



FINAL DECISION

SA Power Networks Distribution Determination 2020 to 2025

Attachment 13 Control mechanisms

Novemebr 2021~~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 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	13-2
Contents	13-3
Shortened forms	13-4
13 Control mechanisms	13-5
13.1 Final decision	13-5
13.2 SA Power Networks' revised proposal.....	13-6
13.3 Assessment approach.....	13-6
13.4 Reasons for final decision for standard control services ...	13-6
13.5 Reasons for final decision for alternative control services ..	<u>13-16</u> <u>13-14</u>
A DUoS unders and overs account	<u>13-21</u> <u>13-20</u>
B Designated pricing proposal charges unders and overs account	<u>13-23</u> <u>13-22</u>
C Jurisdictional scheme amounts unders and overs account....	<u>13-25</u> <u>13-24</u>
D Rounding of inputs in annual pricing proposals	<u>13-27</u> <u>13-26</u>

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
ATO	Australian Tax Office
CESS	capital expenditure sharing scheme
CPI	consumer price index
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
F&A	framework and approach
NEM	National Electricity Market
NER	National Electricity Rules
NSP	network service provider
PTRM	post-tax revenue model
RIN	regulatory information notice
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital

13 Control mechanisms

A control mechanism imposes limits over the prices of direct control services (standard and alternative control services) and/or the revenues that a distribution network service provider can recover from customers for these services.

SA Power Networks largely accepted our draft decision, however it did not accept our substitution of the weighted average cost of capital (WACC) as the margin component in its quoted services formula. On the basis of the evidence presented, we accept SA Power Networks' proposed 6 per cent margin.

In our final decision we have accepted SA Power Networks' proposed margin. We have also made minor amendments to the standard control services control mechanism formula to better reflect the transition of the revised service target performance incentive scheme (STPIS) and to the side constraint formula to better reflect the intent of the relevant clause of the National Electricity Rules (NER).

13.1 Final decision

Our final determination for SA Power Networks is the same as our draft decision, except that we have also:

- adjusted the standard control service control mechanism formula to better reflect the transition of the revised STPIS
- adjusted the standard control service side constraint formula to better reflect the intent of the NER
- amended the description of the I factor in the standard control service formulae to correct an error
- provided further clarifications, including in relation to the WACC calculation to apply to unders and overs
- accepted SA Power Networks' proposal that the margin component of the quoted service formula be defined as six per cent of the total cost of labour, contract services and materials.

The control mechanism for standard control services is a revenue cap. The revenue cap formula for standard control services is set out in Figure 13.1. The side constraints applying to price movements for each of SA Power Networks' tariff classes are set out in Figure 13.2.

The control mechanism for alternative control services is a price cap. The price cap formula for legacy metering, public lighting and ancillary services (fee based) is set out in [Figure 13.3](#)~~Figure 13.3~~. The price cap applying to SA Power Networks' quoted services is set out in [Figure 13.4](#)~~Figure 13.4~~.

Appendix A sets out how SA Power Networks must demonstrate compliance with the revenue cap. Appendices B and C set out how SA Power Networks is to report on the recovery of designated pricing proposal charges and jurisdictional scheme amounts,

and how any under or over recovery of revenue associated with those charges is to be accounted for.

Appendix D sets out how rounding is to be handled in the annual pricing approval process.

We have sustained our draft decision in rejecting SA Power Networks' proposal that new public lighting services during the 2020–25 regulatory control period be introduced as fixed-fee services.

13.2 SA Power Networks' revised proposal

SA Power Networks largely accepted our draft decision, however it did not accept our substitution of the WACC as the margin component in its quoted services formula. Specifically, SA Power Networks proposed that the margin component of the quoted service formula be defined as six per cent of the total cost of labour, contract services and materials, consistent with its original proposal.¹ In its revised proposal SA Power Networks provided evidence in support of this margin.

SA Power Networks generally accepted our draft decision that new services introduced during the regulatory control period be charged on a quoted basis, however it proposed that fees for new public lighting services could be introduced on a fixed-fee basis using its approved public lighting model with updates to relevant inputs. SA Power Networks submitted that a quoted service price cap formula was not suitable for ongoing operating costs relating to public lighting services.²

13.3 Assessment approach

Our assessment approach is unchanged from the description set out in our draft decision.

13.4 Reasons for final decision for standard control services

We consider there are benefits to a consistent approach to control mechanisms and price control formulae across the National Electricity Market (NEM). To achieve this, our final decision incorporates minor adjustments to the control mechanism and side constraint formulae that has resulted from engagement with other distributors through their own regulatory determination processes. We consider the changes set out below either provide greater clarity on the operation of the formulae or better reflect the application of the NER.

¹ SA Power Networks, *2020–25 Revised regulatory proposal - Attachment 14 - Alternative control services*, 10 December 2019, p. 18.

² SA Power Networks, *2020–25 Revised regulatory proposal - Attachment 14 - Alternative control services*, 10 December 2019, p. 44.

Application of revised STPIS

Our draft decision set out that the I factor parameter in the control mechanism formula would include the STPIS and that the STPIS component of the I factor would be applied as a fixed monetary amount adjustment to annual revenue, as determined by the AER.³ Through our engagement with other distributors as part of their own regulatory determination processes we have reviewed the application of STPIS to the control mechanism formula and determined that amendments are necessary.

The STPIS component of the I factor was previously applied as a percentage adjustment to annual revenue (an S factor), as determined by the AER.⁴ Under the new guideline⁵ the STPIS component will be applied as a monetary amount adjustment to the annual revenue, in line with other incentive schemes.

As the STPIS is applied to revenue on a two-year lag, there will be a transitional phase in the 2020–25 regulatory control period. In years 1 and 2 of the regulatory control period, the S factor will be applied as a percentage adjustment to annual revenue. In subsequent years, any revenue adjustment related to the STPIS will be included in the I factor. [In year 3, the STPIS amounts from years 1 and 2 will need to be backed out of the revenue path.](#) The application of this is set out in Figure 13.1 (revenue cap formula).

As part of our final decision we require SA Power Networks to submit a compliance report for year t-2 before the start of year t. We will then determine the adjustment for year t-2 to be applied in the year t annual pricing proposal.

Incentive scheme adjustments (I factor)

In our draft decision, we set out the definition of the I factor parameter as incorporating the efficiency benefit sharing scheme, the capital expenditure sharing scheme, and the STPIS.⁶ Our final decision corrects an error that was made in these inclusions. As the efficiency benefit sharing scheme and the capital expenditure sharing scheme are dealt with exclusively through the AER's regulatory determinations, including relevant true-ups, they are not to be incorporated in the I factor. Our final decision amends the I factor description in the standard control services formulae to correct this error.

Clarification of WACC calculation to apply to unders and overs accounts

³ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, p.13-12.

⁴ AER, *Electricity distribution network service providers: Service target performance incentive scheme: Appendix C*, 1 November 2009, p. 32.

⁵ AER, *Electricity distribution service providers: Service target performance incentive scheme*, November 2018, pp. 34-35.

⁶ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, p. 13-8.

To provide greater certainty on the application of the WACC value to under and over recovery amounts, we have clarified the calculation of the WACC in the control mechanism formula. As set out in our draft decision, the WACC applied in the unders and overs account will reflect actual inflation. We have clarified that the nominal WACC is to be calculated using the real vanilla WACC from the annual update Post Tax Revenue Model (PTRM) adjusted for actual inflation.

We have also made minor amendments in appendices A, B and C to reflect the clarification in the calculation of the unders and overs accounts for distribution use of system (DUoS), designated pricing proposal charges and jurisdictional scheme amounts.

Deliberately under-recovered revenue

As noted in our draft decision,⁷ we accept there are times when SA Power Networks may decide to recover below its allowed level of revenue. This is in contrast to unintentional under recovery due to a natural variation between forecast quantities of a service offered and actual quantities achieved. In the event of intentional under recovery, this revenue will not be counted as an under recovery for the purpose of the under and overs account and by extension will therefore not subsequently increase the total allowable revenue in future years.

Control mechanism for standard control services

Our decision on the formula that gives effect to the control mechanism must be as set out in the framework and approach (F&A) unless we consider that a material change in circumstances occurs which justifies departing from that approach.⁸

The formula in the F&A included an Adjusted Annual Revenue (AAR) factor, which represented the adjusted annual smoothed revenue requirement. This factor allowed for the adjustment to revenue requirements for the STPIS. In our F&A, we stated that we would apply the version of the STPIS that was current at that time. The revenue cap formula was based on that version of the STPIS. We noted in the F&A paper that we were, at that time, undertaking a review of the STPIS. After the final F&A was published, we finalised the STPIS review and released our new STPIS guideline.

Now that we have completed our review and published the revised STPIS, our final determination will apply the revised STPIS. Future STPIS outcomes will now be specified as a fixed monetary amount, rather than a percentage adjustment.⁹ Hence, we need to adjust how we account for STPIS in the revenue cap control formula. We consider that there has been a material change in circumstances which requires us to

⁷ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, pp. 13-10 and 13-11.

⁸ NER, cl. 6.12.3(c1).

⁹ AER, *Amendment to the Service Target Performance Incentive Scheme - Explanatory Statement*, November 2018, p. 3.

depart from the F&A and apply the revised STPIS to this revenue determination process.¹⁰ As a result of the new application of the STPIS as a monetary amount, we can now include this under the I factor, rather than an escalation to create the AAR factor. As the STPIS operates on a two-year lag, this revised revenue cap formula will operate from year 3-4 of the 2020–25 regulatory control period, with a transitional revenue cap formula applying in year 3.

In response to an information request seeking SA Power Networks' response to the proposed STPIS changes, SA Power Networks suggested some of the definitions in the formula could be improved.¹¹ We have amended the definition of the I factor to clarify that it does not include incentive schemes where the amounts to be recovered are set as part of our regulatory determination (e.g. the capital expenditure sharing scheme (CESS) or efficiency benefit sharing scheme (EBSS)). We consider the existing definitions and supplementary information provided in the appendices are otherwise appropriate.

We have also clarified the method to be used to calculate the WACC to be applied to unders and overs to arrive at the B factor.

Figure 13.1 sets out the revenue cap formula for distribution services.

Figure 13.1 Revenue cap formula¹²

$$1. \quad TAR_t \geq \sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_t^{ij} \quad i = 1, \dots, n \text{ and } j = 1, \dots, m \text{ and } t = 1, 2, \dots, 5$$

$$2. \quad TAR_t = AAR_t + I_t + B_t + C_t \quad t = 1, 2, \dots, 5$$

$$3. \quad AAR_t = AR_t \times (1 + S_t) \quad t = 1$$

$$4. \quad AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + S_t) \quad t = 2$$

$$5. \quad AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t) \div (1 + S_{t-1}) \div (1 + S_{t-2}) \quad t = 3$$

$$5-6. \quad AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t) \quad t = 3, 4, 5$$

where:

TAR_t is the total allowable revenue in year t.

¹⁰ NER, cl. 6.12.3(c1).

¹¹ SA Power Networks, *Response to information request #092 - Control mechanisms*, 6 February 2020.

¹² All parameters are in nominal terms unless otherwise specified.

p_t^{ij} is the price of component 'j' of tariff 'i' in year t.

q_t^{ij} is the forecast quantity of component 'j' of tariff 'i' in year t.

t is the regulatory year.

AR_t is the annual smoothed revenue requirement in the PTRM for year t.

AAR_t is the adjusted annual smoothed revenue requirement for year t.

I_t is the sum of payments relating to:

- the STPIS version 2.0¹³¹⁴ (applicable from year t = 3 onwards (2022/23, 2023/24 and 2024/25));
- demand management incentive scheme and innovation allowance adjustments as they relate to year t-2, applied in year t; and
- any other related incentive schemes¹⁵ to be applied in year t. ~~is the sum of the STPIS (from year t = 3 onwards), demand management incentive scheme, and any other related incentive schemes¹⁶ as they relate to year t-2, applied in year t.~~

B_t is the sum of annual adjustment factors for year t and includes the true-up for any under or over recovery of actual revenue collected through DUoS charges calculated using the following method:

$$DUoS \text{ Under and Overs True} - Up_t = -(Opening \text{ Balance}_t)(1 + WACC_t)^{0.5}$$

where:

$DUoS \text{ Under and Overs True} - Up_t$ is the true-up for the balance of the DUoS unders and overs account in year t.

¹³ [The service target performance incentive scheme \(STPIS\) version 2.0 applies for the 2020-25 regulatory control period. The first payments relating to STPIS version 2.0 will occur in 2022/23. See AER, *Electricity distribution network Service Providers - Service target performance incentive scheme \(Version 2.0\)*, November 2018.](#)

¹⁴ [The STPIS 2.0 guideline uses the annual smoothed revenue AR\(t-2\) in the calculation of the s-factor, however AR is only applicable to revenue in the first year of the regulatory control period when revenue is sourced from the PTRM. AR\(t-2\) will apply to the s-factor calculations in year t=3, as this refers to the first year revenue. In other years where STPIS 2.0 applies \(in this regulatory control period, years t=4 and 5\), AAR\(t-2\) will be used to ensure the correct revenue is used, inclusive of actual CPI movements, and with any previous year s-factors backed out.](#)

¹⁵ [This does not reflect those incentive schemes that are calculated and applied through our regulatory determination, such as the capital expenditure sharing scheme \(CESS\) or efficiency benefit sharing scheme \(EBSS\).](#)

¹⁶ [This does not reflect those incentive schemes that are calculated and applied through our regulatory determination, such as the capital expenditure sharing scheme \(CESS\) or efficiency benefit sharing scheme \(EBSS\).](#)

$Opening\ Balance_t$ is the opening balance of the DUoS unders and overs account in year t as calculated by the method in appendix A.

$WACC_t$ is the approved weighted average cost of capital used in regulatory year t in the DUoS unders and overs account in appendix A. This WACC figure will be a nominal WACC figure that reflects actual inflation rather than forecast inflation. To calculate this nominal WACC, the real vanilla WACC from the annual update PTRM will be escalated for actual inflation.

C_t is the sum of approved cost pass through amounts (positive or negative) with respect to regulatory year t, as determined by the AER. It will also include any end-of-period adjustments in regulatory year t.

ΔCPI_t is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities¹⁷ from the December quarter in year t-2 to the December quarter in year t-1, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-1

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-2

minus one.

For example, for 2020-21, year t-2 is the December quarter 2018 and year t-1 is the December quarter 2019.

X_t is the X factor for each year of the 2020-25 regulatory control period as determined in the PTRM, and annually revised for the return on debt update in accordance with the formula specified in attachment 3—rate of return—calculated for the relevant year.

S_t [is the s-factor for regulatory year t relating to payments for the application of the STPIS version 1.2 in the 2015-20 regulatory control period.¹⁸ This s-factor will only apply in years t = 1 and 2, with new STPIS version 2.0 providing for a change in the application of STPIS payments from year t = 3 onwards.¹⁹ In year t=3, the adjusted](#)

¹⁷ If the ABS does not or ceases to publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

¹⁸ [The meaning for year “t” under this formula is different to that in Appendix C of STPIS. Year “t+1” in Appendix C of STPIS version 1.2 is equivalent to year “t” in this formula.](#)

¹⁹ [AER, *Electricity distribution network Service Providers – service target performance incentive scheme*, 1 November 2009.](#)

~~smoothed revenue will be calculated including the backing out of previous year s-factors. This will revert the revenue path to a CPI-X format, and ensure that rewards or penalties related to STPIS in previous years are not carried forward in allowed revenue. is the s-factor applicable to regulatory year t. This s-factor reflects performance in year t-2 against STPIS targets set in this decision. This factor will only apply in years t = 1 and 2, with new STPIS guidelines providing for a change in the application from year t = 3 onwards.~~

Side constraint mechanism

Figure 13.2 sets out the side constraints formula. For each regulatory year after the first year of a regulatory control period, side constraints apply to the weighted average revenue raised from each tariff class. In accordance with the NER, the permissible percentage increase is the greater of CPI-X plus 2 per cent or CPI plus 2 per cent.²⁰

The NER states that recovery of certain revenues, such as those to accommodate cost pass throughs and incentive schemes, are disregarded in deciding whether the permissible percentage has been exceeded.²¹ In considering material raised in Energex's and Ergon Energy's revised proposals (noting the AER is making distribution determinations for these businesses at the same time as SA Power Networks),²² we have determined that reinstating the incentive schemes and cost pass through factors upholds the intent expressed in the NER. An alternative approach to disregarding cost pass throughs and incentive schemes would be challenging to implement in practice as it would require separate tariffs to be provided to calculate weighted average revenues of a tariff class, net of incentive schemes and cost pass throughs, to ensure compliance with the permissible percentage.

To ensure the intent of the NER is upheld, we have therefore included the incentive schemes and cost pass through factors in the side constraint formula. These factors will be applied in the side constraints mechanism as annual percentage changes. This will provide a permissible percentage that will reflect the changes in incentive scheme and cost pass through amounts from the previous year, to reflect the calculated weighted average revenues being inclusive of these amounts.

In line with the approach taken for the revenue cap formula, the STPIS will be applied under the I factor from year 3 onwards. We consider that any discrepancy that will occur between year 2 and year 3 tariffs as a result of the new STPIS guideline will be immaterial, and will not have any substantial impact on the side constraint mechanism.

In response to an information request seeking SA Power Networks' response to the proposed changes, SA Power Networks suggested an alternative approach to the side

²⁰ NER, cl. 6.18.6(c).

²¹ NER, cl. 6.18.6(d).

²² Energy Queensland, *Energex revised regulatory proposal 2020–25*, December 2019, p. 52; Energy Queensland, *Ergon Energy revised regulatory proposal 2020–25*, December 2019, pp 55-56.

constraint formula that focussed on relative price movements.²³ We have maintained our general approach to the side constraint formula as we consider it appropriately reflects the permissible percentage movements set out in the NER.

For consistency with the revenue cap formula, we have also represented proposed prices and prices charged as 'p', as opposed to the 'd' used previously. We have also clarified which incentive schemes are included in the I factor.

Figure 13.2 Side constraints formula²⁴

For t=1, 2:

$$\frac{\left(\sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_t^{ij}\right)}{\left(\sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_t^{ij}\right)} \leq (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + 2\%) \times (1 + S_t) + I_t' + B_t' + C_t'$$

For year t=3:

$$\frac{\left(\sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_t^{ij}\right)}{\left(\sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_t^{ij}\right)} \leq (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + 2\%) \div (1 + S_{t-1}) \div (1 + S_{t-2}) + I_t' + B_t' + C_t'$$

For t=3, 4, 5:

$$\frac{\left(\sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_t^{ij}\right)}{\left(\sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_t^{ij}\right)} \leq (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + 2\%) + I_t' + B_t' + C_t'$$

where each tariff class has "n" tariffs, with each up to "m" components, and where:

p_t^{ij} is the proposed price for component 'j' of tariff 'i' for year t.

²³ SA Power Networks, *Response to information request #092 - Control mechanisms*, 6 February 2020.

²⁴ All parameters are in nominal terms unless otherwise specified.

p_{t-1}^{ij} is the price charged for component 'j' of tariff 'i' in year t-1.

q_t^{ij} is the forecast quantity of component 'j' of tariff 'i' in year t.

ΔCPI_t is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities²⁵ from the December quarter in year t-2 to the December quarter in year t-1, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-1

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-2

minus one.

For example, for 2020-21, year t-2 is the December quarter 2018 and year t-1 is the December quarter 2019.

X_t is the X factor for each year of the 2020-25 regulatory control period as determined in the PTRM, and annually revised for the return on debt update in accordance with the formula specified in attachment 3—rate of return—calculated for the relevant year. If $X > 0$, then X will be set equal to zero for the purposes of the side constraint formula.

S_t is the s-factor for regulatory year t relating to payments for the application of the STPIS version 1.2 in the 2015-20 regulatory control period.²⁶ This s-factor will only apply in years t = 1 and 2, with new STPIS version 2.0 providing for a change in the application of STPIS payments from year t = 3 onwards.²⁷ In the side constraints for year t=3, the permissible percentage will be calculated including the backing out of previous year s-factors, to reflect the same adjustments made to the adjusted smoothed revenue in that year. ~~is the s-factor applicable to regulatory year t. This s-factor reflects performance in year t-2 against STPIS targets set in this decision. This factor will only apply in years t=1 and 2, with new STPIS guidelines providing for a change in the application from year t=3 onwards.~~

I_t is the annual percentage change from the sum of payments relating to:

²⁵ If the ABS does not or ceases to publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

²⁶ The meaning for year "t" under this formula is different to that in Appendix C of STPIS. Year "t+1" in Appendix C of STPIS version 1.2 is equivalent to year "t" in this formula.

²⁷ AER, *Electricity distribution network Service Providers – service target performance incentive scheme*, 1 November 2009.

- [the STPIS version 2.0²⁸²⁹ \(applicable from year t = 3 onwards \(2022/23, 2023/24 and 2024/25\)\);](#)
- [demand management incentive scheme and innovation allowance adjustments as they relate to year t-2, applied in year t; and](#)
- [any other related incentive schemes³⁰ to be applied in year t.s the annual percentage change in the sum of the STPIS \(from year t=3 onwards\), demand management incentive scheme, and any other related incentive schemes³⁴ as they relate to year t-2, applied in year t.](#)

This percentage can be calculated by dividing the incremental revenues (the difference between the I factor used in the total annual revenue formula for t and t-1) by the expected revenues for regulatory year t-1 (based on prices in year t-1 multiplied by the forecast quantities for year t).

B_t' is the annual percentage change from the sum of annual adjustment factors for year t and includes true-up for any under or over recovery of actual revenue collected through DUoS charges calculated using the method in Figure 13.1. This percentage can be calculated by dividing the incremental revenues (the difference between the B-factor used in the total annual revenue formula for t and t-1) by the expected revenues for regulatory year t-1 (based on the prices in year t-1 multiplied by the forecast quantities for year t).

C_t' is the annual percentage change from the sum of approved cost pass through amounts (positive or negative) with respect to regulatory year t, as determined by the AER. It will also include any end-of-period adjustments in regulatory year t. This percentage can be calculated by dividing the incremental revenues (the difference between the C-factor used in the total annual revenue formula for t and t-1) by the expected revenues for regulatory year t-1 (based on the prices in year t-1 multiplied by the forecast quantities for year t).

²⁸ [The service target performance incentive scheme \(STPIS\) version 2.0 applies for the 2020-25 regulatory control period. The first payments relating to STPIS version 2.0 will occur in 2022/23. See AER, *Electricity distribution network Service Providers - Service target performance incentive scheme \(Version 2.0\)*, November 2018.](#)

²⁹ [The STPIS 2.0 guideline uses the annual smoothed revenue AR\(t-2\) in the calculation of the s-factor, however AR is only applicable to revenue in the first year of the regulatory control period when revenue is sourced from the PTRM. AR\(t-2\) will apply to the s-factor calculations in year t=3, as this refers to the first year revenue. In other years where STPIS 2.0 applies \(in this regulatory control period, years t=4 and 5\), AAR\(t-2\) will be used to ensure the correct revenue is used, inclusive of actual CPI movements, and with any previous year s-factors backed out.](#)

³⁰ [This does not reflect those incentive schemes that are calculated and applied through our regulatory determination, such as the capital expenditure sharing scheme \(CESS\) or efficiency benefit sharing scheme \(EBSS\).](#)

³⁴ [This does not reflect those incentive schemes that are calculated and applied through our regulatory determination, such as the capital expenditure sharing scheme \(CESS\) or efficiency benefit sharing scheme \(EBSS\).](#)

13.5 Reasons for final decision for alternative control services

Our final decision on the control mechanisms for alternative control services incorporates adjustments in relation to the margin for quoted services in response to SA Power Networks' revised proposal.

To demonstrate compliance with the distribution determination applicable to it during the 2020–25 regulatory control period, SA Power Networks must propose prices for alternative control services in its annual pricing proposal.³²

Margin for quoted services

Our draft decision accepted the inclusion of a margin in the price cap formula for services charged on a quotation basis. However, our draft decision was that the margin should be SA Power Networks' nominal vanilla WACC.³³ We considered that the proposed margin of six per cent was somewhat arbitrary, whereas the WACC was based on an extensive consultation process.³⁴

In its revised proposal, SA Power Networks again proposed that this margin be six per cent, as per its original proposal. It submitted that WACC is not appropriate as it:

measures the return on combined capital; it is not appropriate for use as a measure of the return on time and materials activities undertaken by a service provider.³⁵

It submitted that a margin based on net cost plus – the ratio of operating profit to operating costs – is more appropriate, given ancillary network services are normally delivered through operating expenditure.³⁶ SA Power Networks engaged KPMG to provide a report on the returns earned by contractors in competitive markets where they provide similar services to SA Power Networks' ancillary network services. KPMG found that the median of the weighted average range of results was 6.1 per cent.³⁷

We reviewed the KPMG report and, in this case, accept the reasoning behind using a margin based on net cost plus. Based on KPMG's analysis we also accept SA Power Network's proposed margin of 6 per cent in this circumstance. We have adjusted the

³² NER, cl. 6.18.2(b)(7).

³³ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, p.13-6.

³⁴ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, p.13-16.

³⁵ SA Power Networks, *2020–25 Revised regulatory proposal - Attachment 14 - Alternative control services*, 10 December 2019, p. 18.

³⁶ SA Power Networks, *2020–25 Revised regulatory proposal - Attachment 14 - Alternative control services*, 10 December 2019, p. 18.

³⁷ SA Power Networks, *14.7 - KPMG - Alternative control services - margin analysis*, 10 December 2019, p. 17.

definition of the margin in the quoted services control mechanism formula to reflect this.

New services introduced within the regulatory control period

Consistent with our draft decision, if new services arise during the 2020–25 regulatory control period with characteristics that are the same or essentially the same as other alternative control services,³⁸ we consider that they should be priced as a quoted service until the next regulatory period.³⁹ SA Power Networks can then propose to price this service differently at the time of the next regulatory determination.

Our draft decision contained some ambiguous wording regarding the interaction of the introduction of new services and annual pricing proposals.⁴⁰ For the avoidance of doubt we clarify that any new ancillary network service and pricing methodology should be disclosed through each distributor's annual pricing proposal. This proposal should provide a detailed description of the service along with how the new service will be charged. The quoted price approach adopted is to be based on a similar service within that same service grouping.

SA Power Networks proposed that new public lighting services should be an exception to this treatment, and should be allowed to be introduced as fixed-fee charges.⁴¹ We did not receive any stakeholder support in submissions for this departure from the AER's standard approach.

Our final decision is to not change the treatment of new public lighting services that are introduced during the 2020–25 regulatory control period, and maintain the treatment set out in our draft decision for all new alternative control services. This position on new alternative control services is consistent with the position set out in our F&A, which was accepted by SA Power Networks in its submission to the preliminary F&A.⁴² As noted in our draft decision, this is also consistent with our approach across other NEM jurisdictions.⁴³

³⁸ Service classifications are set out in attachment 12 of our final decision. We generally classify services in groupings rather than individually. This obviates the need to classify services one-by-one and instead defines a service cluster, such that where a service is similar in nature it would require the same regulatory treatment. This provides distributors with flexibility to alter the exact specification (but not the nature) of a service during a regulatory control period.

³⁹ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, p.13-18.

⁴⁰ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, p.13-18.

⁴¹ SA Power Networks, *2020–25 Revised regulatory proposal - Attachment 14 - Alternative control services*, December 2019, p. 44.

⁴² AER, *Framework and approach SA Power Networks Regulatory control period commencing 1 July 2020*, July 2018, pp. 56-7; SA Power Networks, *Submission on AER's preliminary framework and approach for SA Power Networks*, 27 April 2018, p. 5.

⁴³ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, p.13-18.

We consider it is important that new alternative control services provided on a fixed fee basis are introduced through regulatory determinations, where there is sufficient time for the appropriate analysis and stakeholder engagement to occur. We do not consider there is sufficient time to make this assessment as part of the annual pricing proposal assessment, as suggested by SA Power Networks.⁴⁴

Control mechanism formulae

The price cap formula that will apply to SA Power Networks' alternative control services (except for quoted services) is shown at Figure 13.3. It is consistent with our final F&A and draft decision.⁴⁵

The price cap formula that will apply to SA Power Networks' quoted services is shown at Figure 13.4.

Our draft decision to accept SA Power Networks' proposal to include a margin in its quoted services control mechanism formula required us to be satisfied that there was a material change in circumstances justifying a departure from the position in our final F&A for SA Power Networks. This is because our F&A did not include a margin component in the control mechanism formula. As noted in our draft decision, we consider that our determination for TasNetworks to include a margin as an explicit additional factor within the control mechanism formula (which had not yet been made) is a material change in circumstances and warrants a different approach.⁴⁶ Our final decision sustains the position in our draft decision, while updating the quantum of the margin.

As set out in our draft decision,⁴⁷ when charging for quoted services:

1. SA Power Networks must provide itemised invoices to the customer or the service recipient.
2. The charges must be consistent with good industry practice in terms of the resource requirements.

Figure 13.3 Price cap formula to apply to SA Power Networks' legacy metering, public lighting and ancillary services (fee based)

$$\bar{p}_t^i \geq p_t^i \quad i=1,\dots,n \text{ and } t=1, 2,\dots,5$$

$$\bar{p}_t^i = \bar{p}_{t-1}^i \times (1 + \Delta CPI_t) \times (1 - X_t^i) + A_t^i$$

⁴⁴ SA Power Networks, *2020–25 Revised regulatory proposal - Attachment 14 - Alternative control services*, December 2019, p. 44.

⁴⁵ AER, *Framework and approach SA Power Networks Regulatory control period commencing 1 July 2020*, July 2018, p. 58.

⁴⁶ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, p.13-18.

⁴⁷ AER, *Draft Decision: SA Power Networks distribution determination 2020 to 2025 - Attachment 13 - Control mechanisms*, October 2019, pp.13-18 and 13-19.

Where:

\bar{p}_t^i is the cap on the price of service i in year t.

p_t^i is the price of service i in year t. For the first year of the regulatory control period, the cap on the price of service i will be as per the schedule of approved charges set out in attachment 15 - Alternative Control Services.

\bar{p}_{t-1}^i is the cap on the price of service i in year t-1.

t is the regulatory year.

ΔCPI_t is the annual percentage change in the ABS consumer price index (CPI) All Groups, Weighted Average of Eight Capital Cities⁴⁸ from the December quarter in year t-2 to the December quarter in year t-1, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-1

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-2

minus one.

For example, for 2020-21, year t-2 is the December quarter 2018 and year t-1 is the December quarter 2019.

X_t^i is the X factor for service i in year t. The value of this factor is as specified in Attachment 15 – Alternative Control Services.

A_t^i is the sum of any adjustments for service i in year t. Likely to include, but not limited to adjustments for any approved cost pass through amounts (positive or negative) with respect to regulatory year t, as determined by the AER.

Figure 13.4 Price cap formula to apply to SA Power Networks' quoted services

$$Price = Labour + Contractor Services + Materials + Margin$$

Where:

⁴⁸ If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

Labour consists of all labour costs directly incurred in the provision of the service which may include labour on-costs, fleet on-costs and overheads. Labour is escalated annually by $(1 + \Delta CPI_t)(1 - X_t^i)$ where:

ΔCPI_t is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities⁴⁹ from the December quarter in year t-2 to the December quarter in year t-1, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-1

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-2

minus one.

For example, for 2020-21, year t-2 is the December quarter 2018 and year t-1 is the December quarter 2019.

X_t^i is the X factor for service i in year t. The value of this factor is as specified in Attachment 15 – Alternative Control Services.

Contractor Services reflect all costs associated with the use of external labour including overheads and any direct costs incurred. The contracted services charge applies the rates under existing contractual arrangements. Direct costs incurred are passed on to the customer.

Materials reflect the cost of materials directly incurred in the provision of the service, material storage and logistics on-costs and overheads.

Margin is an amount equal to six per cent of the total cost of *Labour*, *Contractor Services* and *Materials*

⁴⁹ If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

A DUoS unders and overs account

To demonstrate compliance with the distribution determination applicable to it during the 2020–25 regulatory control period, SA Power Networks must maintain a DUoS unders and overs account in its annual pricing proposal.⁵⁰

SA Power Networks must provide the amounts for the following entries in its DUoS unders and overs account for the most recently completed regulatory year (t–2), the current regulatory year (t–1) and the next regulatory year (t):⁵¹

1. An opening balance for year t–2, year t–1 and year t.
2. An interest charge for one year on the opening balance for each regulatory year (t–2, t–1 and t). These adjustments are to be calculated using the respective nominal WACC for each intervening year between regulatory year t–2 and year t. The WACC applied for each year will be the real vanilla WACC approved by the AER in the annual update, escalated for actual inflation for the relevant year.
3. The amount of revenue recovered from DUoS charges in respect of that year, less the total allowable revenue for the year in question.
4. An adjustment to the net amount in item 3 by six months of interest. These adjustments are to be calculated using the nominal WACC calculated as per step 2.
5. The total sum of items 1–4 to derive the closing balance for each year.

SA Power Networks must provide details of calculations in the format set out in Table 13-1. Amounts provided for the most recently completed regulatory year (t–2) must be audited.⁵² Amounts provided for the current regulatory year (t–1) will be regarded as an estimate. Amounts for the next regulatory year (t) will be regarded as a forecast.

In proposing variations to the amount and structure of DUoS charges, SA Power Networks is expected to achieve a closing balance as close to zero as practicable in its DUoS unders and overs account in each forecast year in its annual pricing proposals during the 2020–25 regulatory control period.

⁵⁰ NER, cl. 6.18.2(b)(7).

⁵¹ In exceptional circumstances, the DUoS unders and overs account can accommodate additional years—such as year t–3. If available, amounts provided for additional years must be audited where they depart from the annual RIN.

⁵² A reasonable assurance report sufficiently meets these auditing requirements. Where amounts provided match other audited submissions to the AER, further assurance is not required (e.g. RINs), and should be referenced.

Table 13-1 Example calculation of DUoS unders and overs account (\$'000, nominal)

	Year t-2 (actual)	Year t-1 (estimate)	Year t (forecast)
(A) Revenue from DUoS charges	45 779	40 269	39 510
(B) Less TAR for regulatory year =	43 039	41 427	44 429
+ Adjusted annual smoothed revenues (AAR _t)	40 189	41 393	44 393
+ Incentive scheme amounts (I _t) ^a	1 026	34	36
+ Annual adjustments (B _t) ^b	0	0	0
+ Cost pass through amount (C _t)	1 824	0	0
(C) Revenue deliberately under-recovered in year	1 000	0	0
(A minus B plus C) Under/over recovery of revenue for regulatory year	3 740	-1 158	-4 919^c
<i>DUoS unders and overs account</i>			
Nominal WACC (per cent)	5.00%	5.50%	6.00%
Opening balance	1 737	5 656 ^d	4 778
Interest on opening balance	87	311	287
Under/over recovery of revenue for regulatory year	3 740	-1 158	-4 919
Interest on under/over recovery for regulatory year	92	-31	-145
Closing balance	5 656	4 778	0^e

- Notes:
- (a) Includes incentive schemes as set out in our determination with the exception of those schemes that are calculated and applied through our regulatory determination (e.g. CESS and EBSS).
 - (b) B_t parameter calculations in the DUoS unders and overs account exclude the true-up for DUoS revenue under/over recovery for regulatory year and are therefore expected to be 0.
 - (c) Approved DUoS revenue under/over recovery for regulatory year t.
 - (d) Opening balance is the previous year's closing balance.
 - (e) SA Power Networks is expected to achieve a closing balance as close to zero as practicable in its DUoS unders and overs account in each forecast year in its annual pricing proposals in the 2020–25 regulatory control period.

B Designated pricing proposal charges⁵³ unders and overs account

To demonstrate compliance with the distribution determination applicable to it during the 2020–25 regulatory control period, SA Power Networks must maintain a designated pricing proposal charges unders and overs account in its annual pricing proposal.⁵⁴

SA Power Networks must provide the amounts for the following entries in its designated pricing proposal charges unders and overs account for the most recently completed regulatory year (t–2), the current regulatory year (t–1) and the next regulatory year (t):⁵⁵

1. An opening balance for year t–2, year t–1 and year t.
2. An interest charge for one year on the opening balance for each regulatory year (t–2, t–1 and t). These adjustments are to be calculated using the respective nominal WACC for each intervening year between regulatory year t–2 and year t. The WACC applied for each year will be the real vanilla WACC approved by the AER in the annual update, escalated for actual inflation for the relevant year.
3. The amount of revenue recovered from designated pricing proposal charges in respect of that year, less the total costs related to designated pricing proposal charges for the year in question.
4. An adjustment to the net amount in item 3 by six months of interest. These adjustments are to be calculated using the nominal WACC calculated as per step 2.
5. The total sum of items 1–4 to derive the closing balance for each year.

SA Power Networks must provide details of calculations in the format set out in Table 13-2. Amounts provided for the most recently completed regulatory year (t–2) must be audited.⁵⁶ Amounts provided for the current regulatory year (t–1) will be regarded as an estimate. Amounts for the next regulatory year (t) will be regarded as a forecast.

In proposing variations to the amount and structure of designated pricing proposal charges, SA Power Networks is expected to achieve a closing balance as close to zero

⁵³ Designated pricing proposal charges are charges related to: designated pricing proposal services (prescribed exit fees, prescribed common transmission services and prescribed transmission use of system services); avoided customer transmission use of system charges; charges provided by another distributor (but only to the extent they comprise of designated pricing proposal services or standard control services); and charges or payments related specified in NER clause 11.39.

⁵⁴ NER, cll. 6.18.2(b)(6), 6.12.1(19), 6.18.7.

⁵⁵ In exceptional circumstances, the designated pricing proposal charges unders and overs account can accommodate additional years—such as year t–3. If available, amounts provided for additional years must be audited where they depart from the annual RIN.

⁵⁶ A reasonable assurance report sufficiently meets these auditing requirements. Where amounts provided match other audited submissions to the AER, further assurance is not required (e.g. RINs), and should be referenced.

as practicable in its designated pricing proposal charges unders and overs account in each forecast year in its annual pricing proposals during the 2020–25 regulatory control period.⁵⁷

Table 13-2 Example calculation of designated pricing proposal charges unders and overs account (\$'000, nominal)

	Year t–2 (actual)	Year t–1 (estimate)	Year t (forecast)
(A) Revenue from designated pricing proposal charges (DPPC)	40 077	34 944	36 609
(B) Less DPPC related payments for regulatory year =	34 365	38 734	39 200
+ DPPC to be paid to TNSP	33 672	37 933	38 000
+ Avoided TUoS/DPPC payments	572	734	800
+ Inter-distributor payments	121	67	400
(A minus B) Under/over recovery of revenue for regulatory year	5 712	–3 790	–2 540^a
<i>DPPC unders and overs account</i>			
Nominal WACC (per cent)	5.00%	5.50%	6.00%
Opening balance	167	6 028 ^b	2 467
Interest on opening balance	8	332	148
Under/over recovery of revenue for regulatory year	5 712	–3 790	–2 540 ^a
Interest on under/over recovery for regulatory year	141	–103	–75
Closing balance	6 028	2 467	0^c

Notes: (a) Approved DPPC revenue under/over recovery for regulatory year t.
(b) Opening balance is the previous year's closing balance.
(c) In addition to complying with clause 6.18.7(b) of the NER, SA Power Networks is expected to achieve a closing balance as close to zero as practicable in its DPPC unders and overs account in each forecast year in its annual pricing proposals in the 2020–25 regulatory control period.

⁵⁷ The proposal must also comply with clause 6.18.7(b) of the NER.

C Jurisdictional scheme amounts⁵⁸ unders and overs account

To demonstrate compliance with the distribution determination applicable to it during the 2020–25 regulatory control period, SA Power Networks must maintain a jurisdictional scheme amounts unders and overs account in its annual pricing proposal.⁵⁹

SA Power Networks must provide the amounts for the following entries in its jurisdictional scheme amounts unders and overs account for the most recently completed regulatory year (t–2), the current regulatory year (t–1) and the next regulatory year (t):⁶⁰

1. An opening balance for year t–2, year t–1 and year t.
2. An interest charge for one year on the opening balance for each regulatory year (t–2, t–1 and t). These adjustments are to be calculated using the respective nominal WACC for each intervening year between regulatory year t–2 and year t. The WACC applied for each year will be the real vanilla WACC approved by the AER in the annual update, escalated for actual inflation for the relevant year.
3. The amount of revenue recovered from jurisdictional scheme charges in respect of that year, less the total jurisdictional scheme payments for the year in question;
4. An adjustment to the net amount in item 3 by six months of interest. These adjustments are to be calculated using the nominal WACC calculated as per step 2.
5. The total sum of items 1–4 to derive the closing balance for each year.

SA Power Networks must provide details of calculations in the format set out in Table 13-3. Amounts provided for the most recently completed regulatory year (t–2) must be audited.⁶¹ Amounts provided for the current regulatory year (t–1) will be regarded as an estimate. Amounts for the next regulatory year (t) will be regarded as a forecast.

Where SA Power Networks receives a government subsidy for jurisdictional schemes in lieu of recovering these amounts directly from jurisdictional scheme charges (or part thereof), it will be required to record the subsidy amount received as revenue. This will not impact the operation of the unders/overs account. Where SA Power Networks

⁵⁸ Jurisdictional scheme amounts are amounts a distributor is required under a jurisdictional scheme obligation as defined by the NER to: pay a person; pay into a fund established under an Act of a participating jurisdiction; credit against charges payable by a person; or reimburse a person, less any amounts recovered by the distributor from any person in respect of those amounts other than under the NER.

⁵⁹ NER, cll. 6.12.1(20), 6.18.2(b)(6A), 6.18.7A(b) and (c).

⁶⁰ In exceptional circumstances, the jurisdictional scheme amounts unders and overs account can accommodate additional years—such as year t–3. If available, amounts provided for additional years must be audited.

⁶¹ A reasonable assurance report sufficiently meets these auditing requirements. Where amounts provided match other audited submissions to the AER, further assurance is not required (e.g. RINs), and should be referenced.

receives a full government subsidy for jurisdictional schemes it will not recover any amounts from customers in relation to those jurisdictional schemes.

In proposing variations to the amount and structure of jurisdictional scheme charges, SA Power Networks is expected to achieve a closing balance as close to zero as practicable in its jurisdictional scheme amounts unders and overs account in each forecast year in its annual pricing proposal during the 2020–25 regulatory control period.⁶²

Table 13-3 Example calculation of jurisdictional scheme amounts unders and overs account (\$'000, nominal)

	Year t-2 (actual)	Year t-1 (estimate)	Year t (forecast)
(A) Revenue from jurisdictional schemes	19 777	23 121	26 965
(B) Less jurisdictional scheme payments for regulatory year	20 272	20 959	28 641
=			
+ Jurisdictional scheme 1 payments	14 159	13 954	13 961
+ Jurisdictional scheme 2 payments	6 113	7 005	14 680
(A minus B) Under/over recovery of revenue for regulatory year	-495	2162	-1 676^a
<i>Jurisdictional scheme amount unders and overs account</i>			
Nominal WACC (per cent)	5.00%	5.50%	6.00%
Opening balance	-52	-562 ^b	1 628
Interest on opening balance	-3	-31	98
Under/over recovery of revenue for regulatory year	-495	2 162	-1 676 ^a
Interest on under/over recovery for regulatory year	-12	59	-50
Closing balance	-562	1 628	0^c

Notes: (a) Approved jurisdictional scheme amounts revenue under/over recovery for regulatory year t.
 (b) Opening balance is the previous year's closing balance.
 (c) In addition to complying with clause 6.18.7A(b) of the NER, SA Power Networks is expected to achieve a closing balance as close to zero as practicable in its jurisdictional scheme amount unders and overs account in each forecast year in its annual pricing proposals in the 2020–25 regulatory control period.

⁶² The proposal must also comply with clause 6.18.7A(b) of the NER.

D Rounding of inputs in annual pricing proposals

The following sets out our final determination around the requirement of how SA Power Networks must use calculation inputs, whether on a rounded or unrounded basis, in the annual pricing approval process.

'Unrounded', for this purpose, will be taken to mean at least fifteen digit floating point precision (the level of accuracy at which numbers will be stored in Microsoft Excel workbooks of .XLS, .XLSX, .XLSM or .XLSB). This definition accepts that numbers with fewer than fifteen floating digits may not require fifteen digits to express (such as 2.25 being equivalent to 2.25000000000000) but will meet the definition of fifteen digit floating point precision.

Rounding in calculations must be done on a 'nearest' basis. So rounding to two decimal places means rounding to the nearest two decimal places, not rounding up automatically or down automatically. This accepts the convention that if a number falls precisely between two points, it can be rounded up (e.g. 2.245 can be rounded to 2.25 rather than 2.24).

Where a calculation produces an output which is to be used as an input in another calculation, rounding should not occur. Rounding should be applied to final outputs only, unless otherwise specified.

Unrounded inputs should be taken from approved Excel models where appropriate. X factors should be unrounded inputs taken from the approved model. Where necessary, inputs should be calculated as an alternative to using a rounded value. For example, inflation should be used as calculated based around the CPI tables as provided by the Australian Bureau of Statistics, or the AER's nominated best available substitute should this index cease to be calculated. The result of this calculation should be taken as is, not rounded before use. Table 13-4 sets out the required level of precision for an inflation calculation.

Table 13-4 Demonstration of inflation calculation

	Required Precision
The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-2 (example)	112.1
The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in regulatory year t-1 (example)	114.6
ΔCPI_t	2.23015165031222%

When applying a price cap, the value of \bar{P}_t^i should be rounded to the nearest two decimal places each year.

Table 13-5 Demonstration of price cap calculation (with rounding)

	Required Precision
\bar{P}_{t-1}^i	\$23.28
X factor (example: should be taken from model)	-7.125%
ΔCPI_t	2.23015165031222%
\bar{P}_t^i (unrounded)	\$25.4938708296164
\bar{P}_t^i (rounded)	\$25.49

Prices P_t^i can be rounded to as few or as many decimal places as required, subject to being less than or equal to the two decimal place value of \bar{P}_t^i . In the above table, this would mean a price of \$25.49 would be acceptable, as would a price of \$25.4899. However, a price of \$25.493 would not be compliant.

For avoidance of ambiguity, where a price is expressible as a rate for a period of time, rounding of the price cap will apply to the largest relevant time period. So an hourly service will be capped on an hourly basis. However, a service which can be priced either on a daily rate or an annual rate will have rounding apply to the cap on the annual rate. The daily rate should then represent the annual rate divided by 365, or 366 should the regulatory year to which the price applies include a leap year (e.g. 29 February 2024). This daily rate may be expressed on a rounded basis (with discretion from SA Power Networks on the appropriate level of decimal places to apply) but must be based on a rounding to the nearest decimal place.

The factors of the revenue cap formula, adjusted annual smoothed revenue requirement, sum of incentive scheme adjustments, sum of annual adjustment factors and sum of approved cost pass through amounts should be rounded to no fewer than two decimal places. Prices, quantities, X factors and CPI must be used unrounded in the revenue cap formula.

Unrounded inputs include all those not specified above as being rounded.