Draft Decision

Ausgrid, Endeavour Energy, Essential Energy, Evoenergy, Power and Water Corporation and TasNetworks Electricity Distribution Determination 2024 to 2029 (1 July 2024 to 30 June 2029)

Attachment 14 Control mechanisms

September 2023



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14 Control mechanisms

Control mechanisms impose limits over the prices of direct control services (standard and alternative control services) and/or the revenues that distribution network service providers (distributors) can recover from customers for these services. For standard control services, the National Electricity Rules (NER)¹ require the control mechanism be of the prospective CPI–X form (or some incentive-based variant).

The forms of the control mechanisms that will apply to a distribution determination and the formulae that give effect to those control mechanisms are considered during the framework and approach (F&A) stage. We have limited discretion to depart from the control mechanisms set out in the F&A paper.² For example, we can only depart from the formulae if we consider there has been a material change in circumstances.

This attachment discusses:

- the form and formulae of the control mechanisms for standard control services³
- the forms and formulae of the control mechanisms for alternative control services⁴
- how compliance with the control mechanisms is to be demonstrated,⁵ including the mechanism through which the distributors will recover distribution revenues, including adjustments for revenue under or over recovery
- how the distributors are to report on their recovery of designated pricing proposal charges and jurisdictional scheme amounts, including adjustments for under or over recovery of these amounts.⁶

14.1 Draft decision

Our draft determination for the distributors⁷ is as follows:

- The form of control mechanism for standard control services is a revenue cap. Section 14.4 provides our draft decision on standard control services.
 - The revenue cap formulae (Figure 14-1) has been revised to accommodate new incentive schemes and to increase transparency and accessibility.
 - The side constraints formulae (Figure 14-3) consistent with the position established in our annual pricing process review.⁸

¹ For Power and Water Corporation, the NT NER applies, rather than the generic NER. For all references to the NER in this attachment, the NT NER mirrors the NER provisions.

² NER, cll. 6.12.3(c) and (c1).

³ NER, cl. 6.12.1(11).

⁴ NER, cl. 6.12.1(12).

⁵ NER, cl. 6.12.1(13).

⁶ NER, cll. 6.12.1(19) and (20).

⁷ Ausgrid, Endeavour Energy, Essential Energy, Evoenergy, Power and Water Corporation and TasNetworks

⁸ AER, Annual pricing process review – Side constraint mechanism – Final position paper, November 2022.

- The form of control mechanism for alternative control services is a price cap. Section 14.5 provides our draft decision on alternative control services.
 - The price cap formulae (Figure 14-4) for fee-based ancillary network services, metering services, and public lighting services has been revised to accommodate a true-up mechanism for metering services operating expenditure.
 - The price cap formula (Figure 14-5) for quoted ancillary network services, which includes a margin (set at a fixed 6%) and tax components.
- The mechanisms to demonstrate compliance with the revenue cap are the unders/overs statement and account. These mechanisms are provided in Appendix A and its presentation has been revised to improve transparency and accessibility.
- The mechanisms to demonstrate compliance with reporting of designated pricing proposal charges and jurisdictional scheme amounts are the relevant unders/overs statements and accounts. These mechanisms are provided in Appendix A and have been revised to improve transparency and accessibility.
- The template for demonstrating compliance using these mechanisms is the standardised pricing model. This template is addressed in Appendix B.
- Other rules and notes relating to the demonstration of compliance within these mechanisms, including rounding, are provided in Appendix C.

14.2 The distributors' proposal

The distributors accepted the decisions in our final F&A to:9

- Apply revenue caps to standard control services.
- Apply price caps to alternative control services.

The distributors also proposed formulae that give effect to the revenue caps for standard control services and price caps for alternative control services based on the final F&A.

The distributors' proposals also included:

- The application of the AER's final position on the side constraint mechanism.¹⁰
- Proposed definitions for the margin component of quoted services:
 - Ausgrid proposed not to introduce a margin as it does not make returns on ancillary network services.¹¹
 - Essential Energy proposed to set the margin equal to the nominal vanilla WACC.¹²

⁹ Ausgrid, 2024–29 Regulatory proposal, January 2023, p.179; Endeavour Energy, 0.01 Regulatory proposal, January 2023, p.9; Essential Energy, 8.02 Revenue control mechanisms, January 2023, p.4; Evoenergy, Attachment 5 Control mechanisms, January 2023, p.5; Power and Water Corporation, 7.02 – Control mechanism formula, January 2023, p.iii; TasNetworks, Attachment 16 – Control mechanisms, January 2023.

¹⁰ AER, Annual pricing process review – Side constraint mechanism – Final position paper, November 2022.

¹¹ Ausgrid, *Att.* 9.3 – *Ancillary network services*, January 2023, p.11.

¹² Essential Energy, 13.01 Ancillary network services explanatory document, January 2023, p.6.

- Evoenergy proposed to set the margin equal to the nominal vanilla WACC.¹³
- Power and Water Corporation proposed to set the margin equal to 6%.¹⁴
- TasNetworks proposed to set the margin at 5.93%, being the average WACC to apply over the 2024–29 period.¹⁵
- Support inclusion of the tax component.¹⁶
- TasNetworks proposed bespoke adjustments in its revenue cap control mechanism to continue true-ups for its Electrical Safety Inspection Service and NEM charges.

14.3Assessment approach

Our approach to assessing the form of control mechanisms is unchanged from our final F&A.

The final F&A sets the form of control mechanism and binds our determination. However, we did not define various parameters of both the revenue and price cap control formulae so that we could consider these in our determination if changes to the parameters are required. This draft determination clarifies our position regarding these parameters.

We may only make changes to the formulae specified in the F&A where we are satisfied that there has been a material change in circumstances. If we are satisfied that a material change in circumstances has occurred, then we would either propose changes or consider the merits of proposed changes to the formulae as relevant.

Consistency of regulatory arrangements for similar services is a consideration the AER must have regard to when considering control mechanisms as described in the NER.¹⁷ We consider there are benefits in maintaining a consistent approach to the control mechanisms across distributors within the same jurisdiction and across jurisdictions where possible, subject to specific circumstances and new information that becomes available over time. The benefits of consistency in approach include accessibility for stakeholders, and the ability to benchmark and report.

14.4 Draft decision for standard control services

The following sets out our draft decision on the control mechanism formulae for standard control services and provides further discussion of the parameters of the revenue cap control mechanism. It also discusses our draft decision in relation to:

- deliberately under-recovered revenue
- unpaid network charges from retailer of last resort events
- the reporting of designated pricing proposal charges

¹³ Evoenergy, Attachment 6 Alternative control services, January 2023, pp.24–25.

¹⁴ Power and Water Corporation, 7.02 – Control mechanism formula, January 2023, p.7.

¹⁵ TasNetworks, *Attachment 16 – Control mechanisms*, January 2023, p.10.

¹⁶ Essential Energy, 13.01 Ancillary network services explanatory document, January 2023, p.6; Evoenergy, Attachment 6 Alternative control services, January 2023, pp.24–25; Power and Water Corporation, 7.02 – Control mechanism formula, January 2023, p.7; TasNetworks, Attachment 16 – Control mechanisms, January 2023, p.10.

¹⁷ NER, cl.6.2.5(c)(4), cl.6.2.5(d)(4)

- the reporting of jurisdictional scheme amounts
- the rounding of inputs in annual pricing proposals.

14.4.1 Control mechanism formulae for standard control services

Our draft decision on the formulae gives effect to the control mechanism set out in the final F&A. Figure 14-1 sets out the revenue cap formula for standard control services.

Formula	Equation	where
1.	$TAR_t \ge \sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_t^{ij}$	i = 1,, n j = 1,, m t = 1, 2, 3, 4, 5
2.	$TAR_{t} = AAR_{t} + I_{t} + B_{t} + C_{t}$	t = 1, 2, 3, 4, 5
3.	$AAR_t = AR_t$	t = 1
4.	$AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t)$	t = 2, 3, 4, 5
5.	$B_t = b_t + A_t$	t = 1, 2, 3, 4, 5
6.	$b_t = -0_t \times (1 + WACC_t)^{0.5}$	t = 1, 2, 3, 4, 5
7.	$A_{t} = a_{t-2}^{1} \times (1 + WACC_{t-1}) \times (1 + WACC_{t}) + a_{t-1}^{2} \times (1 + WACC_{t}) + a_{t}^{3}$	t = 1, 2, 3, 4, 5
8.	$WACC_t = (1 + rvWACC_t) \times (1 + CPI_t) - 1$	t = 1, 2, 3, 4, 5

Figure 14-1 Revenue cap formulae

Where:

Variable	Represents
t	the regulatory year with t = 1 being the 2024–25 financial year.
TAR _t	the total annual revenue for year t, calculated as per formula 2 above.
p_{t}^{ij}	the price of component 'j' of tariff 'i' for year t.
q_t^{ij}	the forecast quantity of component 'j' of tariff 'i' for year t.
AR _t	the annual smoothed revenue requirement in the Post Tax Revenue Model (PTRM) for year t.
AAR _t	the adjusted annual smoothed revenue requirement for year t, calculated as per formulae 3 and 4 above.
It	the sum of incentive scheme adjustments for year t. Where applicable, incorporates revenue adjustments relating to the outcomes of:
	 the service target performance incentive scheme (STPIS) (S-factor) in relation to regulatory year t-2
	• the demand management incentive scheme (DMIS) in relation to regulatory year t-2
	 the demand management innovation allowance mechanism (DMIAM) relating to the 2019–24 regulatory control period to be applied in regulatory year t=2 only

Variable	Represents
	 the customer service incentive scheme (CSIS) (H-factor) in relation to regulatory year t-2
	 the export service incentive scheme (ESIS) (E-factor) in relation to the regulatory year t-2
	• any other related incentive schemes as applicable that are to be applied in year t.
B _t	the sum of annual adjustment factors to balance the unders and overs account for year t, calculated as per formula 5 above. It includes:
	 the true-up of any under or over recovery of actual revenue (b-factor) collected through distribution use of system (DUoS) charges calculated using the method outlined in formula 7.
	 Any other bespoke adjustments the AER deems necessary (A-factor). These include but are not limited to: residuals of jurisdictional scheme amounts upon cessation, applicable licence fee payments, or other true-ups not provided for elsewhere. These adjustments will apply the time value of money where appropriate, calculated as per formula 7 above.
Ct	the approved pass-through amounts (positive or negative) for year t, as determined by the AER. It will also include any annual or end of period adjustments for year t.
ΔCPI _t	the annual percentage change in the Australian Bureau of Statistics' (ABS) Consumer Price Index All Groups, Weighted Average of Eight Capital Cities ¹⁸ from December in year t–2 to December in year t–1. For example, for the 2024–25 year, t–2 is December 2022 and t–1 is December 2023.
X _t	the X factor in year t, incorporating annual adjustments to the PTRM for the trailing cost of debt.
b _t	the true-up for the balance of the DUoS unders and overs account in year t, calculated as per formula 6 above.
0 _t	the opening balance of the DUoS unders and overs account in year t as calculated by the method in Appendix A.
WACC _t	the approved weighted average cost of capital (WACC) used in regulatory year t in the DuoS unders and overs account in Appendix A. The WACC is updated annually to apply actual inflation, calculated as per formula 8 above. It also applied to true-up mechanisms to adjust for the time value of money.
A _t	the sum of bespoke adjustments, including the application of the time value of money where appropriate, calculated as per formula 7 above.
at	the bespoke adjustment '1' for year t. Formula 7 above demonstrates the application of the time value of money for different bespoke adjustments relating to different regulatory years.
rvWACC _t	the real vanilla WACC provided in the annually updated PTRM for year t.

¹⁸ 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.

14.4.1.1 Definition of standard control mechanism formula parameters

The final F&A stated that we would define the I, B, C and X factors in our draft decision. These definitions are as follows:

- I factor: This adjustment will continue to adjust revenues for applicable incentive schemes. It will be the sum of STPIS, DMIS, DMIAM, CSIS, and ESIS payments as well as any other future applicable incentive scheme. For avoidance of doubt, this excludes efficiency benefit sharing scheme (EBSS) and capital expenditure sharing scheme (CESS) payments.
- B factor: This adjustment will continue to include true-ups for any under or overrecovery of DUoS. We have added a new component to this definition which will include any other bespoke adjustments that the AER may specify, or that currently exist (for example, true-ups for TasNetworks addressed below, or residuals of jurisdictional scheme amounts addressed in Appendix A).
- C factor: This adjustment will continue to apply to approved cost pass-throughs.
- X factor: This adjustment will continue to incorporate adjustments to the PTRM for the trailing cost of debt.

Overall, we did not make major changes to the definitions for these revenue adjustments. In comparison to our previous final decision, in the I factor, we added newly introduced incentive schemes such as CSIS and ESIS. This change is consistent with Ausgrid's and Evoenergy's proposal.

However, we adjust the presentation of its calculation and the definition of the B factor. Previously the definition of the B factor included a formula to calculate the true-up for actual DUoS revenues in year t (b factor). We have changed this presentation by adding it as formula 6 in Figure 14-1 above.

As part of our change to the definition of the B factor, we also added a catch-all A factor which includes all bespoke adjustments agreed upon by the AER and the distributor. This includes adjustments for the transfer of jurisdictional scheme true-ups when a jurisdictional scheme ends without any other in operation as raised by SA Power Networks in its F&A process, and other payments the distributors make that are not captured anywhere else (e.g. licence fees).¹⁹

14.4.1.2 Bespoke adjustments – TasNetworks

We accept TasNetworks' proposal to include two adjustments in its A factor: the true-up for its Electrical Safety Inspection Service charge (ESISC) and the true-up for its National Energy Market charge (NEMC). These are long-running annual adjustments to TasNetworks' allowed revenue which represents the charges it is obliged to pay to operate in Tasmania. Below, we provide the formulae for its calculation.

Figure 14-2 provides the Electrical Safety Inspection Service charge true-up and National Electricity Market charge true-up for TasNetworks. These amounts will have WACC applied to adjust for the time value of money as per formula 7 of the revenue cap formula above.

¹⁹ SA Power Networks, *Submission - Preliminary position paper F&A 2025-30*, April 2023, pp.6–7.

Formula	Equation	where
1.	$a_{t-1}^1 = \text{ESISC}_{t-1} = (\text{ESISC}a_{t-1} - \text{ESISC}e_{t-1})$	t = 1, 2, 3, 4, 5
2.	$a_{t-1}^2 = \text{NEMC}_{t-1} = (\text{NEMCa}_{t-1} - \text{NEMCe}_{t-1})$	t = 1, 2, 3, 4, 5

Figure 14-2 TasNetworks ESISC and NEMC true-up formulae

Where:

Variable	Represents
ESISCa _{t-1}	the actual Electrical Safety Inspection Service charge (ESISC) for year t-1.
ESISCe _{t-1}	the estimated ESISC for year t-1 as per the amount to be set in the final distribution determination.
NEMCa _{t-1}	the actual National Electricity Market charge (NEMC) for year t-1.
NEMCe _{t-1}	the estimated NEMC for year t-1 as per the amount to be set in the final distribution determination.

14.4.2 Side constraint mechanism

For each regulatory year after the first year of a regulatory period, the distributors are subject to side constraints which limits the annual movements in revenue that can be recovered from a tariff class (a group of customers). This reduces inequitable price shocks for individual customer classes during the regulatory period.

The specific requirement is that the expected weighted average revenue that may be recovered from a tariff class must not exceed the corresponding expected weighted average revenue for the preceding year by more than the permissible percentage.²⁰ 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.²¹ The NER requires us to adjust the permissible percentage to ignore the recovery of certain revenues, such as cost pass through amounts, and to remove (disregard) their impact for determining compliance with the side constraints.²²

In November 2022, we published our final position paper on the side constraint mechanism as part of our annual pricing process review.²³ In that paper we introduced a revised side constraint mechanism which we will apply to this regulatory determination. We undertook the review because:

- distributors had different interpretations of the side constraint mechanisms which led to different outcomes for customers serviced by different distribution networks
- the mechanism occasionally conflicted with other elements of the regulatory framework.

²⁰ NER, cl. 6.18.6.

²¹ NER, cl. 6.18.6(c).

²² NER, cl. 6.18.6(d).

²³ AER, Annual pricing process review – Side constraint mechanism – Final position paper, November 2022.

Our draft decision is to apply this revised side constraint mechanism. The key changes to the side constraint mechanism in comparison to the previous regulatory period are:

- including a Q factor in the mechanism for changes in price attributable to movements in quantities from the preceding year
- including a D factor in the mechanism to ensure the tariff class revenues are comparable to the CPI–X plus 2 per cent threshold.

Figure 14-3 sets out the side constraints formulae to apply for the 2024–29 period.

Formula	Equation
1.	$PP_{t} \ge \frac{SCR_{t}}{SCR_{t-1}}$
2.	$PP_{t} = ((1 + \Delta CPI_{t}) \times (1 - X_{t}) \times (1 + 2\%) - 1) \times D_{t} + AA_{t} + Q_{t} + 1$
3.	$SCR_t = \sum_{i=1}^m \sum_{j=1}^n p_t^{ij} q_t^{ij}$
4.	$SCR_{t-1} = \sum_{i=1}^{m} \sum_{j=1}^{n} p_{t-1}^{ij} q_t^{ij}$
5.	$D_{t} = \frac{AAR_{t-1}}{SCR_{t-1}}$
6.	$AA_{t} = \frac{(I_{t} + C_{t} + B_{t}) - (I_{t-1} + C_{t-1} + B_{t-1})}{SCR_{t-1}}$
7.	$Q_{t} = \left(\frac{TAR_{t-1}}{SCR_{t-1}} - 1\right)$

Figure 14-3 Side constraints formulae

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

Variable	Represents
PPt	the permissible percentage for year t, calculated as per formula 2 above.
SCR _t	the side constraint revenue for year t, calculated as the sum of the products of proposed prices and forecast quantities for year t, calculated as per formula 3 above.
SCR _{t-1}	the side constraint revenue for year t-1, calculated as the sum of the products of prices charged for year t-1 and forecast quantities for year t, calculated as per formula 4 above.
ΔCPI _t	the annual percentage change in the Australian Bureau of Statistics' (ABS) Consumer Price Index All Groups, Weighted Average of Eight Capital Cities ²⁴ from December in year t–2 to December in year t–1. For example, for the 2024–25 year, t–2 is December 2022 and t–1 is December 2023. This is as per the change in CPI used in the revenue cap formulae.

²⁴ 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.

Variable	Represents
X _t	the X-factor for each year of the regulatory control period as determined in the post-tax revenue model, and annually revised for the return of debt update. This is as per the X-factor used in the revenue cap formulae. If X>0, then X will be set equal to zero for the purposes of the side constraint formula.
2%	the additional threshold defined in the NER.
D _t	the adjustment made to the base threshold to create a common base, calculated as per formula 5 above.
AA _t	the annual percentage change in the sum of all annual adjustment factors (I, B and C factors). This is calculated by dividing the total incremental revenues (the difference between the factors used in the total annual revenue formula for regulatory year t and year t-1) by the expected revenues for year t-1 (SCR_{t-1}). This calculation is provided at formula 6 above.
Qt	the adjustment made each year to account for changes in quantities from the preceding year. The Q factor calculation is provided at formula 7 above.
p_{t}^{ij}	the proposed price for component 'j' of tariff 'i' for year t.
q_t^{ij}	the forecast quantity for component 'j' of tariff 'i' for year t.
p_{t-1}^{ij}	the price charged for component 'j' of tariff 'i' for year t-1.
AAR _{t-1}	the adjusted annual revenue requirement for year t-1, as used in the revenue cap formulae in the preceding and current years.
It	the sum of incentive scheme adjustments in year t, as per the revenue cap formulae.
C _t	the sum of approved cost pass through amounts (positive or negative) in year t, as determined by the AER. It will also include any end-of-period adjustments to be made in year t, as per the revenue cap formulae
B _t	the sum of annual adjustment factors for year t, as per the revenue cap formulae. It includes adjustments to balance the unders/overs account, relating to previous under/over-recoveries of revenue.
I _{t-1}	the sum of incentive scheme adjustments in year t-1. This is as per the approved t-1 pricing proposal.
C _{t-1}	the sum of approved cost pass through amounts (positive or negative) in year t-1, as determined by the AER. This is as per the approved t-1 pricing proposal.
B _{t-1}	the sum of annual adjustment factors for year t. It includes adjustments to balance the unders/overs account, relating to previous under/over-recoveries of revenue. This is as per the approved t-1 pricing proposal. For the avoidance of doubt, the B factor for t-1 should be equal to that used to calculate t-1 revenue in the previous pricing proposal and should not be updated for movements in the unders/overs accounts in the year t pricing proposal.
TAR _{t-1}	the total allowable revenue for year t-1, calculated using the revenue cap control formula in the preceding year.

Variable	Represents
t	the forecast regulatory year.

14.4.3 Deliberately under-recovered revenue

We accept there are times when the distributors may decide to recover below their allowed revenue. This contrasts with unintentional under recovery due to a clerical error or 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 unders and overs mechanism and by extension will therefore subsequently not be allowed to be recovered from customers in future years, i.e., increase the total allowable revenue in future years.

This approach was set out in our F&A and is consistent with recent regulatory determinations for distributors in other jurisdictions.

14.4.4 Unpaid network charges resulting from retailer of last resort events

During the current 2019–24 period, we have seen an increase in retailer of last resort (ROLR) events. These events generally involve the insolvency of a retailer, resulting in an unpaid balance of network charges that are not recovered from that retailer.

In such events, distributors can recover these amounts through a cost pass-through. However, due to the substantial number of qualifying cost pass-through events in recent years, we introduced a line item in the unders and overs mechanism to account for these events, removing the administrative burden to both distributors and the AER of a cost passthrough application. We consider the recovery of these amounts to be administrative in nature.

Our draft decision incorporates this new line item into our unders and overs mechanism as applied in recent years.

14.4.5 Reporting on designated pricing proposal charges

We must decide how the distributors will report on the recovery of designated pricing proposal charges for each year of the 2024–29 period and how to account for any under or over recovery of revenue associated with those charges.

We apply a mechanism to facilitate this reporting and account for the true-up of under and over recovery of revenue. This approach is similar to the DUoS revenue unders and overs mechanism and is consistent with the requirements of the NER. It is also consistent with the approach applied to electricity distributors in other jurisdictions. The operation of this method is detailed in Appendix A.

14.4.6 Reporting on jurisdictional scheme amounts

We must decide how the distributors will report on the recovery of jurisdictional scheme amounts for each year of the 2024–29 period and how to account for any under or over recovery of revenue associated with those charges.

We apply a mechanism to facilitate this reporting and account for the true-up of under and over recovery of revenue. This approach is similar to the DUoS revenue under and over recovery mechanism and is consistent with the requirements of the NER. It is also consistent with the approach applied to electricity distributors in other jurisdictions. The operation of this method is detailed in Appendix A.

14.4.7 Rounding of inputs in annual pricing proposal process

When reporting on compliance as part of the annual pricing proposal process each year of the 2024–29 period, we require that certain calculation inputs be used on an unrounded basis while others may be used on a rounded basis. The process for rounding and the specific inputs to be rounded are detailed in Appendix C.

14.5 Draft decision for alternative control services

The following sets out our draft decision on the control mechanism formulae for alternative control services and provides further discussion of the parameters of the price cap control mechanism. It also discusses our draft decision on the addition of new services and transparency in quoted services.

14.5.1 Potential change in classification for metering services

On 30 August the Australian Energy Market Commission (AEMC) published its final decision on the review of the regulatory framework for metering services.²⁵ This decision sets a target of replacing all distributor owned meters with smart meters provided by other parties by 2030. Due to the timing of the AEMC's decision, we have not been able to fully incorporate its findings into our draft decision.

The AEMC's final decision constitutes a material change in circumstances which impacts the distributors' provision, and cost recovery, of metering services. We are conscious these changes also impact the prices customers pay for these services with some customers likely to incur inequitably higher prices if their meters are replaced later in the replacement program. We discuss this further in our draft decision attachments.²⁶

Our draft decision maintains the setting of classifying metering services as alternative control services, with a price cap form of control. However, we consider a reclassification to standard control services and costs recovery through the revenue cap form of control is likely to be more appropriate to reduce material price impacts for customers through the transition of the meter replacement cycle. The AEMC's decision, being a material change in circumstances, permits departure of the classification and form of control as set out in the F&A. We encourage the distributors to engage with stakeholders in considering this change in settings for their revised proposals.

²⁵ AEMC, *Review of the regulatory framework for metering services – final report*, 30 August 2023.

²⁶ See Attachment 16 – Alternative control services for Power and Water Corporation, Attachment 20 – Metering services for Essential Energy, Endeavour Energy, Evoenergy and TasNetworks, and Attachment 20 – Metering services for Ausgrid.

14.5.2 Control mechanism formulae for alternative control services

Our decision on the formulae that give effect to the control mechanism must be as set out in the F&A unless we consider that a material change in circumstances occurs that justifies departing from that approach. We do not consider that such a change has arisen for alternative control services. Figure 14-4 and Figure 14-5 sets out the price cap formulae.

Formula	Equation	where
1.	$\overline{p}_t^i \geq p_t^i$	i = 1,, n t = 1, 2, 3, 4, 5
2.	$\bar{p}_{t}^{i} = \bar{p}_{t-1}^{i} \times (1 + \Delta CPI_{t}) \times (1 - X_{t}^{i}) \times (1 + A_{t}^{i})$	i = 1,, n t = 1, 2, 3, 4, 5
3.	$A_{t}^{\text{metering}} = \frac{\left(1 + A_{t}^{\text{metering}}\right)}{\left(1 + A_{t-1}^{\text{metering}}\right)} - 1$	t = 2, 3, 4, 5
4.	$A'_{t}^{\text{metering}} = \frac{\left(b_{t-1}^{\text{metering}} + b_{t-2}^{\text{metering}}\right)}{\left(AR_{t}^{\text{metering}}\right)}$	t = 2, 3, 4, 5
5.	$\mathbf{b}_{t-1}^{\text{metering}} = \left(0_{t-1}^{\text{estimate}} - 0_{t-1}^{\text{forecast}}\right) \times (1 + \text{WACC}_{t})$	t = 2, 3, 4, 5
6.	$b_{t-2}^{\text{metering}} = \left(0_{t-2}^{\text{actual}} - 0_{t-2}^{\text{estimate}}\right) \times (1 + \text{WACC}_{t-1}) \times (1 + \text{WACC}_{t})$	t = 2, 3, 4, 5
7.	$WACC_t = (1 + rvWACC_t) \times (1 + CPI_t) - 1$	t = 2, 3, 4, 5

Figure 14-4 Price cap formulae (fee-based ancillary network services, metering services, and public lighting)

Where:

Variable	Represents
t	the regulatory year with $t = 1$ being the 2024–25 financial year.
\overline{p}_t^i	the cap on the price of service 'i' for year t.
$p_t^i \\$	the price of service 'i' in year t. The initial value is to be decided in the distribution determination.
\bar{p}_{t-1}^i	the cap on the price of service 'i' for year t-1.
ΔCPI _t	the annual percentage change in the Australian Bureau of Statistics' (ABS) Consumer Price Index All Groups, Weighted Average of Eight Capital Cities ²⁷ from December in year t–2 to December in year t–1. For example, for the 2024–25 year, t–2 is December 2022 and t–1 is December 2023.
Xti	the X-factor for service i in year t. The value of this factor is as specified in Attachment 16 – Alternative control services.
A_t^i	the sum of any adjustments for service 'i' in year t. This includes any bespoke adjustments the AER deems necessary, applying the time value of money where

²⁷ 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.

Variable	Represents
	appropriate. It also includes the true-up mechanism for metering services, calculated as per formulae 3–7 above.
$A_t^{metering}$	the adjustment to metering services price caps to apply the true-up mechanism for metering operating expenditure, calculated as per formula 3 above.
$A'_t^{metering}$	the calculated adjustment to true-up metering operating expenditure for year t, calculated as per formula 4 above.
$A'_{t-1}^{metering}$	the calculated adjustment to true-up metering operating expenditure for year t-1, as applied in the previous year's annual pricing proposal. This is discounted from $A_t^{metering}$ to provide the applicable adjustment. In year 2 (2025–26) the value is zero.
$b_{t-1}^{metering}$	the balancing adjustment for year t-1, calculated as per formula 5 above. This reflects the true-up of estimated opex against forecast opex.
b _{t-2} ^{metering}	the balancing adjustment for year t-2, calculated as per formula 6 above. This reflects the true-up of actual opex against the previously estimated opex. In year 2 (2025–26) the value is zero.
$0_{t-1}^{forecast}$	the forecast opex as included in the metering PTRM for year t-1.
$O_{t-1}^{estimate}$	the estimated opex for year t-1, provided by the distributor in its annual pricing proposal.
$0_{t-2}^{estimate} \\$	the estimated opex for year t-2, as previously provided by the distributor in its previous annual pricing proposal.
O_{t-2}^{actual}	the actual opex for year t-2, as reported in the regulatory information notices (or similar).
WACCt	The approved weighted average cost of capital (WACC) used in regulatory year t in the DuoS unders and overs account in Appendix A. The WACC reflects actual inflation, calculated as per formula 7 above. For the avoidance of doubt, this WACC will be the annually updated WACC used for SCS.

Figure 14-5 Price cap formulae (quoted services)

Formula	Equation	Where
1.	$\bar{\mathbf{p}}_t = \text{Labour}_t + \text{Contractor Services}_t + \text{Materials}_t + \text{Margin}_t + \text{Tax}_t$	t = 1, 2, 3, 4, 5
2.	$Labour_t = Labour_{t-1}(1 + \Delta CPI_t) \times (1 - X_t^i)$	t = 2, 3, 4, 5
3.	$Margin_t = 0.06 \times (Labour_t + Contractor Services_t + Materials_t)$	t = 1, 2, 3, 4, 5

Where:

Variable	Represents
t	the regulatory year with $t = 1$ being the 2024–25 year.
\overline{p}_t	the applicable price cap for the requested service.

Variable	Represents
Labour	the 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 CPI-X, calculated as per formula 2 above.
ΔCPI _t	the annual percentage change in the Australian Bureau of Statistics' (ABS) Consumer Price Index All Groups, Weighted Average of Eight Capital Cities ²⁸ from December in year t–2 to December in year t–1. For example, for the 2024–25 year, t–2 is December 2022 and t–1 is December 2023.
Xti	the X factor for labour rate 'i' in year t. The value of this factor is as specified in Attachment 16 – Alternative control services.
Contractor Services	the 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	the cost of materials directly incurred in the provision of the service, material storage and logistic on-costs and overheads.
Margin	6% multiplied by the sum of labour, contractor services, and materials, calculated as per formula 3 above.
Тах	the tax payable at the company tax rate of 30% on the capital component of the expenditure (revenue less expenses) that incurs a tax liability

14.5.2.1 Metering services true-up mechanism

The AEMC's final decision on their review of the regulatory framework for metering services introduces new requirements for distributors in relation to the planning and implementation of the smart meter rollout. It also incentivises retailers to accelerate the rollout. Both these requirements impact the distributor's operating expenditure and introduce a significant degree of uncertainty relating to those forecasts over the coming 2024–29 period.

As a result of this uncertainty, we have introduced a true-up mechanism to allow distributors to recover their reasonable costs and reduce the risks involved in the smart meter rollout. For more information on the reasoning behind the introduction of this mechanism, see our metering attachments.²⁹

As noted above, we consider the AEMC's final decision to constitute a material change in circumstances to allow for changes to the control mechanism and the formulae that give effect to it. However, we consider that the previously established A factor is appropriate to apply adjustments resulting from the true-up mechanism. Therefore, we have added the true-up mechanism within this A factor.

²⁸ 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.

²⁹ See Attachment 20 – Metering services for Essential Energy, Endeavour Energy, Evoenergy and TasNetworks, and Attachment 20 – Metering services for Ausgrid.

We modelled this true-up mechanism on the abolishment true-up factor introduced for the Victorian gas 2023–28 access arrangements,³⁰ with some minor variations to reflect the different price cap forms of control. This mechanism includes an adjustment in the t-1 year to update for best estimates, similar to our unders/overs mechanisms. This works to reduce volatility of prices over time.

This mechanism does not apply to Power and Water Corporation as they are not subject to the AEMC's review.

14.5.2.2 Definition of alternative control mechanism formula parameters

In our F&A we included two additional components to the quoted services formula: margin and tax. We consider both elements to increase cost reflectivity and consistent with the principle of competitive neutrality.

As part of our F&A we left open the definition of margin and tax in the quoted services formula. Below we outline the submissions we received on the definitions of these components and our draft decision.

Margin component

All distributors agreed that the margin should be applied to labour, contractor services and materials costs only. However, distributors had different proposals for the margin percentage to be applied to these costs. There were two main approaches proposed:

- Using the adjusted nominal vanilla WACC, reflecting the WACC used in the annual pricing process and used in the revenue cap control mechanism which accounts for actual inflation (proposed by Essential Energy and Evoenergy)
- Using a fixed WACC, which can be a fixed percentage (proposed by Power and Water Corporation) or calculated as an average of the WACC forecast (proposed by TasNetworks)

The revenue and pricing principles in the National Electricity Law (NEL) allows for a price or charge for a direct control service (which includes alternative control services) to include a return commensurate with the regulatory and commercial risks involved.

We consider that the most efficient way to calculate a margin of this nature is to use a fixed flat rate of 6%. We consider a flat rate to be transparent and easy to apply, reducing administrative burden compared to applying an updated annual WACC given the differences between the two approaches tends to be immaterial. We note this may differ from current settings in other jurisdictions, and we expect to align those jurisdictions with this decision in time.

Tax component

We included a tax allowance in our F&A to account for the tax liability distributors may incur when they capitalise costs (related to the capital-intensive nature of some quoted services) for tax and accounting purposes. This creates a tax liability for the quoted service based on revenue less depreciation over time.

³⁰ AusNet Services, Access Arrangement 2024–28 Part B, June 2023, p.10.

Essential Energy, Evoenergy, TasNetworks and Power and Water Corporation proposed similar definitions for the tax component.

Our draft decision is to incorporate a similar definition to tax as used for standard control services. We consider that a tax component only be applied to the capital component of the expenditure that incurs a tax liability. We note that we recover payroll tax as part of the cost build-up for labour rates used in quoted services.

14.5.3 Addition of new alternative control services

Distributors should propose changes to their alternative control services as a part of their regulatory proposals. However, we understand there are times where a distributor cannot foresee a specific new service at the time of the regulatory determination. This is especially relevant in public lighting where new technologies are emerging, including more advanced light-emitting diode (LED) lamps and the integration of smart devices in public lighting infrastructure.

During the 2024–29 period, we will allow distributors to propose new services. New services should only be introduced because customers what them (customer driven). Our assessment of new services will include consideration of the extent customers have transparency over the costs of the service as well as the likely benefits to customers from the service.

Where new services are to be introduced that clearly fall within one of the established service groupings, such as public lighting, a quoted price approach is to be adopted with the price to be based on a relevant service within that same service grouping. For example, the price for a new type of public lighting would be based on a relevant public lighting service.

We consider this is consistent with our previous distribution determinations. We stated new alternative control services introduced during a regulatory control period with characteristics that are the same or essentially the same as other alternative control services should be priced as a quoted service until the next regulatory control period.³¹

Prices for new services will be formalised as a part of the annual pricing process. However, we encourage distributors to engage with us as early as possible on any proposed new service.

Prior to submitting their annual pricing proposal, the distributors must submit to the AER:

- a detailed description of the service along with how the new service will be charged,
- the proposed quoted price setting out each cost component consistent with Figure 14-5 above, and
- demonstration of customer engagement and support.

The AER will consider the proposal for inclusion in the relevant annual pricing proposal. This is consistent with our F&A, and regulatory determinations across all NEM jurisdictions.

 ³¹ For examples, see Final Decision - SA Power Networks distribution determination 2020-25 - Attachment 13
 - Control mechanisms - November 2021 – Clean, pp. 17–18; AER - Final decision - Endeavour Energy distribution determination 2019-24 - Attachment 15 - Alternative control services - April 2019, pp. 7–8.

14.5.4 Transparency of quoted services

Our draft decision includes requirements around transparency of billing for quoted services. When charging for quoted services:

- Distributors must provide itemised invoices to the customer or the service recipient. The itemised invoices must show all cost components. At a minimum, invoices must contain information on the cost components to demonstrate compliance with the control mechanism formula for quoted services (see Figure 14-5).
- The charges must be consistent with good industry practice in terms of the resource requirements.

We have made this decision following feedback we received throughout the New South Wales 2019–24 regulatory determinations, particularly from Accredited Service Providers, with regards to a lack of transparency around invoices received. This will aid in achieving consistency between regulatory arrangements for similar services across all jurisdictions.

A Unders and overs mechanism

To demonstrate compliance with the distribution determination applicable to it during the 2024–29 period, distributors must comply with the unders and overs mechanism in their annual pricing proposals.

Separate unders and overs mechanisms must be maintained for each of the following:

- Distribution use of system (DUoS) charges
- Designated pricing proposal charges (DPPC)^{32 33}
- Jurisdictional scheme amounts (JSA)^{34 35}
- Metering services, where under a revenue cap.

The unders and overs mechanism incorporates both an unders and overs statement and an unders and overs account. The unders and overs statement provides the revenues and expenditures (or allowed revenues for revenue caps) and calculates under or over-recoveries. The unders and overs account carries forward under and over-recoveries from previous years, applies the time value of money, and calculates the balancing adjustment to be applied to the revenue cap to balance the account each year.

The unders and overs statement must include the following entries for the most recently completed regulatory year (t-2), the current regulatory year (t-1) and the next (or forecast) regulatory year (t). An example of an unders and overs statement is provided in Table 14-1.

- Forecast/estimated/actual revenue:
 - For DPPC, this will include cross-boundary revenue.
 - To include any deliberate under-recoveries, which will be added to recovered revenue, as this is not able to be recovered in future years (see section 14.4.3 above).
 - To include any unpaid network charges resulting from ROLR events (see section 14.4.4).
- Applicable revenue caps for DUoS charges (and metering services where applicable) these revenue caps are fixed over time and are not updated in subsequent years.
- Forecast/estimated/actual expenditure for DPPC and JSA these items should be itemised as provided for in the annual pricing proposal template.
- The balancing adjustment (b-factor) for each year these adjustments are fixed over time and are not updated in subsequent years.

³² DPPC generally related to amounts passed through by a distributor in relation to the transmission of electricity from or to networks outside of their own. DPPC are specified in more detail in NER clause 11.39.

³³ NER, cll. 6.18.2(b)(6), 6.12.1(19), 6.18.7.

³⁴ Jurisdictional scheme amounts are amounts passed through under a jurisdictional scheme approved by the AER or prescribed in the NER.

³⁵ NER, cll. 6.12.1(20), 6.18.2(b)(6A), 6.18.7A(b) and (c).

		Year t-2	Year t-1	Year t
		(actual)	(estimate)	(forecast)
Revenue from charges	i	100 000	103 000	92 266
Cross-boundary revenue (DPPC only)	ii			
Deliberate under-recoveries	iii	50	50	50
Unpaid network charges (ROLR)	iv	10		
Total revenue	i + ii + iii - iv = A	100 040	103 050	92 316
Total allowable revenue ^a /DPPC or JSA expenditure ^b		98 000	99 000	100 000
Total allowable revenue/Total DPPC expenditure/Total JSA expenditure	В	98 000	99 000	100 000
Total under/over recovery of revenue for regulatory year	A - B = C	2 040	4 050	-7 684
Balancing adjustment (b-factor) made when year was 't' $^{\rm c}$	D	5 000	5 000	-7 684 ^d
Net under/over recovery of revenue for regulatory year	C - D = E	-2 960	-950	0

Table 14-1 Example unders and overs statement (\$'000, nominal)

Notes: (a) Total allowable revenue for a revenue cap should exclude the balancing adjustment applied for revenue under/over recovery for the regulatory year and are therefore expected to equal the sum of the remaining annual adjustments, excluding bt, as set out in Figure 14-1.

(b) DPPC and JSA expenditure will be itemised in their respective unders and overs statement in line with the annual pricing proposal template.

(c) The balancing adjustment applied in the revenue cap for each relevant regulatory year. This is as approved in the relevant pricing proposal and should remain unchanged.

(d) Approved DUoS revenue under/over recovery for regulatory year t.

The unders and overs account must include the following entries for the most recently completed regulatory year (t-2), the current regulatory year (t-1) and the next (or forecast) regulatory year (t). An example unders and overs account is provided in Table 14-2.

- Opening balances for each regulatory year (reflecting the closing balance of the previous year).
- An interest charge for one year on the opening balance for each regulatory year. •
- The net under or over recovery calculated in the unders and overs statement for each regulatory year, and any applicable adjustment to remove under or over recovery amounts from the account.36

³⁶ These adjustments include, but are not limited to, bespoke smoothing arrangements set in our Determination in response to significant unforeseen events, jurisdictional schemes that treat under or over recoveries within the scheme.

- An interest charge for 6 months on the net under or over recovery for each regulatory year.
- The total sum of items 1–4 to derive the closing balance for each regulatory year.

Table 14-2 Example unders and overs account (\$'000, nominal)

		Year t–2	Year t-1	Year t
		(actual)	(estimate)	(forecast)
Adjusted nominal WACC (per cent)	F	5.00%	5.50%	6.00%
Opening balance	G	1 000	3 140ª	7 463
Interest on opening balance	F x G = H	50	173	448
Under/over recovery of revenue for regulatory year	E (from statement)	2 040	4 050	-7 684
Adjustment	I	0	0	0
Interest on under/over recovery for regulatory year	(E – I) x F ^{0.5} = J	50	100	-227
Closing balance	G + H + E + I + J = K	3 140	7 463	0 ^b

Notes: (a) Opening balance is the previous year's closing balance.

(b) Distributors are expected to achieve a closing balance as close to zero as practicable (and ≤0) in their unders and overs accounts in each forecast year in their annual pricing proposals.

Interest charges are to be calculated using the relevant adjusted nominal WACC. The adjusted nominal WACC applied for each year will be the real vanilla WACC approved by the AER in the relevant annual update, escalated for actual inflation for the relevant year.³⁷ This is as applied in the revenue cap formulae set out in Figure 14-1.

Distributor's annual pricing proposals must provide details of calculations in the format set out in Table 14-1 and Table 14-2. In general:

- Amounts provided for the most recently completed regulatory year (t-2) must be audited.³⁸
- Amounts provided for the current regulatory year (t–1) will be regarded as an estimate.
- Generally, these estimates would reflect the approved prices for year t-1 multiplied by the estimated quantities for year t-1.

³⁷ If circumstances require, alternative adjustments for an appropriate cost of capital may be applied following consultation between the AER and relevant distributor(s).

³⁸ 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.

- If not, supporting information should be provided as to how those estimates are calculated and why they should be considered the best estimate of expected revenue for the year.
- Amounts for the next regulatory year (t) will be regarded as a forecast.
- Generally, these estimates would reflect the prices for year t multiplied by the forecast quantities for year t.
- If not, supporting information should be provided as to how those forecasts are calculated and why they should be considered reasonable.

In exceptional circumstances, the unders and overs accounts can accommodate additional years, such as year t– $3.^{39}$

To ensure compliance with the NER and the revenue cap form of control, a closing balance as close to zero as practicable, and below zero, is expected to be achieved in each forecast year t.

Jurisdictional scheme amounts

Jurisdictional scheme amounts are currently mostly made up of amounts related to premium feed-in-tariff schemes. These historical schemes involve distributors paying premium feed-in-tariff rates for eligible customers. Distributors recover amounts to fund these schemes through network tariffs.

Over the coming years, a number of these premium feed-in-tariff schemes will cease. As a result, there may be no ongoing jurisdictional scheme amounts, and true-ups of the recovered revenues may continue in perpetuity in smaller and smaller amounts.

We consider it appropriate that if in a particular year, there is no forecast jurisdictional scheme amounts for that year, or for future years, that any residual amounts in that year will be moved out of the unders and overs account. These amounts will be applied as a bespoke adjustment in the distribution revenue control mechanism and allow the jurisdictional scheme unders and overs account to balance to 0. For the avoidance of doubt, this adjustment will occur in the year following the cessation of a jurisdictional scheme, being the first year that there the forecast jurisdictional scheme amounts are \$0, and where there are no continuing jurisdictional scheme amounts for future years.

If at any point jurisdictional schemes are subsidised, the jurisdictional scheme amounts will still be treated as normal in the unders and overs mechanism, and revenue will be recovered from a different source. These amounts will still need to be 'trued-up', to ensure the distributor does not recover more or less than they otherwise should.

³⁹ Subject to AER approval. Any amounts provided for additional years prior to t-2 must be audited.

B Annual pricing proposals

In line with our approach established through the annual pricing process review,⁴⁰ the AER will provide pre-filled pricing proposal models for distributors to use in submitting within period annual pricing proposals.

In January of years 2–5 of the 2024–29 period, we will provide distributors with pre-filled pricing proposals models to be used when submitting pricing proposals. These pre-filled models will include annual adjustments, revenue and cost true-up amounts from regulatory information notices or other sources, CPI and annual return on debt updates, and other components known by the AER. Pre-filling this data allows for the AER to verify inputs prior to the short timelines allowed within the pricing approval process.

We will also use these models during our pre-lodgement engagement process with distributors during February and March. This process is used to confirm pre-filled inputs and engage on other inputs known to the distributor at this time such as consumption forecasts. This process will also allow us to confirm the correct application of the price cap mechanisms for alternative control services in advance of the pricing proposal submissions.

These processes will lead to annual pricing proposals that are more likely to be capable of approval without revision and able to be approved in a timely manner.

In their pricing proposals, distributors should also:

- provide a completed 'Statement of Compliance' using the AER's template,
- provide a confidentiality template using the AER's template,
- provide public versions of any confidential models or documents for publication,
- use version numbers in filenames for easy identification of revision by stakeholders (in the format of v1, v2, v3, etc.), and
- provide details on methodologies and any supporting information for any forecasts provided (e.g., consumption forecasts).

The AER will set expectations prior to each process, which may outline further things for the distributors to consider when submitting pricing proposals.

Year 1 pricing

In the first year of 2024–29 period, distributors are required to submit an initial pricing proposal. The NER requires this initial pricing proposal to be submitted within 15 business days of the AER publishing a distribution determination. Generally, this means that initial pricing proposals are received by the AER in late May and approved in mid to late June.

The timing of these initial pricing proposals does not allow appropriate time for distributors and retailers to engage with approved prices in advance of application for 1 July. It also does not allow for our default market offer to reflect approved network prices.

⁴⁰ AER, Annual pricing process review – Final position paper, December 2022.

To ensure a timely approval of network prices for the first year of the 2024–29 period, we will be looking to apply elements of our established process for years 2–5 to first year pricing. This will include exploring the availability of data related to our determination. We will engage further with distributors on this process in advance of the final decision.

C Rounding

The following sets out our draft decision on how distributors should use calculation inputs (i.e., whether on a rounded or unrounded basis) in their annual pricing proposals to demonstrate compliance.

Unrounded inputs to be used in calculations

'Unrounded', for this purpose, will be taken to mean at least 15-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 15 digits to express (such as 2.25 being equivalent to 2.2500000000000) but will meet the definition of 15-digit floating point precision.

Unrounded values should be maintained throughout calculations. 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 appropriate, inputs should be calculated as an alternative to using a rounded value.

For example, inflation should be calculated based around the CPI tables as provided by the ABS, 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 14-3 sets out the required level of precision for an 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%

Table 14-3 Demonstration of inflation calculation

Unrounded inputs include all those not specified below as suitable to be rounded in a given situation.

Instances where rounding is acceptable

In general, rounding in calculations must be done on a 'nearest' basis. 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). An exception to this for prices charged by the distributor is noted below, as these must be less than or equal to the price cap.

Prices under a price cap or a revenue cap should be input as billed. That is, if billing systems calculate charges based on a value rounded to 4 decimal places, then the input into the pricing proposal for actual or proposed prices should also be rounded to 4 decimal places to reflect the actual prices charged.

Price cap control mechanism formulae

When applying a price cap, the value should be rounded to the nearest two decimal places each year. When calculating the value of the price cap for the following period, the rounded value of the previous year's price cap must be used to determine the value of the new price cap to ensure consistency in the price cap from year-to-year.

Table 14-4 Demonstration of price cap calculation (with rounding)

	Required Precision
\overline{p}_{t-1}^{i}	\$23.28
X factor (example: should be taken from model)	-7.12546236955321%
ΔCPI _t	2.23015165031222%
\overline{p}_{t}^{i} (unrounded)	\$25.4938708296164
\overline{p}_{t}^{i} (rounded)	\$25.49

Prices charged by the distributor 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 the price cap. 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 the avoidance of ambiguity, where a price is expressible as a rate for a period of time, rounding of the price cap, and the demonstration of compliance, will apply to the largest relevant time period. So the price of 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 if the regulatory year to which the price applies is a leap year. This resulting daily rate may be expressed on a rounded basis (with discretion on the appropriate level of decimal places to apply) but must be based on a rounding to the nearest decimal place.

Shortened forms

Term	Definition
AEMC	Australian Energy Market Commission
ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
CESS	capital expenditure sharing scheme
CPI	consumer price index
CSIS	customer service incentive scheme
DMIAM	demand management innovation allowance mechanism
DMIS	demand management incentive scheme
DPPC	designated pricing proposal charges
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ESIS	export service incentive scheme
F&A	framework and approach
JSA	jurisdictional scheme amounts
LED	light-emitting diode
NEL	national electricity law
NEM	national electricity market
NER	national electricity rules
opex	operating expenditure
PTRM	post-tax revenue model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital