FINAL DECISION

CitiPower
Distribution Determination
2021 to 2026

Attachment 16
Alternative control services

April 2021

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's final decision on the distribution determination that will apply to CitiPower for the 2021–26 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 – Customer Service Incentive Scheme

Attachment 13 – Classification of services

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Attachment A – Negotiating framework

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16 Alternative control services

This attachment sets out our final decision on prices, or revenues, CitiPower is allowed to charge, or recover from, customers for the provision of alternative control services (ACS):

- ancillary network services,
- public lighting services, and
- metering services.

Alternative control services are customer specific or customer requested services and so the full cost of the service is attributed to that particular customer, or group of customers, benefiting from the service. We set service specific prices or revenues to provide a reasonable opportunity to the distributor to recover the efficient cost of each service from customers using that service.

For more information on the classification of services and the form of control applied to each of the above services, see Attachment 13 − Classification of services, Attachment 14 − Control mechanisms and/or our final *Framework and Approach* (F&A) paper for the Victorian distributors.[1]

16.1 Ancillary network services

Ancillary network services share the common characteristic of being non-routine services provided to individual customers as requested. Our F&A paper outlines several types of services that can be considered as meeting this broad definition.[2] For ease of reference, ancillary network services in this attachment is to be taken to refer to the following service groupings, unless further explanation is provided:[3]

- Auxiliary metering services
- Basic connection services
- Connection application and management services
- Network ancillary services.

Ancillary network services are either charged on a fee or quotation basis, depending on the nature of the service.

We generally determine fee-based service price caps for the next regulatory control period as part of our determination, based on the cost inputs and the average time

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1 AER, *Final framework and approach: AusNet Services, CitiPower, Jemena, Powercor and United Energy: Regulatory control period commencing 1 January 2021*, January 2019.

2 AER, *Final framework and approach: AusNet Services, CitiPower, Jemena, Powercor and United Energy: Regulatory control period commencing 1 January 2021*, January 2019, pp. 29–34 and 100–104.

3 AER, *Final framework and approach: AusNet Services, CitiPower, Jemena, Powercor and United Energy: Regulatory control period commencing 1 January 2021*, January 2019, pp. 29–34 and 105–110.

taken to perform each service. These services tend to be homogenous in nature and scope, and can be costed in advance of supply with reasonable certainty.

By comparison, prices for quoted services are based on quantities of labour and materials, with the quantities dependent on a particular task. Prices for quoted services are determined at the time of a customer's enquiry and reflect the individual requirements of the customer's service request. For this reason, it is not possible to list prices for quoted services in our decision. However, our final decision sets labour rates to be applied to ancillary network services provided on a quotation basis.

16.1.1 Final decision

Fee-based and quoted services

Our final decision, is to:

- Not accept CitiPower's proposed price for the 'Meter accuracy test - additional meters' service. We have substituted a price which we consider reasonably reflects the efficient costs of providing this service.
- Accept CitiPower's proposed price for its 'Failed field visit for lower cost services'. We are also satisfied with the clarification of when the respective prices for 'Failed field visit for lower cost services' and 'Failed field visits (complex tasks)' would apply.
- Accept CitiPower's clarification of when a request for the 'Access to meter data' service is free of charge, and when a quoted service charge would apply.
- Not accept that CitiPower's proposed prices for the 'Installation of nightwatchman lights' services reasonably reflect the efficient costs of providing these services. Instead, we require CitiPower to charge for the 'Installation of nightwatchman lights' services on a quoted basis. We note providing these services on a quoted basis will ensure a standardised approach across relevant Victorian distributors.[4] This outcome satisfies AGL's request that distributors provide standardised and simplified services (see section 16.1.4.3).
- Accept all other aspects of CitiPower's proposed prices for fee-based services.
- Accept all of CitiPower's proposed labour rates for quoted services.

In our final decision, we adjust the prices for year one of the 2021–26 regulatory control period for actual inflation so the prices for the 2021–22 regulatory year are in nominal terms (see Appendix A of this attachment). We also escalated the labour rates for quoted services by our final decision labour price growth forecast for 2021–22.

[4] CitiPower, Powercor and United Energy proposed to install nightwatchman lights as an alternative control service in the 2021–26 regulatory control period. Jemena and AusNet Services no longer install nightwatchman lights but offer a service for the operation and maintenance of existing installations.

Note on proposal of new services at the revised proposal stage

CitiPower only proposed the 'Installation of nightwatchman lights' services—and associated prices—in its revised proposal.

Introducing services in revised proposals limits the extent to which stakeholders can consult and provide comments on the proposal. Our consumer engagement guideline highlights the significance of customer engagement for expenditure proposals.[5]

Stronger consumer engagement can assist in the assessment of service providers' expenditure proposals, and can raise alternative views on matters such as service priorities, capital expenditures and price structures.

X factors for ancillary network services

We determine the prices and labour rates for CitiPower's ancillary network services in the first year of the 2021–26 regulatory control period. For each year thereafter, the prices and labour rates are determined by a price cap control mechanism that adjusts prices for inflation, an X factor and any relevant adjustments. Our final decision price cap control mechanism is set out in Attachment 14 – Control mechanisms.

As ancillary network services have a high share of labour and labour-related inputs, we use labour price growth forecasts as the ancillary network services X factor. In particular, we average wage price index growth forecasts from Deloitte Access Economics and BIS Oxford Economics to determine the X factors.

We have updated the labour price growth forecasts for our final decision to include the most recent forecasts. Our final decision X factors for ancillary network services are set out in Table 16.14 in Appendix A of this attachment.

16.1.2 CitiPower's revised proposal

CitiPower accepted our draft decision on the prices for its fee-based services and the labour rates for its quoted services.[6] CitiPower's revised proposal included a schedule of prices that is largely consistent with our draft decision.[7]

In response to our draft decision, CitiPower proposed two new prices for:[8]

- Failed field visit for lower cost services.
- Meter accuracy test - additional meters services.

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5 AER, *Better regulation: Consumer engagement guideline for network service providers*, November 2013, p. 5.

6 Our draft decision adjusted the business-hours rates from CitiPower's initial proposal downward, but largely accepted the after-hours rates. See AER, *Draft decision: CitiPower distribution determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020, pp. 5–21.

7 CitiPower, *Revised regulatory proposal 2021–26: APP09 ACS charges*, December 2020, pp. 5–7.

8 CitiPower, *Revised regulatory proposal 2021–26*, December 2020, pp. 127–129; CitiPower, *Revised regulatory proposal 2021–26: APP09 ACS charges*, December 2020, p. 5.

For quoted services, CitiPower clarified where it would charge the 'Access to meter data' service on a quoted basis.[9]

CitiPower also proposed two new 'Installation of nightwatchman lights' services which were previously subject to a ring-fencing waiver during the 2016–20 regulatory control period.[10]

CitiPower's revised proposal did not comment on the X factors that apply to its ancillary network services.[11]

16.1.3 Assessment approach

The regulatory framework for assessing alternative control services is less prescriptive than for standard control services. That is, there is no requirement to apply the building block model exactly as prescribed in Part C of the National Electricity Rules (NER).[12]

On this basis, our approach involves an assessment of the efficient costs for providing ancillary network services. Labour costs are the major input in the cost build-up of prices for ancillary network services. Therefore, our assessment focusses on comparing CitiPower's proposed labour rates against maximum total labour rates, which we consider efficient.

Where CitiPower's proposed labour rates exceed our maximum efficient labour rates, we apply our maximum efficient labour rates to determine prices. We follow this assessment process for services provided on a fee or quotation basis.

We also considered relevant stakeholder feedback raised throughout the consultation process and benchmarked CitiPower's proposed ancillary network services prices against its prices for the 2016–20 regulatory control period and other relevant distributors. We made further adjustments to CitiPower's ancillary network services prices where we considered it appropriate to do so.

Origin Energy noted in its submission that alternative control services can impose significant costs on customers. As such, Origin Energy appreciate the efforts made in examining the underlying cost structures associated with alternative control services.[13]

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9 CitiPower, *Revised regulatory proposal 2021–26*, December 2020, pp. 127–129; CitiPower, *Revised regulatory proposal 2021–26: APP09 ACS charges*, December 2020, p. 5.

10 CitiPower, *Revised regulatory proposal 2021–26*, December 2020, pp. 127–129; CitiPower, *Revised regulatory proposal 2021–26: APP09 ACS charges*, December 2020, p. 5.

11 CitiPower, *Revised regulatory proposal 2021–26*, December 2020, p. 62; CitiPower, *Revised regulatory proposal 2021–26: APP09 ACS charges*, December 2020, p. 7.

12 NER, cl. 6.2.6(c).

13 Origin Energy, *Submission on the Victorian EDPR Revised proposal and draft decision 2021–26*, January 2021, p. 2.

16.1.4 Reason for final decision

Sections 16.1.4.1 to 16.1.4.2 discuss our reasons for our final decision on CitiPower's revised proposal in response to requirements in our draft decision or where it proposed new matters not considered in our draft decision.

Section 16.1.4.3 sets out our consideration of issues raised by AGL on the regulation of ancillary network services in general.

16.1.4.1 Fee-based services

Meter accuracy test – additional meters

We do not accept CitiPower's proposed price of $233.22 ($2020–21) for the 'Meter accuracy test - additional meters' service. We have substituted a price of $219.51 ($2020–21) which we consider reasonably reflects the efficient costs of providing this service.

As requested in our draft decision, CitiPower's revised proposal included a price for the 'Meter accuracy test – additional meters' service. CitiPower proposed a price of $233.22 ($2020–21) for each additional meter test. Our analysis indicates CitiPower derived the revised proposal price by taking the volume weighted average of the approved 2020 prices for the 'Meter accuracy test - single phase - additional meters' service and 'Meter accuracy test - multi phase - additional meters' service.

However, this method derives a price for this service that is not on the same basis as the other prices in our draft decision, which CitiPower accepted.[14] That is, we consider the approved 2020 prices should be escalated by consumer price index (CPI) and X factor to adjust the prices to be on the same basis as the initial proposal. This price should then be reduced by 8.3 per cent as per our draft decision —which reflected our downward adjustment to CitiPower's proposed labour inputs.[15] This results in a price of $219.51 ($2020–21).

We raised this inconsistency with CitiPower who agreed with our approach to determine the 'Meter accuracy test – additional meters' service price of $219.51 ($2020–21).[16]

Failed field visit

We accept CitiPower's proposed price for 'Failed field visit for lower cost services' reasonably reflects the efficient costs of providing the service. We are also satisfied with CitiPower's clarification of when the respective prices for 'Failed field visit for lower cost services' and 'Failed field visits (complex tasks)' would apply.

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14 CitiPower, *Revised regulatory proposal 2021–26*, December 2020, p. 127.

15 AER, *Draft decision: CitiPower Distribution Determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020, p. 14.

16 CitiPower, *Information request #079*, 25 January 2021.

In response to our draft decision, CitiPower proposed a price of $29.41 ($2020–21) for the 'Failed field visit charge for lower cost services' equal to the price for its 'Special reading' service. This is consistent with the requirements of our draft decision which considered the price should be the same.[17]

CitiPower's revised proposal also set out the different circumstances for when the respective prices for 'Failed field visit for lower cost services' and 'Failed field visits (complex tasks)' would apply.[18]

We consider CitiPower's clarification is reasonable. It ensures the relevant wasted visit fee is not higher than the price for the requested service which addresses the concerns AGL and Origin Energy raised in response to CitiPower's initial proposal.[19]

16.1.4.2 Quoted services

Quoted charges for access to meter data

We are satisfied with CitiPower's clarification of when a request for the 'Access to meter data' service is free of charge, and when a quoted service charge would apply.

CitiPower initially proposed to offer the 'Access to meter data' service free of charge, except for cumbersome requests which would be provided as a quoted service.[20]

In our draft decision, we considered it was unclear what constitutes a cumbersome request and requested CitiPower to provide the parameters and definitions to distinguish between services that are free and those that incur a charge on a quoted basis.

CitiPower's revised proposal clarified there is no charge for non-cumbersome requests, which involve only one meter. Examples include:[21]

- a customer requesting their own meter data, or
- a customer requesting data for one of CitiPower's zone substations.

CitiPower classified cumbersome requests to be any other data request that requires an aggregation of meters using network or other geospatial information, and requires more than 10 hours to complete. For such requests, CitiPower would charge for the 'Access to meter data - cumbersome requests' service on a quoted basis.[22]

We consider these terms are reasonable and accept CitiPower's revised proposal.

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17 AER, *Draft decision: CitiPower distribution determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020, pp. 6–7 and 15–17.

18 CitiPower, *Revised regulatory proposal 2021–26*, December 2020, p. 128.

19 AER, *Draft decision: CitiPower distribution determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020, p. 16.

20 CitiPower, *Regulatory proposal 2021–26*, January 2020, p. 142.

21 CitiPower, *Revised regulatory proposal 2021–26*, December 2020, p. 129.

22 CitiPower, *Revised regulatory proposal 2021–26*, December 2020, p. 129.

Installation of nightwatchman lights

We do not accept that CitiPower's proposed prices for the 'Installation of nightwatchman lights' services reasonably reflect the efficient costs of providing the services. Instead, through our engagement with CitiPower, we agreed these services will be provided on a quoted basis which will result in more cost reflective and efficient prices for customers.

We have classified these services as quoted services for Powercor and United Energy, ensuring a standardised approach across the relevant Victorian distributors. This outcome satisfies AGL's request that distributors provide standardised and simplified services (see section 16.1.4.3).

In its revised proposal, CitiPower included prices for two new 'Installation of nightwatchman lights' services with the price depending on the type of light:

- installation of nightwatchman lights (light-emitting diode (LED) medium output): $2,597.10 ($2020–21)
- installation of nightwatchman lights (LED high output): $3,115.20 ($2020–21).

CitiPower clarified the prices are for installation of the lights only.[23] Once installed, CitiPower maintains and repairs these assets at no cost to the customer.[24]

Our analysis showed CitiPower's proposed prices are significantly higher than similarly-named services from other distributors in the National Electricity Market (NEM). For example, the NSW distributors' fee for installing nightwatchman lights are all under $500 per light (although Endeavour Energy's installation fee for short term installations are over $1,000—which is still significantly less than CitiPower's fees).[25]

We note similarly-named ancillary network services may differ as to the exact nature of the services provided. For example, services named 'Security lighting' or 'Nightwatchman lights' could involve installation and/or ongoing operation and maintenance depending on the distributor. Differing jurisdictional obligations may also contribute to price differentials for similarly-named services.

We requested CitiPower to provide information on the costs that constitute its proposed prices for the 'Installation of nightwatchman lights' services.[26]

CitiPower noted its prices are based on costs comprising approximately 70 per cent labour and 30 per cent materials. Overheads contribute approximately 11 per cent to

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23 CitiPower, *Information request #084*, February 2021.

24 CitiPower, *Information request #090*, February 2021.

25 Ausgrid, *Pricing proposal for the financial year ending June 2021: Appendix B: Alternative control services fee schedule*, April 2020, p. 11; Endeavour Energy, *Pricing proposal 1 July 2020–30 June 2021*, May 2020, p. 120; Essential Energy, *Pricing proposal: Price schedule for Ancillary Network Services 1 July 2020*, May 2020, p. 7.

26 AER, *CitiPower - Information request #084,* February 2021.

costs. However, CitiPower stated that providing a more detailed cost breakdown was not practicable as it has not installed any nightwatchman lights in the last five years.[27]

CitiPower also considered the service could be charged on a quoted basis or equal to United Energy's proposed fee-based price ($1,839.05, $2020–21). CitiPower considered United Energy's price efficient as it is based on market contracts.[28]

Under the circumstances, we consider charging the 'Installation of nightwatchman lights' service on a quoted basis would be more cost reflective and result in more efficient prices for customers. The total charge for a quoted service depends on the exact nature of the request. This assists customers understanding the specific costs of the service and the greater transparency would aid in resolving any cost disputes.

In providing these services, CitiPower needs to demonstrate compliance with the price cap formula for quoted services, which comprises labour, materials and contractor services. Our final decision price cap control mechanism is set out in Attachment 14 – Control mechanisms.

16.1.4.3 Issues raised on the regulation of ancillary network services

In its submission, AGL considered there is scope to improve the regulation of ancillary network services by standardising and simplifying the services that distributors offer.[29] This would allow retailers operating across the five distribution regions in Victoria to streamline their operations. For example, AGL noted how each Victorian distributor had different criteria on how they charged their connection service fees.

We agree with the feedback from stakeholders, such as AGL, there is potential to standardise and simplify the ancillary network services offered across distributors and even across jurisdictions. The different naming conventions, criteria for services, and service descriptions across distributors makes it difficult for us and other stakeholders to compare and benchmark prices. The standardisation and simplification of ancillary network services is an issue that merits further investigation in the future.

AGL further noted that it was important for distributors to justify differences in their after-hours charges with their business-hours charges. AGL considered distributors should not automatically assume their after-hours charges can be automatically marked up by 75 per cent.[30] This was in reference to the Marsden Jacob recommendation that after-hours labour rates be capped at 1.75 times the relevant ordinary rate.

In CitiPower's case, the mark-up on after-hours fees for fee-based services ranges between 19 per cent and 39 per cent compared to its proposed prices for business hours. We consider this to be reasonable as labour rates would tend to be higher

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27 CitiPower, *Information request #084,* February 2021.

28 CitiPower, *Information request #084:* February 2021.

29 AGL, *Submission on the Victorian EDPR Revised Proposal and draft decision 2021–26*, January 2021, pp. 2–3.

30 AGL, *Submission on the Victorian EDPR Revised Proposal and draft decision 2021–26*, January 2021, p. 2.

outside of normal working hours. In other words, CitiPower's proposed after-hours rates did not require any adjustment due to our cap. We will continue to monitor the after-hours mark-ups in future determinations.

16.2 Metering

We are responsible for the economic regulation of the regulated metering services provided by the Victorian distributors. Metering services include the maintenance, reading, data services and recovery of capital costs related to installing meters.

Metering assets are used to measure electrical energy flows at a point in the network to record consumption for the purposes of billing, and include:

- type 5 (interval) and type 6 (accumulation) meters, including meters installed as part of the Advanced Metering Infrastructure (AMI or smart metering) program in Victoria, which are classified as type 5-6 meters, and
- type 7 meters, which relate to unmetered connections with predictable energy consumption patterns (such as public lighting connections).

Unlike other jurisdictions in the NEM, the Victorian distributors are the monopoly providers of most metering services, including smart metering services. Since 2017, metering services have become contestable services in some jurisdictions and can be provided by a retailer or a third party instead, but not in Victoria.[31]

CitiPower currently has more than 341 000 smart meters across its network, covering 97.5 per cent of its residential customers.[32]

In this section, we explain our final decision for CitiPower on the following metering services:

- Type 5 and 6 (Inc. smart metering) services, and
- Metering exit fees.

Our final decision on other regulated metering services (for example, type 7 metering services and auxiliary metering services other than metering exit fees) is set out in section 16.1.1 on ancillary network services.

16.2.1 Final decision

Our final decision is to:

- Not accept CitiPower's revised proposal to reallocate 88 per cent of its communication infrastructure operating expenditure (opex) and communication

[31] In some instances, a customer is charged for metering services from both the distributor and retailer. More information on these arrangements can be found in the AER's distribution determination for each distributor.

[32] CitiPower, *Regulatory Proposal 2021–26*, January 2020, p.133.

devices annual program capital expenditure (capex) for revenue-capped type 5 and 6 (incl. smart metering) services to standard control services.

We apply our draft decision allocations of these costs being 75 per cent to alternative control services and 25 per cent to standard control services.

- Not accept CitiPower's revised proposal to allocate 100 per cent of the costs to standard control services for upgrading AMI communications from 3G to 5G.

  We apply our draft decision allocations of these costs being 10.1 per cent to alternative control services and 89.9 per cent to standard control services.

- Not accept CitiPower's proposed metering exit fees.

  We substitute alternate metering exit fees based on our changes to forecast capex and opex.

In our final decision, we adjust CitiPower's metering model to derive charges for year one (2021–22) of the 2021–26 regulatory control period for:

- actual inflation and inflation forecast consistent with standard control services,
- our final decision labour price growth forecasts, and
- our final decision nominal vanilla weighted average cost of capital (WACC) (see Attachment 3 - Rate of return).

Our final decision also includes an adjustment in the first year (2021–22) of the 2021–26 regulatory control period to true-up the allowed revenue amounts we set for the six-month extension period (see section 16.2.1.5).

16.2.1.1 Allocation of AMI communication costs and 3G upgrade costs

Our final decision on the allocation of AMI communication costs and 3G upgrade costs between alternative and standard control services is summarised in Table 16.1 below.

Table 16.1 Final decision – CitiPower allocation of AMI communication costs

Cost Category		Revised Proposal		Final Decision	
		SCS	ACS	SCS	ACS
AMI communication	Infrastructure Opex	88%	12%	25%	75%
	Communication device annual capex costs	88%	12%	25%	75%
3G upgrade costs	5G upgrade capex	100%	0%	89.9%	10.1%

Source: AER analysis; CitiPower, *Revised Regulatory Proposal 2021–26 - Supporting document - MOD 11.04 - Metering Cost Model*, December 2020.

Note: ACS = alternative control services and SCS = standard control services

16.2.1.2 Type 5 and 6 (incl. smart metering) services revenue

Our final decision allows a revenue requirement for type 5 and 6 (incl. smart metering) services for the 2021–26 regulatory control period of $105.96 million ($ nominal) compared to CitiPower's revised proposal of $101.63 million ($ nominal).

Table 16.2 provides the building block components that make up the total revenue requirement.

Table 16.2 Final decision building block components ($ million, nominal)

	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Return on Capital	3.47	3.18	2.91	2.57	2.24	14.37
Return of Capital (regulatory depreciation)	9.37	10.12	10.92	11.69	12.50	54.59
Operating Expenditure	5.89	6.10	6.33	6.55	6.80	31.67
Revenue Adjustments	-	-	-	-	-	-
Net Tax Allowance	1.09	1.03	1.04	1.10	1.14	5.39
Annual Revenue Requirement (unsmoothed)	19.81	20.43	21.19	21.91	22.67	106.02
X factor	20.55%	-0.75%	-0.75%	-0.75%	-0.75%	
Smoothed revenue	20.05	20.61	21.18	21.76	22.36	105.96

Source: AER, *Final decision CitiPower - distribution determination 2021–26 - Metering PTRM*, April 2021.

(a) Opex includes debt raising costs.

(b) The X factor for metering services from 2022–23 to 2025–26 will be revised to reflect the annual return on debt update. Under the CPI–X framework, the X factor measures the real rate of change in annual expected revenue from one year to the next. A negative X factor represents a real increase in revenue. Conversely, a positive X factor represents a real decrease in revenue.

Having calculated the metering revenue requirement for the 2021–26 regulatory control period, we smooth the revenue for each regulatory year across that period. This step reduces revenue variations between years, and calculates the expected revenue and X factor for each year. The X factors equalise (in net present value terms) the total expected revenues to be earned by the distributor with the total revenue requirement for the 2021–26 regulatory control period. For CitiPower, this NPV is $92.87 ($2020–21).

16.2.1.3 Metering charges

Our final decision will lead to a higher net present value of CitiPower's total metering revenue (smoothed) over the 2021–26 regulatory control period compared to that proposed by CitiPower in its revised proposal. As metering services are subject to a

revenue cap,[33] we have not set metering charges in this final decision. Actual metering charges will be approved during our annual pricing process.

Broadly we expect the price path to follow the X factors included in Table 16.2 and Table 16.3. Table 16.3 provides the first year adjustment (2021–22) relative to the revenues in the last year of the 2016–20 regulatory control period and X factors for remaining years of 2021–26 regulatory control period. We further note that negative first year adjustments and X factors reflect increases in revenues due to the CPI–X revenue control formula.

Table 16.4 sets out the expected or 'smoothed' revenue for the 2021–26 regulatory control period.

Table 16.3 Final decision first year adjustments and X factors for remaining years of the 2021–26 regulatory control period (per cent)

	2021–22	2022–23	2023–24	2024–25	2025–26
Proposal	19.40	0.00	0.00	0.00	0.00
Draft Decision	21.16	0.00	0.00	0.00	0.00
Revised Proposal	23.48	0.00	0.00	0.00	0.00
Final Decision	20.55	-0.75	-0.75	-0.75	-0.75

Note: The first year adjustment is calculated from approved 2020 revenue, and indexed to $2020–21 for comparison.

Source: CitiPower, *Regulatory Proposal 2021–26 - Supporting document - MOD 11.02 - Metering PTRM and exit fees 2021–26*, January 2020; AER, *Draft decision CitiPower - distribution determination 2021–26 - Metering PTRM - September 2020*; CitiPower, *2021–26 Regulatory Proposal - Supporting document - RRP MOD 11.02 - Metering PTRM and exit fees 2021–26*, December 2020; AER, *Final decision CitiPower - distribution determination 2021–26 - Metering PTRM - December 2020.*

Table 16.4 Final decision smoothed revenue 2021–26 ($ million, nominal)

Smoothed revenue	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Proposal	20.33	20.81	21.31	21.82	22.35	106.63
Draft Decision	19.97	20.45	20.93	21.43	21.94	104.71
Revised Proposal	19.38	19.84	20.32	20.80	21.29	101.63
Final Decision	20.05	20.61	21.18	21.76	22.36	105.96

Source: CitiPower, *Regulatory Proposal 2021–26 - Supporting document - MOD 11.02 - Metering PTRM and exit fees 2021–26*, January 2020; AER, *Draft decision CitiPower - distribution determination 2021–26 - Metering PTRM - September 2020*; CitiPower, *Regulatory Proposal2021–26 - Supporting document - RRP MOD 11.02 -*

[33] AER, *Final framework and approach: AusNet Services, CitiPower, Jemena, Powercor and United Energy,* January 2019. See also attachment 14 of this draft decision.

Metering PTRM and exit fees 2021–26, December 2020; AER, *Final decision CitiPower - distribution determination 2021–26 - Metering PTRM - December 2020.*

16.2.1.4 Metering Exit fees

Our final decision metering exit fees reflect adjustments we made to the building block components for type 5 and 6 (incl. smart metering) revenue. These metering exit fees reflect:

- apportionment of the meter, IT, communications, and any other regulated asset base to reflect foregone revenue based on the average remainder of life of an asset
- administration costs of removing the meter
- tax allowances, and other relevant costs.

These costs are sourced from the calculations of the building block components for type 5 and 6 (incl. smart metering) revenue, and are therefore subject to the same assessment and reasoning as for the type 5 and 6 (incl. smart metering) revenue.

Our final decision metering exit fees for 2021–22 are set out in Appendix B. Prices for subsequent years will be determined by the control mechanism formula set out in Attachment 14 – Control Mechanisms. Our final decision on the X factors for metering exit services is also set out in Appendix B.

16.2.1.5 True-up for six month extension period

Our final decision also includes an adjustment of –$16,464 ($2020–21) in the first year (2021–22) of the 2021–26 regulatory control period to true-up the allowed revenue amounts we set for the six-month extension period. We used a placeholder WACC to determine the allowed revenues for the six-month extension period. Now that the actual WACC has been determined for this period, an adjustment is required to account for the differences between the placeholder and actual WACCs.

The adjustment will be made through the C factor as set out in Attachment 14 – Control mechanisms. The true up for the placeholder WACC is discussed further in Attachment 3 – Rate of return.

16.2.2 CitiPower's revised proposal

CitiPower did not accept most aspects of our draft decision. which primarily related to our allocation of type 5 and 6 IT and communication system costs form alternative to standard control services.

16.2.2.1 Cost allocation

CitiPower did not accept our draft decision to allocate 75 per cent of AMI communication infrastructure opex and communication devices annual program capex to alternative control services and 25 per cent to standard control services. CitiPower

also did not accept our draft decision to allocate 10.1 per cent of its 5G upgrade capex to alternative control services and 89.1 per cent to standard control services.[34]

In response, CitiPower maintained its initial proposal of 88 per cent allocation of business as usual replacement of AMI communication devices and 100 per cent AMI upgrade costs to standard control services. To support its proposal, CitiPower provided a report prepared by Optimal Technology Solutions (OTS).[35]

OTS sets out a number of use cases (services) where the AMI communication systems and network analytic platform can be used to support the provision of standard control services.

For most of these services, OTS considered it necessary that data be collected from 100 per cent of CitiPower's AMI meters every 15 minutes.[36] OTS also considered that a reduced frequency of data collection could significantly impact customer service outcomes (such as a tripling of customer shocks).[37]

CitiPower updated its metering post-tax revenue model (PTRM) to reflect its proposed cost allocation and its proposed labour price growth, inflation and WACC, thereby recalculating revenue, metering prices and corresponding X factors.

16.2.2.2 Type 5 and 6 (incl. smart metering) services revenue requirement

CitiPower proposed a revenue requirement of $101.63 million ($ nominal) in its revised proposal) or $89.3 million ($2020–21), with $29.30 million ($2020–21) in metering capex and $26.87 million ($2020–21) in metering opex.

16.2.2.3 Annual metering charges

CitiPower's revised annual metering charges are set out in Table 16.5.

Table 16.5 CitiPower revised proposal metering service charges ($2020–21)

Meter type	2021–22	2022–23	2023–24	2024–25	2025–26
Single phase	54.66	53.94	53.26	52.63	52.04
Three phase direct connected meter	67.54	66.65	65.81	65.03	64.30

34 CitiPower, *Revised Proposal 2021–26*, December 2020, p.130.

35 CitiPower, *Revised Proposal 2021–26, Attachment 037 OTS – Communication cost allocation review,* December 2020.

36 CitiPower has also proposed to collect 60 second interval power quality data every 5 minutes from 10 percent of meters and 10 second interval power quality data every 5 minutes from 0.5 per cent of meters.

37 CitiPower, *Revised Proposal 2021–26, Attachment 037 OTS – Communication cost allocation review,* December 2020, p.20.

Meter type	2021–22	2022–23	2023–24	2024–25	2025–26
Three phase CT connected meter	84.95	83.82	82.77	81.79	80.86

Source: CitiPower, *Revised Regulatory Proposal 2021–26*, December 2020, p.131.

16.2.2.4 Metering exit fees

CitiPower's revised meter exit fees as set out in Table 16.6 below.

Table 16.6 CitiPower revised proposal meter exit fees ($ nominal)

Meter type	2021–22	2022–23	2023–24	2024–25	2025–26
Single phase	300.60	289.73	272.27	253.86	238.24
Three phase direct connected meter	358.75	343.77	322.07	299.04	279.27
Three phase CT connected meter	707.33	667.74	620.61	569.84	525.12
Basic or MRIM	53.12	54.25	55.50	57.02	58.94

Source: CitiPower, *Revised Regulatory Proposal 2021–26 - Supporting document - MOD 11.02 - Metering PTRM and exit fees 2021–26*, December 2020.

16.2.3 Assessment approach

In our final F&A, we classified type 5 and 6 (incl. smart metering) services and Metering exit services as alternative control services.[38]

16.2.3.1 Type 5 and 6 (incl. smart metering) services revenue

As type 5 and 6 (incl. smart metering) services are classified as alternative control services, we have greater discretion under the NER in making our assessment compared to standard control services.[39]

The regulatory framework for assessing alternative control services is less prescriptive than for standard control services. That is, there is no requirement to apply the building block model exactly as prescribed in Part C of the NER.[40]

[38] AER, *Final framework and approach: AusNet Services, CitiPower, Jemena, Powercor and United Energy - Regulatory control period commencing 1 January 2021*, January 2019.

[39] NER, cl. 6.2.6(c).

[40] NER, cl. 6.2.6(c).

Consistent with the approach adopted for our draft decision and the current regulatory control period we have chosen to apply a limited version of a building block[41] approach for our final decision.

For our final decision we also had regard, where relevant, to:

- the wider regulatory context in determining the allocation of metering service costs, including the possibility of Victoria adopting a competitive metering framework at some point in the future
- cost allocation principles, and particularly our Cost Allocation Methodology Guideline[42] and the approved Cost Allocation Methodology for each distributor[43]
- consistency of approach with other regulated services, including the WACC and labour price growth forecasts used for standard control services
- comparisons between the Victorian distributors
- the Victorian distributors revised proposals, and
- stakeholder feedback in response to our draft decision.

16.2.3.2 Cost Allocation

In our draft decision, we affirmed that some AMI communication system costs are shared costs between alternative and standard and control.[44] We noted that meter data volumes are an appropriate causal allocator of the associated shared costs.[45]

Our draft decision determined that the collection of power quality data from 1 per cent of meters is sufficient to support CitiPower distribution functions. On this basis, we determined 94 per cent of costs be allocated to alternative control services and 6 per cent to standard control services. We considered this supported not only the appropriate recovery of costs from relevant customers, but also enabled efficient price signals to be sent regarding the costs of providing the service.[46]

In assessing CitiPower's revised proposal, we focused on the scope of this driver - meter data volumes with respect to the frequency of data collection and meter population.

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41 The building block model calculates the allowed revenue for a regulated business for each year of the regulatory control period. Where the revenue Requirement = opex + depreciation + tax + (WACC x regulatory asset base). The building block model requires inputs/forecasts for each year of the regulatory control period. These include; the regulatory asset base, opex, capex, interest rates, inflation and incentive payments. Our metering building block model is streamlined because it does not include any adjustment for incentive schemes.

42 AER, *Victorian electricity distribution network service providers - cost allocation guidelines*, June 2008.

43 CitiPower, *Electricity Distribution Cost Allocation Method*, September 2020.

44 AER, *Draft decision: CitiPower Distribution Determination 2021–26, Attachment 16 - Alternative Control services*, September p. 37.

45 NER, 6.15.2(3).

46 AER, *Draft decision: CitiPower distribution determination 2021–26, Attachment 16 - Alternative Control Services*, September 2020, p.35-36.

We also reviewed different use cases for standard control services using AMI meter data provided in the OTS report and assessed whether collecting meter data from 1 per cent of the meter population is still appropriate. Our assessment is based on the technical analysis of various use cases, cost allocation principles and cost benefit evaluation of whether the costs proposed can be considered efficient and prudent.

Our analysis and assessment with reasons are described in the section 16.2.4.

16.2.3.3 Metering exit fees

Metering exit services allow the distributor to recover the written down value, as well as the efficient costs of removing and disposing, of AMI meters. This currently occurs when an existing site with multiple meters, such as an apartment building becomes an embedded network, resulting in the removal of existing meters.[47]

Consistent with the approach for our draft decision, the inputs we used to calculate metering exit fees for our final decision are:

- Our final decision on CitiPower's opening metering asset base value for type 5 and 6 (incl. smart metering) services as of 1 July 2021, split into meter categories (meter, IT and communications) for the purpose of modelling the exit fee, as opposed to the broader category of 'remotely read interval meter'.
- Our final decision on forecast metering capex and opex for type 5 and 6 (incl. smart metering) services for CitiPower 2021–26 regulatory control period.
- Depreciation lives (meters – 15 years, communications and IT – 7 years), which we accept in this final decision.

16.2.4 Reason for final decision

To derive our final decision metering charges, we have applied an allocation of 75 per cent of AMI communication costs for communication infrastructure opex and communication devices annual program capex in CitiPower's alternative control services metering model (25 per cent to standard control services). We included 10.1 per cent 5G upgrade capex in CitiPower's alternative control services metering model.

16.2.4.1 Cost allocation

We agree with stakeholders such as Department of Environment, Land, Water and Planning, Energy Consumers Australia (ECA), our Consumer challenge panel, sub-panel 17 (CCP17) and the Victorian electricity distributors that the AMI infrastructure and communication systems can be used to provide a range of distribution services,

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[47] AER, *Final framework and approach: AusNet Services, CitiPower, Jemena, Powercor and United Energy*, January 2019, p 34-35. See also attachment 14 of this draft decision.

including standard control services.[48] As such, some of the AMI shared costs will need to be allocated to both alternative and standard control services. A view endorsed by ECA and the CCP17.[49]

ECA submitted that in a market where there is no metering competition, the allocation of costs between alternative and standard control services makes little difference to the customer who pays for the entire bundle.[50] Further, ECA submitted that, in the absence of metering competition or a need to compare metering costs across jurisdictions, it had no objection to the reallocation of costs to standard control services.[51]

In our assessment, we have been mindful to seek an appropriate allocator to apportion AMI shared costs between alternative and standard control services to ensure prices reflect the respective underlying efficient costs. This is particularly pertinent should metering services in Victoria become contestable in the future to reduce the risk of cross-subsidies. The Victorian distributors and their competitors should face similar underlying costs in providing these services. As noted by the CCP17, AMI data can be used to support network operations, however metering remains fundamentally required for the purposes of determining energy consumption and retail competition.[52]

In our draft decision, we agreed data volumes are an appropriate driver of AMI shared costs and could be used to allocate costs. However, we did not accept CitiPower's proposed allocations which were derived based on meter data requirements of collecting power quality data from 100 per cent of its AMI meters every 15 minutes for majority of power quality data.[53]

Based on our assessment, we determined CitiPower only needed to collect power quality data from 1 per cent of AMI meters to support its standard control network functions. We considered this a more appropriate allocation of costs, supporting not only the appropriate recovery of costs from relevant customers, but also enabling efficient price signals to be sent regarding the costs of providing a given service.

Collecting power quality data from 1 per cent of meters resulted in a cost allocation based on meter data volumes of 75 per cent of costs allocated to alternative control

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48 Department of Environment, Land, Water and Planning, *Submission on the electricity distribution price review 2021–26*, June 2020, pp.4-5; Spencer & Co Business advisory services, *Report to Energy Consumers Australia - A review of Victorian Distribution Networks Regulatory Proposals 2021–26*, June 2020, p.37. CCP17, *Submission on the Victorian Electricity Distributors' Regulatory Proposals for the Regulatory Determination 2021–26,* January 2021.

49 ECA, *Submission on the Victorian EDPR Revised Proposal and draft decision 2021–26*, January 2021, p 18; CCP17, *Submission on the Victorian EDPR Revised Proposal and draft decision 2021–26*, January 2021, p.95.

50 ECA, *Submission on the Victorian EDPR Revised Proposal and draft decision 2021–26*, January 2021, p 18.

51 ECA *Submission on the Victorian EDPR Revised Proposal and draft decision 2021–26*, January 2021, p 18

52 CCP17, *Submission on the Victorian EDPR Revised Proposal and draft decision 2021–26*, January 2021, p.95.

53 60 seconds and 10 seconds of power quality is also proposed to be collected every 5 minutes from certain per cent of meter population in the OTS report.

services and 25 per cent allocated to standard control services (See our draft decision Attachment 16, section 16.2.4 reasons for draft decision).[54]

CitiPower did not accept our draft decision. In its revised proposal, CitiPower maintained its initial proposal of 88 per cent allocation of business as usual replacement of AMI communication devices and 100 per cent AMI upgrade costs to standard control services. To support its proposal, CitiPower provided a report prepared by Optimal Technology Solutions (OTS).[55] Our assessment of the report is discussed below.

Using the AMI communication network to deliver standard control services

The OTS report put forward a number of use cases (services) where the AMI communication systems and network analytic platform can be used to support the provision of standard control services. OTS considered it necessary that a high frequency of data be collected from all of CitiPower's meters in order to efficiently deliver network services such as loss of neutral, voltage management, load unbalance detection, phase rebalancing and other services.[56]

OTS considered that a reduced frequency of data collection could significantly impact customer service outcomes (such as a tripling of customer shocks).

We observe that other jurisdictions in the NEM have limited penetration of AMI meters compared to the Victorian electricity distribution networks. As a result, the electricity distribution network service providers in these other jurisdictions do not rely on the smart metering infrastructure to deliver network services similar to the ones set out in the OTS report. Most of these services, including loss of neutral are adequately managed by use of non-AMI infrastructure. Therefore, we consider the provision of distribution services through the AMI infrastructure should only be done to the extent it is efficient to do so.

Table 16.7 sets out our detailed assessment of each use case put forward by OTS with the exception of our assessment of loss of neutral detection which is discussed separately below.

We conclude from our assessment that the use cases proposed by OTS overstated the use of the AMI infrastructure to support CitiPower's provision of standard control services. We consider:

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54 AER, *Draft decision: CitiPower distribution determination 2021 to 2026 Attachment 16 Alternative Control Services*, September 2020, p.38.

55 CitiPower, *Revised regulatory proposal 2021–26, Attachment 037 OTS -Communication cost allocation review,* December 2020.

56 Exclusive list of standard control services are provided by CitiPower in its consultant report; CitiPower, *Revised regulatory proposal 2021–26, Attachment 037*, Section 5, p7-12.

- that some services are not part of standard control services and therefore an allocation to standard control services is not justified
- OTS has overstated the efficient level of data collection required from the AMI communication infrastructure to support the standard control service functions. We consider OTS' proposed frequency data collection is an over extensive and inefficient use of the AMI system to deliver these services
- that for some services the customer benefit does not outweigh the cost of providing that service, or
- that use cases such as phase rebalancing only arise when distribution service providers make modifications to the network such as when addressing capacity or voltage constraints, or when facilitating the connection of a larger load. We do not agree that collecting a large quantity of AMI data is required to enable such works.

We consider that lower frequency of data collection from limited number of meters is sufficient for the efficient provision of the use cases listed in Table 16.7. We maintain our draft decision that CitiPower only needs to collect data from 1 per cent of its meter population to support its distribution network functions. We consider this translates into a more appropriate allocation of costs, supporting not only the appropriate recovery of costs from relevant customers when the benefits to customers are quantified, but also enabling efficient price signals to be sent regarding the costs of providing a given service.

Table 16.7: Review of OTS use cases for using AMI meters data to deliver standard control services.

Use Case	Description[57]	Technical expert review and comments
Meter Bypass / Theft detection	Requires all meter data for all customers on a circuit to enable identification of meter bypass attempts	We consider that provision of this service is part of metering service and therefore the cost is related to alternative control services and not standard control services. A process for monitoring theft through energy metering is already established and is part of alternative control service costs.
Real-time Voltage Management	Real-time zone substation voltage set point control to maintain voltage compliance. potential to participate as either RERT (Reliability and emergency reserve trader) or FCAS (frequency control ancillary service) to the NEM	There is no requirement under the NER for a distribution service provider to manage voltage as described in the OTS report. We do not consider there is a need to monitor real time voltage at customer's installation as real time voltage management exists within each service provider's zonal substation. Further the OTS report states that real time voltage management helps improve the ability to participate in NEM operations such as RERT and FCS. We consider that these services are not part of standard control services and therefore allocation to standard control services is not justified.

[57] CitiPower, *Revised Regulatory Proposal 2021–26, Attachment 037 OTS – Communication cost allocation review*, December 2020, Section 5, Table starting from p. 7.

Use Case	Description[57]	Technical expert review and comments
Load Unbalance detect	Detection of unbalanced load at the low voltage connection level	
Phase Rebalance New connection	The ability to place customers on the correct phase at the time of connection reduces the chance of overloads due to the connection occurring on which ever phase a line worker wants to connect to.	Phase balancing is part of the static configuration of the network. Generally managing phase loading is an activity undertaken at the time a connection is made, or if the network static configuration is being rearranged to manage network constraints. These are events that happen relatively rarely on any particular LV feeder. We consider that frequent monitoring of the balance of phase loading on every LV feeder is inefficient when compared to the benefits to customers.
Phase Identification/LV Mapping / Cross reference	Detection of low voltage customer connectivity to network	
LV Network fire Prevention ; SWER line Monitoring; Broken Conductor Detection	Detection of network asset defects; Real time monitoring of network conditions ensures that detection of network abnormalities and faults can occur.	These are services to detect network failures using metering data. For LV network fire prevention, we do not agree that metering data can prevent network fires, it can only detect a supply interruption. Capturing an extremely large amount of data for these services does not demonstrate the costs are efficient or prudent.
Faulty Meter Detection Auto job issuing: Meter faults	Detection of Faulty Meters A fault management function that provides faster resolution of faults - preventative maintenance	As in case of meter bypass, this is an established metering service and we consider it is as part of alternative controls costs.
Non-Compliant Solar Suite	Detection of customers with solar connections that are not; registered as Solar customers, are exporting more than contracted to export, have incorrect settings on their solar inverters.	While there may be some consumer benefits in the load management aspects of these services, we consider those benefits to be small and not material as these use cases are likely to be limited to specific locations on the network, occur relatively rarely, or are related to breaches of compliance with connection standards. Non complaint installations should be rare given that electricians are required, as a condition to their license to ensure all their work is complaint. We consider high frequency of data collection is not justified for these services.
A/C detection	Detection of A/C units to stabilize load during peak demands; this use case is important for forecasting purposes	
Summer Saver/Energy Partner Program	Near-real-time load management program to manage customer distributed energy resources (DER) (e.g. A/C) to avoid asset constraints	

Use Case	Description[57]	Technical expert review and comments
Self-Serve Portal	Detection of network growth; without real time monitoring overloads cannot be reliably detected.	While the OTS report notes that this use case enables more efficient network planning and management, it is unclear how material those benefits are from using large amounts of frequently gathered meter data as network loading typically changes relatively slowly and is typically related to specific network locations. We do not consider these benefits to be significant to justify the costs involved in obtaining, processing, storing and maintaining this data.

Source: AER analysis; CitiPower, *Revised Regulatory Proposal 202–-26, Attachment 037 Operational Technology Solutions, Communication cost allocation review*, December 2020, Section 5, p. 7–12.

Loss of Neutral use case

We consider OTS overstated the efficient level of data collection required to manage CitiPower's loss of neutral.

The OTS report highlights the use case of loss of neutral where AMI power quality data can significantly improve the monitoring of neutral faults.[58] When compared to the other use cases above, we agree that using AMI metering infrastructure and collecting power quality data for mitigating the risk of loss of neutral faults is an appropriate option given the greater penetration of smart meters in Victoria.

We consider the loss of neutral use case is different from other proposed use cases. This is because we consider that the power quality information that AMI meters provide can be used to manage neutral integrity in the network. However we consider that the AMI costs for provision of loss of neutral faults should be efficient when all options are considered.

The OTS report stated that a high frequency collection of power quality data from 100 per cent of CitiPower's meters is necessary for detection of high impedance network faults most likely attributed to loss of neutral which might cause electric shock to customers.[59] OTS considered that the AER's proposed targeted sampling approach of 1 per cent of the meters, would leave 99 per cent of the meters unmonitored for faults developing on the customer service line or metering installation.[60]

Further, the OTS report stated that degradation of system capability or rotational sampling is likely to have a disproportionately high detrimental impact on system

[58] CitiPower, *Revised Regulatory Proposal 2021–26, Attachment 037 OTS - Communication cost allocation review*, December 2020, Section 5, p7–12.

[59] CitiPower, *Revised Regulatory Proposal 2021–26, Attachment 037 OTS - Communication cost allocation review*, December 2020, Section 5, p 15.

[60] CitiPower, *Revised regulatory proposal 2021–26, Attachment 037 OTS – Communication cost allocation review,* p.15, December 2020.

effectiveness and would degrade business' capability to detect the emergence of faults with sufficient speed.[61]

We note loss of neutral is a process that generally occurs gradually over time (months to years), or is associated with installation changes such as replacing service mains. We also note that loss of neutral impacts a small number of installations each year (typically 0.2 per cent or less) at a given point in time. Given the gradual degradation process, the ability to test when making changes, and the relatively small amount of installations being affected, we do not consider OTS's proposed high frequency of data from all of CitiPower's meters is an inefficient approach to manage this risk.

CitiPower's approach, and OTS's analysis also fail to consider other options to managing neutral integrity, such as consumer education, plug in alarms, or retaining current practices.

We consider that monitoring loss of neutral should closely follow the profile of how the fault develops. Therefore, an efficient use of the AMI network to manage the loss of neutral is to collect a materially lower frequency and volume of data. We consider the collection of power quality data from 1 per cent of the meter population is more appropriate and efficient when the benefits to customers are quantified. This can be achieved through staggered approach by classifying meter population in subsets for collecting loss of neutral data.

We note that OTS's de-rating[62] analysis was based on collecting data from 100 per cent of the meters while only reducing frequency. We do not agree that a high or low frequency of collecting power quality data could influence the rate of detection in loss of neutral faults. The probability of neutral faults developing for large number of meter installations at the same time is negligible.

5G upgrade costs

CitiPower's proposed allocation of 5G upgrade capex takes into consideration meter data volumes along with the number of 3G devices located on SCADA, which are directly attributable to standard control services (and already classified as standard control) and the number of 3G devices located on AMI access points.[63]

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61 CitiPower, *Revised regulatory proposal 2021–26, Attachment 037 OTS – Communication cost allocation review,* p.15 December 2020.

62 De-rating means communication data modelling to understand the scenarios of how collecting power quality data from 1, 50 and 100 per cent of meters impacts loss of neutral outcomes.

63 CitiPower, *Response to Information Request IR#059 – Communication allocation - Public, 28 July 2020*. This response sets out that:

- 87 per cent of 3G devices are located on SCADA, these are directly attributable to standard control and already classified as standard control
- 13 per cent of 3G devices are located on AMI access points and 88 per cent of these would be reallocated to standard control under CitiPower's proposed reallocation of shared AMI communications costs

Our allocation of 5G upgrade capex is calculated using the same methodology as CitiPower, but is based on our revised meter data volumes. We consider this is the efficient amount of costs that CitiPower requires to provide its standard control services.

Future assessments of metering costs and changes in cost allocation

We will continue to focus on ensuring prices reflect the respective underlying efficient costs for our future assessments of AMI cost allocations between alternative and standard control services.

We would expect where allocations are proposed to change, the Victorian distributors would provide us and stakeholders with comprehensive economic analysis setting out the costs and benefits to customers as to:

- why the provision of standard control services through the AMI network is the efficient approach to deliver these services
- what efficiencies are delivered to the distributor and how these efficiencies are manifesting in cost savings for operating the network
- why particular levels of data collection is efficient, and/or
- why an alternative causal allocator than data volumes is appropriate.

For our assessment of CitiPower's AMI cost allocations in this determination, we note this level of detailed economic analysis was not provided.

In support of its AMI cost allocations, CitiPower stated:[64]

> We have already invested in the analytics software solution to provide the capability to analyse AMI data for a multitude of use cases and we have already developed analytical capability for remote neutral integrity identification as well as the other use cases in the OTS report.

However, CitiPower did not set out detailed analysis on how this investment was driving efficiencies in its business operations that would benefit customers. It only noted the use cases and how the reallocation of the actual expenditure from 2019 and did not involve a material change in expenditure relative to historic levels.[65]

- The proposed allocation for 3G devices located on AMI access points results in 98 per cent of 3G devices being allocated to standard control services. CitiPower proposed that, given the immateriality of the 3G to 5G upgrade costs allocated to metering, 100 per cent of these of costs be allocated to standard control services.

64 CitiPower, *Response to Information request IR076* – AMI communication costs allocation – Public, 28 January 2021, p.1.

65 CitiPower, *Information request #IR076* January 2021.

While the OTS report put forward various reasons for using the AMI infrastructure and data to provide standard control services, it also lacked the analysis and evidence to support it was an efficient approach.

Future cost allocation assessments may also include a detailed assessment of whether the costs to be allocated to operating and capital expenditure for standard control services reasonably reflect the prudent and efficient costs. This detailed assessment would apply to any increase or new costs related to metering services for alternative control services.

Finally, we note that Victoria is the only NEM jurisdiction without competition in metering. This was a policy decision taken by the Victorian government. We advise that any future proposal on the cost allocation of metering services include the Victorian government as a stakeholder.

Overall, our assessment approach would ensure the Victorian distributors are only recovering costs that reasonably reflect the prudent and efficient costs in providing alternative and standard control services; balanced against the costs and benefits to consumers and any future competition for metering services in Victoria.

16.2.4.2 Price growth forecasts and inflation

We have updated the metering PTRM and metering capex and opex models to include our final decision inputs relating to the rate of change, inflation and labour price growth forecasts. For our labour price growth forecasts for metering services we apply the average of WPI growth forecasts from Deloitte Access Economics and BIS Oxford Economics.

16.2.4.3 Metering revenue and charges

Capital expenditure

Our final decision allows for $31.10 million ($2020–21) in forecast capex for CitiPower's 2021–26 regulatory control period, as opposed to $29.30 million ($2020–21) proposed by CitiPower (see Table 16.8).

Table 16.8 Forecast capital expenditure ($2020–21)

Forecast Capex	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Proposal	6.33	6.23	5.15	5.65	7.22	30.58
Draft Decision	5.95	6.43	5.28	5.75	7.41	30.82
Revised Proposal	5.57	6.05	5.10	5.56	7.03	29.30
Final Decision	5.99	6.47	5.33	5.81	7.50	31.10

Source: CitiPower, *Regulatory Proposal 2021–26 - Supporting document - CP MOD 11.02 - Metering PTRM and exit fees 2021–26*, January 2020; AER, *Draft decision CitiPower - distribution determination 2021–26 - Metering PTRM - September 2020*; CitiPower, *Revised Regulatory Proposal 2021–26 - Supporting document - MOD 11.02 - Metering PTRM and exit fees 2021–26*, December 2020; AER, *Final decision CitiPower - distribution determination 2021–26 - Metering PTRM - December 2020.*

Our final decision forecast capex consists of:

- IT $0.49 million ($2020–21)
- Communications $1.97million ($2020–21)
- Metering capex (remotely read interval meters and transformers) $28.25 million ($2020–21)
- Equity raising costs $0.39 million ($2020–21).

The key driver for our higher forecast capex than that proposed by CitiPower is our decision to not accept CitiPower's proposal to re-allocate 88 per cent of its communication devices annual program capex to standard control services and 100 per cent of 5G upgrade capex to standard control services and instead to allocate 25 per cent and 89.9 per cent respectively to standard control services.

Forecast opex

Our final decision allows for $29.81 million ($2020–21) in forecast opex for CitiPower's 2021–26 regulatory control period. This is higher than CitiPower's proposed opex of $26.87 million ($2020–21), driven by our decision on cost allocation as set out above in section 16.2.4.1

Table 16.9 provides the final decision forecast operating expenditure for the 2021–26 regulatory control period.

Table 16.9 Forecast operating expenditure ($2020–21)

Forecast Opex	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Proposal	5.41	5.56	5.72	5.86	5.99	28.54
Draft Decision	5.71	5.78	5.85	5.93	6.03	29.30
Revised Proposal	5.19	5.28	5.37	5.46	5.57	26.87
Final Decision	5.77	5.87	5.96	6.06	6.16	29.81

Source: CitiPower, *Regulatory Proposal 2021–26 - Supporting document - MOD 11.02 - Metering PTRM and exit fees 2021–26*, January 2020; AER, *Draft decision CitiPower - distribution determination 2021–26 - Metering PTRM - September 2020*; CitiPower, *Revised Regulatory Proposal 2021–26, Supporting document - MOD 11.02 - Metering PTRM and exit fees 2021–26*, December 2020; AER Final decision, *CitiPower - distribution determination 2021–26 - Metering PTRM - December 2020.*

The key driver of the increase in opex compared to CitiPower's revised proposal is our decision on cost allocation as discussed above.

16.2.4.4 Meter exit fees

Our final decision sets metering exit fees that reflect adjustments we made to the building block components for type 5 and 6 (incl. smart metering) revenue. These metering exit fees reflect:

- apportionment of the meter, IT, communications, and any other regulated asset base to reflect foregone revenue based on the average remainder of life of an asset
- administration costs of removing the meter
- tax allowances, and other relevant costs.

These cost components are sourced from the calculations of the building block components for type 5 and 6 (incl. smart metering) revenue, and are therefore subject to the same assessment and reasoning as for the type 5 and 6 (incl. smart metering) revenue.

Our final decision type 5 and 6 metering exit fees are set out in Appendix B.

16.3 Public lighting services

Public lighting services are defined as the:

- operation, maintenance, repair and replacement of public lighting assets in line with the Public lighting Code or the relevant legislation
- alteration and relocation of public lighting assets, and
- provision of new public lights.

16.3.1 Final decision

Our final decision is to:

- Accept CitiPower's proposal to add a written down value price and avoided cost rebate price to its public lighting price list. We agree with CitiPower that the written down value price and avoided cost rebate should apply only for replacement of non-energy efficient lights.
- Accept the explanation provided by CitiPower in regards to PE (photo-electric) cells. We acknowledge that uptake of PE cells is supported by stakeholders and the adoption of this technology is in line with the intention of the public lighting code.
- Accept the correction to X factors. We note this was a minor error in the formulae and does not impact the final price list.

For our final decision, we have updated CitiPower's proposed public lighting model for:

- actual inflation where relevant
- our final decision on labour price growth (see Attachment 6 – Operating expenditure), and
- our final decision WACC (see Attachment 3 – Rate of return).

Our final decision sets the public lighting prices for the first year (2021–22) of the 2021–26 regulatory control period which are set out in Appendix C of this attachment.

Prices for the subsequent years of the regulatory control period will be escalated by actual inflation and the X factors set out in Appendix C of this attachment.

16.3.2 CitiPower's revised proposal

In response to our draft decision, CitiPower:

- Accepted our draft decision LED (Light Emitting Diode) unit prices.
- Added its proposed written down value and avoided cost rebate to its public lighting price list.
- Updated the labour price growth rates in its public lighting model for revised forecasts.
- Provided information on its adoption of smart PE cells in support to customer preferences.
- Proposed a minor correction of formulae in the calculation of X factors in the public lighting model.

16.3.3 Assessment approach

To determine prices for public lighting services we assessed CitiPower's public lighting model, considered historical data and benchmarked proposed costs against other NEM distributors and against independent data and information as relevant. Specifically, we assessed proposed labour rates, luminaire prices, other input assumptions and stakeholder submissions to derive proposed public lighting charges. We also updated model parameters where appropriate.

16.3.4 Reason for final decision

16.3.4.1 LED unit prices

In our draft decision, we accepted CitiPower's forecast to increase deployment of LED lights from 47 per cent to 78 per cent.[66] We encourage CitiPower to continue engaging with customers and promoting LED bulk replacements through customer led replacement programs.

In response to our draft decision, the Local Government Response (LGR) acknowledged our support for distributors and councils on matters such as:[67]

- enhancements to enable smart lighting
- improve levels of recycling of redundant street lighting assets

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66 AER Draft decision – *CitiPower distribution determination 2021–26, Attachment 16 Alternative control services* – September 2020, p.49.

67 Local Government Response, *Submission to the AER Victorian EDPR 2021–26,* December 2020, p 6.

- ensure distributors utilise the latest approved technologies when recycling failed and ageing assets (such as LEDs), and
- clearly define asset lifecycle to ensure timely asset renewals.

In particular, the LGR's submission commented that benchmarking was important where product prices decline over time such as LEDs.

Our draft decision recommended the most recent tender prices with respect to LED unit rates be used as inputs to the public lighting model for the five year revenue determination.[68] We will continue to support stakeholders' views that provide long term benefits and improves uptake of new technology such as LED lighting.

Our draft decision also noted stakeholders' views on a review of the Victorian Public Lighting Code.[69] We encouraged stakeholders to work with Essential Services Commission Victoria for the review.

16.3.4.2 Written down value and avoided cost rebate

We welcome CitiPower's proposal to include a written down value price and avoided cost rebate price in their public lighting price list. This provides transparency to customers who want to replace inefficient lights before the total value of an asset is recovered through public lighting charges.

CitiPower's initial proposal included the written down value price and avoided cost price calculations in its public lighting model but did not include them in its price list. CitiPower's revised proposal has addressed this omission to include the values in the final output price list along with the relevant X factors.[70]

16.3.4.3 Adoption of PE cell and its unit cost

We accept CitiPower's explanation of why it has switched to smart PE cells for Category V lights and how it arrived at the proposed unit price. Our draft decision accepted the $87.71 unit price for smart PE cells but requested CitiPower to provide further information to justify the cost of switching to smart PE cells.[71]

In its revised proposal, CitiPower stated that its rollout of smart PE cells is in response to stakeholder preferences.[72] In addition, failed PE cell units will need to be replaced with smart PE cells in certain council areas and more councils have requested that this technology be adopted in line with the intention of the Public Lighting Code.

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68 AER, *Draft decision: CitiPower distribution determination 2021–26, Attachment – 16 Alternative control services,* September 2020, p.51.

69 AER, *Draft decision: CitiPower distribution determination 2021–26, Attachment – 16 Alternative control services,* September 2020, p.51.

70 CitiPower, *Revised regulatory proposal 2021–26, December 2020, Section 9.3,* p 129.

71 AER *Draft decision: CitiPower distribution determination 2021–26, Attachment – 16 Alternative control services,* September 2020, p.52.

72 CitiPower, *Revised regulatory proposal 2021–26, December 2020, Section 9.3,* p 129.

CitiPower added that the proposed unit price is derived using the moving average price from its asset management system. We note stakeholders' support of deployment of smart PE cells and the additional information provided by CitiPower regarding PE cell unit price.

16.3.4.4 Corrected X factors

We have reviewed and accept CitiPower's correction to the calculation of the X factors in its public lighting model. This was a minor error in formulae and it does not impact the final prices.

16.3.4.5 Price movements

Our final decision results in CitiPower's public lighting revenue being relatively stable for the 2021–26 regulatory control period when compared to historic trends. There is a marginal price increase in public lighting prices compared to our draft decision due to updates to inflation, WACC and labour price growth forecasts. This increase is in the range of 0.2 percent to 2.8 percent.

Our final decision public lighting prices and the corresponding X factors are set out in Appendix C of this attachment.

A Ancillary network services prices

Prices in this appendix are in $2021–22.

Table 16.10 Fee-based ancillary network services prices for 2021–22 ($2021–22), final decision – business hours

Service description	CitiPower revised proposal	AER final decision
Basic connection services		
New connection where CitiPower is the metering coordinator		
Single phase	$507.90	$507.90
Multi-phase DC	$607.05	$607.05
Multi-phase CT	$2,538.68	$2,538.68
New connection where CitiPower is not the metering coordinator		
Single phase	$488.51	$488.51
Multi-phase DC	$587.64	$587.64
Multi-phase CT	$2,167.25	$2,167.25
Metering and network ancillary services		
Meter/NMI/site investigation	$359.68	$359.68
Meter accuracy test	$415.00	$415.00
Meter accuracy test - additional meters	$235.23	$221.40
Special reading	$29.66	$29.66
Remote meter reconfiguration	$55.12	$55.12
Manual re-energisation (including customer transfer)	$36.07	$36.07
Manual re-energisation (same day)	$46.32	$46.32
Manual de-energisation	$36.61	$36.61
Failed field visit for lower cost services (simple tasks)	$29.66	$29.66
Isolation of supply or reconnection, excluding HV (single)	$319.62	$319.62
Isolation of supply and reconnection after isolation, excluding HV (same day)	$588.03	$588.03
Standard alteration, <60 minutes	$552.31	$552.31
Complex alteration, > 60 minutes	$686.48	$686.48

Service description	CitiPower revised proposal	AER final decision
Failed field visit (complex tasks)	$344.14	$344.14
Installation of nightwatchman lights (LED medium output)	$2,619.45	Quoted service
Installation of nightwatchman lights (LED high output)	$3,142.01	Quoted service

Source: AER, *Final decision - CitiPower distribution determination - 2021–26 - Ancillary Network Services Model*, April 2021.

Table 16.11 Fee-based ancillary network services prices for 2021–22 ($2021–22), final decision – after hours

Service description	CitiPower revised proposal	AER final decision
Basic connection services		
New connection where CitiPower is the metering coordinator		
Single phase	$613.31	$613.31
Multi-phase DC	$721.43	$721.43
Multi-phase CT	$3,407.58	$3,407.58
New connection where CitiPower is not the metering coordinator		
Single phase	$588.48	$588.48
Multi-phase DC	$696.58	$696.58
Multi-phase CT	$2,683.48	$2,683.48
Metering and network ancillary services		
Meter/NMI/site investigation	$447.99	$447.99
Meter accuracy test	$518.88	$518.88
Isolation of supply or reconnection, excluding HV (single)	$445.06	$445.06
Standard alteration, <60 minutes	$769.08	$769.08
Complex alteration, > 60 minutes	$955.90	$955.90
Failed field visit (unable to perform customer requested task)	$433.49	$433.49

Source: AER, *Final decision - CitiPower distribution determination - 2021–26 - Ancillary Network Services Model*, April 2021.

Table 16.12 Non-exhaustive list of ancillary network services provided on a quotation basis

Description of service
Complex supply abolishment
Rearrangement of network assets at customer request, excluding public lighting assets
Audit design and construction
Specification and design enquiry
Elective undergrounding
High load escorts—surveying and lifting overhead lines
High profile antenna installation
No-go zone safety-related services
Reserve feeder maintenance
Alteration and relocation of public lighting assets
New public lighting services including greenfield sites and new light types
Access to network data
Complex isolations and alterations, including HV
Alterations to the shared network distribution assets
Installation of nightwatchman lights (LED medium output)
Installation of nightwatchman lights (LED high output)

Source: CitiPower, *Regulatory proposal 2021–26*, January 2020, pp. 145–146.

Table 16.13 Quoted service hourly labour rates for 2020–21, final decision ($2021–22)

	AER final decision maximum total hourly rate - Business hours	AER final decision maximum total hourly rate - After hours
Administration	$94.24	NA
Field worker	$174.55	$225.52
Technical	$174.55	$253.40
Engineer	$153.15	$246.20
Senior engineer	$200.26	$321.48

Source: AER, *Final decision - CitiPower distribution determination - 2021–26 - Ancillary Network Services Model*, April 2021.

Table 16.14 AER final decision on X factors for each year of the 2021–26 regulatory control period for ancillary network services (per cent)

	2022–23	2023–24	2024–25	2025–26
X factor	-0.6627	-0.6091	-0.7328	-0.9509

Source: AER analysis.

Note: We do not apply an X factor for 2021–22 because we set the 2021–22 ancillary network service prices in this determination.

To be clear, the labour price growth forecasts in this table are operating as de facto X factors. Therefore, positive labour price growth forecasts are represented as negative in this table and vice versa.

B Type 5 and 6 (incl. smart metering) metering exit fees

Prices in this appendix are in $2021–22.

Table 16.15 AER final decision metering exit fees ($2021–22)

Meter type	2021–22
AMI single phase	$302.38
AMI three phase	$362.41
AMI three phase current transformer	$719.32
Basic or MRIM	$44.71

Source: AER, *Final decision - CitiPower - distribution determination 2021–26 - Metering PTRM*, April 2021.

Table 16.16 AER final decision on X factors for each year of the 2021–26 regulatory control period for metering exit fees (per cent)

X factor	2022–23	2023–24	2024–25	2025–26
AMI single phase	5.2987	8.1912	9.1551	8.5980
AMI three phase	5.8850	8.4742	9.5049	9.0138
AMI three phase current transformer	7.3558	9.2035	10.4150	10.1092
Basic or MRIM	-0.6476	-0.5953	-0.7163	-0.9297

Source: AER, *Final decision - CitiPower - distribution determination 2021–26 - Metering PTRM*, April 2021.

C Public lighting services

Prices in this appendix are in $2021–22.

Table 16.17 Public lighting prices - draft decision ($2021–22)

CitiPower Lights	Revised Proposal	Final Decision
Mercury vapour 80 watt	$92.95	$93.35
Sodium high pressure 150 watt	$137.85	$138.16
Sodium high pressure 250 watt	$140.20	$140.52
Fluorescent 20 watt	$184.98	$185.76
Fluorescent 40 watt	$185.91	$186.70
Mercury vapour 50 watt	$131.99	$132.55
Mercury vapour 125 watt	$146.87	$147.49
Mercury vapour 250 watt	$117.77	$118.04
Mercury vapour 400 watt	$119.17	$119.44
Sodium high pressure 70 watt	$197.06	$197.90
Sodium high pressure 100 watt	$140.61	$140.92
Sodium high pressure 220 watt	$140.48	$140.80
Sodium high pressure 360 watt	$143.01	$143.33
Sodium high pressure 400 watt	$154.22	$154.57
Metal halide 70 watt	$197.06	$197.90
Metal halide 100 watt	$216.43	$216.91
Metal halide 150 watt	$217.80	$218.29
Metal halide 250 watt	$168.24	$168.62
Metal halide 400 watt	$168.24	$168.62
Metal halide 1000 watt	$250.96	$251.53
T5 2X14W	$58.78	$59.58
T5 2X24W	$57.96	$58.76
CF32	$56.94	$57.72
CF42	$56.94	$57.72
Category P LED Standard Output	$31.80	$32.70
Category P LED High Output	$31.80	$32.70
Category V LED L1 Standard Output	$61.87	$63.35
Category V LED L2 Medium Output	$68.06	$69.69

CitiPower Lights	Revised Proposal	Final Decision
Category V LED L4 High Output	$77.34	$79.19

Source: AER, *Final decision - CitiPower distribution determination - 2021–26 - Public Lighting Model*, April 2021.

Table 16.18 Public lighting – X factors (per cent)

CitiPower Lights	2022–23	2023–24	2024–25	2025–26
Mercury vapour 80 watt	0.7147	-4.9041	-8.1768	-11.4865
Sodium high pressure 150 watt	0.6095	0.4378	-6.1187	-8.7326
Sodium high pressure 250 watt	0.6313	1.2306	-6.1588	-8.7841
Fluorescent 20 watt	0.7147	-4.9041	-8.1768	-11.4865
Fluorescent 40 watt	0.7147	-4.9041	-8.1768	-11.4865
Mercury vapour 50 watt	0.7147	-4.9041	-8.1768	-11.4865
Mercury vapour 125 watt	0.7147	-4.9041	-8.1768	-11.4865
Mercury vapour 250 watt	0.6313	1.2306	-6.1588	-8.7841
Mercury vapour 400 watt	0.6313	1.2306	-6.1588	-8.7841
Sodium high pressure 70 watt	0.7147	-4.9041	-8.1768	-11.4865
Sodium high pressure 100 watt	0.6095	0.4378	-6.1187	-8.7326
Sodium high pressure 220 watt	0.6313	1.2306	-6.1588	-8.7841
Sodium high pressure 360 watt	0.6313	1.2306	-6.1588	-8.7841
Sodium high pressure 400 watt	0.6313	1.2306	-6.1588	-8.7841
Metal halide 70 watt	0.7147	-4.9041	-8.1768	-11.4865
Metal halide 100 watt	0.6095	0.4378	-6.1187	-8.7326
Metal halide 150 watt	0.6095	0.4378	-6.1187	-8.7326
Metal halide 250 watt	0.6313	1.2306	-6.1588	-8.7841
Metal halide 400 watt	0.6313	1.2306	-6.1588	-8.7841
Metal halide 1000 watt	0.6313	1.2306	-6.1588	-8.7841
T5 2X14W	0.6256	0.5540	0.3799	0.1721
T5 2X24W	0.6256	0.5540	0.3799	0.1721
CF32	0.6256	0.5540	0.3799	0.1721

CitiPower Lights	2022–23	2023–24	2024–25	2025–26
CF42	0.6256	0.5540	0.3799	0.1721
Category P LED Standard Output	1.4653	1.3719	1.1206	0.8385
Category P LED High Output	1.4653	1.3719	1.1206	0.8385
Category V LED L1 Standard Output	1.0703	1.0335	0.7835	0.5218
Category V LED L2 Medium Output	1.0703	1.0335	0.7835	0.5218
Category V LED L4 High Output	1.0703	1.0335	0.7835	0.5218

Source: AER, *Final decision - CitiPower distribution determination - 2021–26 - Public Lighting Model*, April 2021.

Shortened forms

Shortened form	Extended form
ACS	alternative control services
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AMI	advanced metering infrastructure
capex	capital expenditure
CCP17	Consumer Challenge Panel, sub-panel 17
CPI	consumer price index
Distributor	distribution network service provider
ECA	Energy Consumers Australia
F&A	framework and approach
LED	light-emitting diode
MV	mercury vapour
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
opex	operating expenditure
PE	photo-electric
PTRM	post-tax revenue model
RIN	regulatory information notice
SCS	standard control services
WACC	weighted average cost of capital