DRAFT DECISION

Jemena
Distribution Determination
2021 to 2026

Attachment 16
Alternative control services

September 2020

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's draft decision on the distribution determination that will apply to Jemena for the 2021–26 regulatory control period. It should be read with all other parts of the draft decision.

The draft 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 11 – Demand management incentive scheme and demand management innovation allowance mechanism

Attachment 12 – Not applicable to this distributor

Attachment 13 – Classification of services

Attachment 14 – Control mechanisms

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Attachment 17 – Negotiated services framework and criteria

Attachment 18 – Connection policy

Attachment 19 – Tariff structure statement

Attachment A – Victorian f-factor incentive scheme

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16 Alternative control services

This attachment sets out our draft decision on prices, or revenues, Jemena is allowed to charge, or recover from, customers for the provision alternative control services: ancillary network services, public lighting services and metering services.

Alternative control services (ACS) 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 (e.g. revenue or price cap), 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 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 the quantities of labour and materials required, with the quantities dependent on a particular task. Prices for quoted

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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.

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 draft decision sets labour rates to be applied to ancillary network services provided on a quotation basis.

16.1.1 Draft decision

Form of control

Our draft decision is to maintain our final F&A position to apply price caps to ancillary network services as the form of control. Under a price cap form of control, for fee-based services we set a schedule of prices for the first year of the regulatory control period, 2021–22. For the subsequent years of the regulatory control period, the prices for ancillary network services charged on a fee basis are determined by adjusting the previous year's prices by the formula set out in section 14.5.2 of Attachment 14 – Control mechanisms.

For services offered on a quoted basis, we set a schedule of labour rates for the first year of the regulatory control period, 2021–22. For the subsequent years of the regulatory control period, these labour rates are adjusted as set out in section 14.5.2 of attachment 14. The price caps for these services are determined by applying the approved labour rates and the formula set out in section 14.5.2 of attachment 14.

The annual adjustment of fee-based charges or quoted service labour rates requires the specification of an 'X-factor' (see section 14.5.2 of attachment 14 for details). Consistent with our previous decisions, we have applied a labour escalator as the X-factor for ancillary network services.

We have substituted our labour escalator for Jemena's proposed labour forecasts. For more detail on the reasons for this decision, see the discussion in section 6.4.4 of Attachment 6 – Operating expenditure. Our draft decision X-factors for ancillary network services are set out in Appendix A.

Fee-based and quoted services

Our draft decision is to:

- accept Jemena's proposed charges for fee-based ancillary network services, except for:
    - certain connection services fees (see section 16.1.4.2)
    - the "Customer access to data" charge (see section 16.1.4.3)
    - requiring Jemena to offer a separate (and lower) price for testing additional meters under its "Meter test of types 5, 6 and AMI smart metering installations" service—or otherwise make explicit that customers do not incur the "Meter test of types 5, 6 and AMI smart metering installations" fee again for additional meters tested (see section 16.1.4.4)

- accept Jemena's proposed labour rates for quoted services for four of its proposed labour types, but reject the proposed labour rates for two labour types (see below and section 16.1.4.1).

Our draft decision on prices for fee-based services for the 2021–22 regulatory year is listed in Table 16.15 in Appendix A. Note that prices in Appendix A are in $2020–21. We will incorporate updated inflation figures in our final decision to derive 2021–22 prices in nominal terms.

Table 16.1 sets out our draft decision maximum labour rates (which include on-costs and overheads) that Jemena should apply in calculating charges for quoted services offered in business hours. We accept four of Jemena's proposed labour rates as they fall within our consultant's maximum recommended total hourly rates. We substituted our consultant's maximum recommended hourly rate for the Engineer and Senior Engineer labour types. Appendix A also includes our draft decision on Jemena's after-hours labour rates for quoted services.

Table 16.1 AER draft decision - 2021–22 hourly labour rates (incl. on-costs and overheads, $2020–21) - ordinary hours except as indicated

	Jemena proposed total hourly rate	AER draft decision maximum total hourly rate
Administration	91.05	91.05
Field worker[1]	155.06	155.06
Technical specialist	142.39	142.39
Engineer	172.34	150.69[2]
Senior engineer	217.47	197.05[2]
Field worker (after hours)[1,3]	236.00	236.00

Notes: 1. Jemena's rates for "Field worker" include a vehicle allowance.

2. These are equal to Marsden Jacob's recommended maximum total hourly rate (see Table 16.2) escalated by our draft decision forecast labour price growth for 2021–22 (see the discussion in section 6.4.4 of attachment 6 – operating expenditure).

3. Jemena did not propose after-hours rates for other labour types. See Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, p. 11.

Sources: Marsden Jacob, *Review of ancillary network services: Citipower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, p. 12; Jemena, *Attachment 07-30 ACS Quoted Services Model*, 31 January 2020, 'Input|Labour Rates'!M55:N64; Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, p. 11.

Our maximum rate for a Field Worker and Technical Specialist ($171.75, $2020–21) includes a $20 per hour allowance for a vehicle. Jemena included a vehicle allowance of $20.04 ($2018) when calculating its rates for Field Workers, consistent with our

method in previous distribution determinations.[4] Hence, vehicle costs should not be included in a rate calculation for quoted services involving Field Workers. Where Jemena requires a Technical Specialist to use a vehicle, the hourly rate increases from $142.39 to $164.14 ($2020–21), which is below the maximum rate of $171.75 ($2020–21).[5]

We used the maximum labour rates in Table 16.1 as the principal basis for assessing Jemena's proposed prices for fee-based services. Section 16.1.4.1 discusses our assessment in more detail.

We also made adjustments to the prices of particular fee-based services as described in sections 16.1.4.2 to 16.1.4.4.

16.1.2 Jemena's proposal

Jemena adopted a bottom-up approach to develop prices for all its fee-based services, except for reserve feeder maintenance service, type 7 and non-contestable unmetered loads metrology services, which are determined using a top-down approach. The proposed prices are based on forecast efficient costs of delivering the services, including labour and materials costs, charges Jemena pays to service providers, administrative and other direct costs, indirect costs (overheads), margin, and taxation costs for services that are capital in nature.[6]

Jemena's proposed fee-based services for the 2021–26 regulatory control period are largely the same as for the 2016–20 regulatory control period. One change is Jemena's proposal to replace the "Service vehicle visit" offered during the 2016–20 regulatory control period with a more detailed suite of five other services:[7]

- Supply upgrade/enhancement (1ph to 3ph)
- Replacement of 1-phase overhead service line
- Disconnection (temporary)
- Reconnection after temporary disconnection
- Meter alteration.

Jemena also proposed to offer the "Remote energisation" and "Remote de-energisation" services free of charge. This is consistent with the approach to the

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4 Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, p. 10.

5 AER analysis.

6 Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, p. 1.

7 Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, p. 18; Jemena, *Attachment 07-31 ACS Fee Based Services Model*, 31 January 2020, 'Input|Historical'!..

"Remote special meter read" service, which Jemena offered free of charge during the 2016–20 regulatory control period.

To calculate quoted prices, Jemena proposed to apply the applicable labour unit rates approved by the AER—multiplied by the time taken by each applicable labour category—and then add the costs of materials, contractors' services, a margin and tax.[8] For our decision on this proposal and related reasoning see Attachment 14 − Control mechanisms.

Relative to the labour categories used in the 2016−2020 regulatory control period, Jemena proposed an additional labour category, namely Senior Engineer, to its labour categories.[9] To determine labour rates for each labour category, Jemena followed the same calculation methodology used in the report prepared for the AER by Marsden Jacob Associates during the distribution determinations for NSW, Tasmania and the Northern Territory. For each labour category, Jemena's proposed labour rates comprise raw labour costs, on-costs and overheads. Jemena also included a vehicle allowance for the field workers category only.[10]

16.1.3 Assessment approach

The price cap control mechanism that we apply to assess the efficient costs of alternative control services may use elements of the building block model for standard control services, but there is no requirement to apply the building block model exactly as prescribed in Part C of the National Electricity Rules (NER).[11] Full details of our draft decision on the form of control mechanism and control mechanism formulae are set out in attachment 14 of this draft decision.

Our approach involves an assessment of the main costs of 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 Jemena's proposed labour rates against maximum total labour rates, which we consider efficient.

Where Jemena'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, as Jemena's proposed labour rates are the same for both sets of ancillary network services.[12] Section 16.1.4.1 discusses our maximum total labour rates.

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8 Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, p. 2.

9 Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, p. 5.

10 Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, p. 5.

11 NER, cl. 6.2.6(c).

12 Jemena, *Attachment 07-31 ACS Fee Based Services Model*, 31 January 2020, 'Input|Assumptions!E11:E21; Jemena, *Attachment 07-30 ACS Quoted Services Model*, 31 January 2020, 'Input|Labour Rates'!H23:Q23.

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

16.1.4 Reasons for draft decision

Section 16.1.4.1 discusses the maximum labour rates we consider are appropriate for distributors in Victoria. It also sets out how we assessed and, where necessary, adjusted Jemena's ancillary network services prices for this draft decision, having regard to these maximum labour rates.

Sections 16.1.4.2 to 16.1.4.4 discusses adjustments we made to the prices of particular fee-based services.

Section 16.1.4.5 sets out our consideration of other issues raised in submissions.

16.1.4.1 Proposed labour rates and benchmarking

For ancillary network services we typically review the key inputs in determining the price for the service. We focus particularly on labour rates as these are the principal input for ancillary network services. In considering labour rates we had regard to maximum reasonable benchmark labour rates developed by our consultant, Marsden Jacob, which we consider are efficient. Where necessary we have adjusted Jemena's proposed charges for ancillary network services to reflect the outcome of our assessment of efficient labour rates.

Marsden Jacob also benchmarked Jemena's proposed prices for its most commonly performed services against the prices of other distributors.

We summarise Marsden Jacob's report in the next section.

Marsden Jacob report

We engaged Marsden Jacob to provide advice in relation to estimates of reasonable maximum total labour rates for the Victorian distributors' 2021–26 proposed ancillary network services, and to benchmark certain ancillary network services provided on a fee basis. This is an extension of Marsden Jacob's previous reports for the AER in relation to distribution determinations for other distributors in the National Electricity Market. Marsden Jacob had regard to the methodology in those reports in undertaking this new report.[13]

[13] For recent examples, see: Marsden Jacob, *Review of Alternative Control Services: SA Power Networks, Ergon Energy and Energex: Advice to Australian Energy Regulator*, June 2019; Marsden Jacob, *Review of Alternative Control Services: SA Power Networks, Ergon Energy and Energex: Addendum: Advice to Australian Energy Regulator*, August 2019.

Marsden Jacob observed that, although distributors use different labour category names and descriptions, the types of labour used to deliver ancillary network services broadly fall into five categories: administration; technical services; engineers; field workers; and senior engineers.[14]

Using these categories Marsden Jacob developed benchmark labour rates for each distributor based on Hays 2019–20 Energy sector and office support salary data.[15]

In assessing the reasonableness of proposed labour rates, Marsden Jacob 'normalised' the rates provided by each distributor and separated them as:[16]

1. Raw labour – based on the Hays salary data using Melbourne rates.
2. On-costs – to cover basic leave entitlements and standard on-costs including superannuation, workers compensation and payroll tax.
3. Overheads – to cover all additional costs. Overall, Marsden Jacob recommended a maximum overhead rate of 61 per cent. Marsden Jacob also accepted the inclusion of an explicit profit margin, however where identified this allocation was benchmarked within the overall overhead allowance.

In aggregate, these elements are referred to as the 'total labour rate', which is expressed as an hourly rate. Table 16.2 includes Marsden Jacob's recommended maximum total ordinary time hourly labour rates.

Table 16.2 Marsden Jacob recommendation - 2020–21 hourly labour rates (incl. on-costs and overheads, $2020–21) - ordinary hours

	Marsden Jacob recommended maximum total labour rate
Administration	92.51
Field worker	171.34
Technical	171.34
Engineer	150.33
Senior engineer	196.58

Notes: 1. Marsden Jacob derived maximum recommended labour rates for the 2020–21 year (the year prior to the first year of the 2021–26 regulatory control period). Marsden Jacob therefore examined the labour rates the Victorian distributors proposed for 2020–21.

[14] Marsden Jacob, *Review of ancillary network services: CitiPower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, p. 6.

[15] Marsden Jacob, *Review of ancillary network services: CitiPower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, p. 6.

[16] Marsden Jacob, *Review of ancillary network services: CitiPower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, pp. 6–9.

Source: Marsden Jacob, *Review of ancillary network services: CitiPower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, p. 10.

Based on its review, Marsden Jacob recommended maximum reasonable benchmark labour rates. The maximum hourly labour rates include the highest of the Hays salary rates for each labour category. Marsden Jacob noted that while these are reasonable maximum rates, more efficient rates may be gained by reference to a different point in the Hays salary bands. For future determinations, Marsden Jacob recommended the AER consider reducing the maximum labour rates to reflect efficiency frontier benchmarks rather than the highest of the Hays rates for each labour category.[17] We note Marsden Jacob's recommendation in the context of future determinations. For the purposes of this draft decision, we consider the maximum reasonable rates recommended by Marsden Jacob are efficient.

Marsden Jacob also recommended that after hours rates be capped at 1.75 times the relevant ordinary hours rate.

Marsden Jacob also reviewed the proposed charges for a number of ancillary network services. Where practicable, Marsden Jacob compared each Victorian distributor's charges with like services of other distributors (in Victoria as well as other jurisdictions).[18] In contrast to previous reviews, Marsden Jacob did not recommend specific price levels for individual services as a result of this review. Marsden Jacob stated much of the costing is opaque for the Victorian distributors, except Jemena (see section 16.1.2). Hence, Marsden Jacob instead proposed that the AER seek further information on charges for specific services.[19]

Marsden Jacob recommendations and application

Marsden Jacob recommended we lower Jemena's labour rates for "Engineer" and "Senior Engineer" to equal its maximum total labour rates, as set out in Table 16.2. This is the basis of our draft decision for the labour rates underpinning quoted services as summarised in Table 16.1.

We applied Marsden Jacob's recommended rates for "Engineer" and "Senior Engineer" to Jemena's pricing models. This did not cause any change to Jemena's proposed prices for fee-based services.

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17 Marsden Jacob, *Review of ancillary network services: CitiPower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, pp. 4–5 and 13.

18 Marsden Jacob, *Review of ancillary network services: CitiPower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, p. 14.

19 Marsden Jacob, *Review of ancillary network services: CitiPower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, p. 20.

After-hours prices

Regarding the Victorian distributors in general, AGL submitted there are differences in charges for services performed during business hours and after hours.[20]

As noted in Table 16.1 and Table 16.17, Jemena proposed after-hours rates only for the "Field worker" labour category. The proposed rate is 52 per cent above the business-hours rate. As this is below Marsden Jacob's recommended cap of 75 per cent, we consider it is a reasonable input into the calculation of quoted services.

Jemena's after-hours rates for fee-based services are on average 36 per cent higher than the business-hours rates. They range from 24 per cent to 74.5 per cent above the business-hours rates. We consider this is reasonable as Jemena's after-hours rates are all below Marsden Jacob's recommended maximum labour mark-up of 75 per cent.[21]

16.1.4.2 Connection services fees

In considering Marsden Jacob's recommendations on labour rates, we observed that Jemena used a simple average of the business-hours and after-hours rates for "Field workers" as part of the cost build-up for the following fee-based services:

- Basic single-phase connection
- Basic three-phase connection
- Temporary single-phase connection
- Temporary three-phase connection
- Basic connection upgrade (single-phase to three-phase)
- Replacement of overhead basic connection (single-phase)
- Replacement of overhead basic connection (three-phase).

Hence, Jemena's proposed prices for these respective services are the same for business-hours and after-hours. We raised this with Jemena and sought explanation of the use of a simple average in its calculations. We proposed a weighted average would be more appropriate given the vast majority of services are performed during business hours.[22]

Jemena noted the use of a simple average has the effect of increasing the prices of these services during business hours and lowers the fees during after-hours.[23] Jemena proposed to revise the "Field worker" labour inputs by applying the business-hours and

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20 AGL, *Submission: Victorian electricity distribution determination 2021–26*, 3 June 2020, p. 5.

21 We consider it is reasonable to use Marsden Jacob's recommended maximum mark-up of 75 per cent for the prices of fee-based services to compare business-hours and after-hours rates because labour is the principal cost.

22 AER, *Information request #055 - Questions on quoted and fee-based service charges*, 21 July 2020.

23 Jemena, *Response to information request IR - 055*, 28 July 2020, p. 1.

after-hours field worker labour rates (see Table 16.3). Jemena stated this approach of having individual prices for business-hours and after-hours services will be more consistent with the service offerings of the other Victorian distribution businesses.[24]

We consider these revised prices are reasonable as they are based on the approved labour rates for "Field workers". We also agree with Jemena that the revised prices send a better price signal as they reflect the different costs of providing services during business hours and after hours.[25]

Table 16.3 Jemena revised 2021–22 prices for selected services ($2020–21)

Service description	Business hours	After hours
Basic single-phase connection	$558.48	$739.50
Basic three-phase connection	$687.36	$868.39
Temporary single-phase connection	$558.48	$739.50
Temporary three-phase connection	$687.36	$868.39
Basic connection upgrade (single-phase to three-phase)	$687.36	$868.39
Replacement of overhead basic connection (single-phase)	$670.02	$851.05
Replacement of overhead basic connection (three-phase)	$743.77	$924.80

Source: Jemena, *Response to information request IR - 055*, 28 July 2020, p. 6.

16.1.4.3 Abolishment of charges

As we discuss below, we require Jemena to offer the "Customer access to data" service free of charge. Jemena may offer this service as a quoted service for cumbersome requests.

AGL submitted the Victorian distributors are leading the National Electricity Market (NEM) for the provision of remote services for meter reads, re-energisation and de-energisation as a result of the smart meter rollout. [26] AGL, along with Energy Consumers Australia (ECA) and the Victorian Department of Environment, Land, Water and Planning (DELWP), welcomed the abolishment of remote re-energisation and remote de-energisation fees from 1 July 2021.[27]

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[24] Jemena, *Response to information request IR - 055*, 28 July 2020, p. 5.

[25] Jemena, *Response to information request IR - 055*, 28 July 2020, p. 5.

[26] AGL, *Submission: Victorian electricity distribution determination 2021–26*, 3 June 2020, p. 5.

[27] AGL, *Submission: Victorian electricity distribution determination 2021–26*, 3 June 2020, p. 5; DELWP, *Victorian Government submission on the Electricity Distribution Price Review 2021–26*, 29 May 2020, p. 5; ECA, *Victorian electricity distributors regulatory proposals 2021–2026 submission: Attachment 1*, June 2020, p. 37.

Local Governments called on the AER to encourage the practice of abolishing charges across all distributors, where possible, because of system improvements such as the rollout of smart meters. Local Government also recommended we assess whether these are being applied evenly across all distributors.[28] Similarly, DELWP similarly encouraged us to "to ensure operational efficiencies delivered by AMI are resulting in sustained cost savings for consumers."[29] Meanwhile the ECA "look forward to see[ing] what other customer charges can be removed entirely" (as benefits resulting from smart meters).[30]

We consider Jemena has largely chosen appropriate services to offer free of charge from the 2021–26 regulatory control period ("Remote special meter read", "Remote energisation" and "Remote de-energisation"). We consider the provision of these services would not incur material costs due to the benefits provided by the smart meter rollout.

However, we require Jemena to offer the "Customer access to data" service free of charge.[31] This charge appears to be identical to the "Access to meter data" that CitiPower and Powercor proposed to abolish for the 2021–26 regulatory control period. CitiPower and Powercor stated the rollout of smart meters and other technological advancements enable them to abolish charges for several services, including "Access to meter data".[32]

CitiPower and Powercor stated they would offer the "Access to meter data" free of charge except for cumbersome requests, which they proposed as a quoted charge.

Consistent with our draft decision for CitiPower and Powercor, we expect Jemena could offer cumbersome requests as a quoted service in the 2021–26 regulatory control period.[33] In the revised proposal, we require Jemena to provide parameters and definitions to distinguish between "Customer access to data" services that are free and those that incur a quoted service charge.

We are interested in receiving further submissions pointing to other services whose costs may have similarly become immaterial due to the smart meter rollout and so can be offered free of charge. We will consider such submissions for our final decision.

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28 Local Government, *Local Government response to the Victorian Electricity Distribution Price Review (EDPR) 2021–26: Prepared by the Victorian Greenhouse Alliances*, May 2020, p. 23.

29 DELWP, *Victorian Government submission on the Electricity Distribution Price Review 2021–26*, 29 May 2020, p. 5.

30 ECA, *Victorian electricity distributor's regulatory proposals 2021–2026 submission: Attachment 1*, June 2020, p. 37.

31 Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020 p. 23.

32 CitiPower, *Regulatory proposal 2021–2026*, January 2020, p. 142; Powercor, *Regulatory proposal 2021–2026*, January 2020, p. 162.

33 AER, *Draft decision: CitiPower Distribution Determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020; AER, *Draft decision: Powercor Distribution Determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020.

16.1.4.4 Meter tests - charge for additional meters

Jemena offers a "Meter test of types 5, 6 and AMI smart metering installations" service. Where Jemena is responsible for providing metering services, a customer can request a test to verify the meter is accurately measuring the amount of energy consumed. In the case of a meter being proven to be faulty, Jemena will waive the charge.[34]

As set out in Table 16.15, we accept Jemena's proposed price for this service.

However, it is not clear whether Jemena proposed to apply the "Meter test of types 5, 6 and AMI smart metering installations" fee only once—even when testing multiple meters—or whether Jemena would apply the fee for each meter tested.[35]

If it is the former, we consider this is reasonable and commend Jemena for the initiative to simplify its charges. We only require Jemena to make this more explicit in the revised proposal (and in its annual pricing proposals).

If it is the latter, we do not consider this is reasonable and require Jemena to continue to offer a separate (and lower) price for testing additional meters. This is consistent with our draft decision for CitiPower, Powercor and United Energy.[36] It is also consistent with AusNet Services' proposed approach for the 2021–26 regulatory control period, which we accept in our draft decision.[37]

We consider there are costs associated with the first meter test that additional meter tests would not incur. The fees for additional meter tests should not incorporate the costs of travel to and from the site, for example. We also expect any administration costs related to additional tests would be incremental to the administration costs of the first meter test. Hence, charging additional meter tests with the same price would appear to double count costs such as travel time and the principal administration costs.

For these reasons, we consider Jemena should offer a separate (and lower) price for testing additional meters if there is an additional charge. In this case, we require that Jemena's revised proposal includes a proposed service relating to the testing of additional meters and explains how it has calculated the quantum of the associated charge.

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34 Jemena, *2021–26 Electricity Distribution Regulatory Proposal: Attachment 07-11: Alternative Control Services*, 31 January 2020, pp. 25–26.

35 In the former case, for example, Jemena would charge $509.28 ($2020–21) if it receives a request to test three meters during business hours (see our draft decision price in Appendix A). In the latter case, Jemena would charge $1,527.84 ($2020–21) if it receives a request to test three meters during business hours.

36 AER, *Draft decision: CitiPower Distribution Determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020; AER, *Draft decision: Powercor Distribution Determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020; AER, *Draft decision: United Energy Distribution Determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020.

37 AER, *Draft decision: AusNet Services Distribution Determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020.

16.1.4.5 Other issues raised in submissions

Comparison between regulatory control periods

In discussing the Victorian distributors in general, Origin Energy stated it appears the proposed charges for a number of fee-based services increased considerably in 2021–22 compared to prices for 2020. Origin Energy encouraged us to examine the cost structures associated with these services as the fee increases appear well above consumer price index (CPI) or wages growth.[38]

Our analysis suggests Jemena's proposed prices for the 2021–22 regulatory year increased by 3 per cent, on average, compared to the approved prices for the 2020 regulatory year.[39] However, there is quite a large range in the change in price between those years for individual services, with some prices decreasing between the two regulatory years and others increasing.

The most significant increases in price relate to "Supply upgrade/enhancement (1ph to 3ph)" and "Replacement of 1-phase overhead service line". The prices for these services rise on average by 44 per cent ($230, $ nominal) between 2020 and 2021–22 (for business hours and after hours).[40]

However, this appears to be due to Jemena replacing the "Service vehicle visit" offered during the 2016–20 regulatory control period with a more detailed suite of five other services as discussed in section 16.1.2. The "Supply upgrade/enhancement (1ph to 3ph)" and "Replacement of 1-phase overhead service line", which represent two of these replacement services, involve additional costs compared to the "Service vehicle visit" service.[41]

Jemena also proposed three other services based on the "Service vehicle visit": "Disconnection (temporary)", "Reconnection after temporary disconnection" and "Meter alteration". The prices for these services fall between 2020 and 2021–22 by 8 per cent on average (for business hours and after hours).[42]

Origin Energy also stated it appears the distributors are proposing significant increases in labour costs between regulatory control periods. Origin Energy noted Powercor and CitiPower proposed increases in “administration” labour rates of over 50 per cent and significant increases in “field worker” labour rates.[43]

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38 Origin Energy, *RE: Submission to Victorian electricity distributor’s regulatory proposals*, 3 June 2020, pp. 7–8.

39 AER analysis. This does not include the 121 per cent increase for "Type 7 metering" because it is an outlier and involves small dollar amounts. The approved price for the service was $0.66 in 2020; Jemena proposes to increase this charge to $1.46 in 2021–22.

40 This excludes the "Type 7 metering" charge for the reasons noted in the footnote above.

41 AER analysis.

42 The after-hours rate for "Meter alteration" increases by 5 per cent ($31.48, $ nominal) between 2020 and 2021–22.

43 Origin Energy, *RE: Submission to Victorian electricity distributor’s regulatory proposals*, 3 June 2020, p. 8.

Jemena proposed lower labour rates for the "Administration", "Technical officer" and "Engineer" in 2021–22 compared to 2020 (by approximately 1, 10 and 16 per cent, respectively). Jemena's proposed 2021–22 rates for "Field worker" increased significantly compared to 2020 (by approximately 36 per cent and 67 per cent for business hours and after hours, respectively). Despite these increases, we consider Jemena's proposed rates for "Field worker" are reasonable as they are below Marsden Jacob's recommended maximum rates.

Origin Energy also noted the substantial variance in “Field worker” labour rates between distributors, pointing to Powercor and Jemena. Origin Energy requested further clarification on this variance.[44] As indicated in Marsden Jacob's report, there will naturally be variation in the rates for the various labour categories.[45] Hence, we consider it is reasonable there will be some variation between the Victorian distributor's proposed labour rates.

However, we agree with Origin Energy that the variance in the labour rates may be "substantial" in some cases. As we discussed in section 16.1.4.1, we consider Jemena's proposed rate for the "Field worker" labour category is reasonable as it is lower than Marsden Jacob's recommended maximum rate. Regarding Powercor, our draft decision is to reduce its proposed labour rates to equal Marsden Jacob's recommended maximum rates.[46] This has reduced the variance between Powercor's and Jemena's business-hours rate for "Field worker" from 21.4 per cent to 10.8 per cent.

As we discussed in section 16.1.4.1, we will explore Marsden Jacob's suggestion of using efficient—rather than maximum—labour rates in future distribution determinations. This could lower the variation in labour rates in future regulatory control periods.

Wasted visit charge

AGL accepted it is reasonable to charge for failed or wasted visits where a field crew cannot undertake the requested task at the site due to customer fault.[47] However, AGL and Origin Energy noted there are instances where the failed field visit fee is higher than the fee for the requested service. They considered the failed field visit fee should be the same or less than the fee for the requested service because the time at the site is reduced and no materials are used.[48]

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44 Origin Energy, *RE: Submission to Victorian electricity distributor’s regulatory proposals*, 3 June 2020, p. 8.

45 Marsden Jacob, *Review of ancillary network services: CitiPower, Powercor, United Energy, Jemena and AusNet: Advice to the Australian Energy Regulator*, 30 June 2020, p. 7.

46 AER, *Draft decision: Powercor Distribution Determination 2021 to 2026: Attachment 16: Alternative control services*, September 2020.

47 AGL, *Submission: Victorian electricity distribution determination 2021–26*, 3 June 2020, p. 5.

48 AGL, *Submission: Victorian electricity distribution determination 2021–26*, 3 June 2020, p. 5; Origin Energy, *Submission: RE: Submission to Victorian electricity distributors regulatory proposals*, 3 June 2020, p. 8.

We consider Jemena's wasted visit charges are reasonable. In most cases the wasted visit charges are below the charge for the completed service. For these services Jemena clarified that administrative and field worker costs cannot be avoided and the only cost that can be avoided (due to the wasted visit) is the cost of materials.[49] For other services—such as "Temporary disconnection", "Field-based de-energisation" and "Field-based energisation"—the services consist of only labour costs. Consequently, the relevant wasted site attendance fees are the same amount as the fee for the service.[50]

Consolidation of services

Origin Energy noted the Victorian distributors proposed to consolidate some services in the 2021–26 regulatory control period, citing Powercor's consolidation of meter accuracy services. Origin requested clarification of any proposed service consolidation between regulatory control periods and the associated rationale.[51]

It does not appear that Jemena proposed to consolidate any ancillary network services for the 2021–26 regulatory control period.

Nevertheless, we are interested in receiving submissions pointing to services stakeholders consider would benefit consumers through consolidation. We will consider such submissions for our final decision.

16.2 Metering

We are responsible for the economic regulation of the regulated metering services provided by the Victorian distributors. These include:

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

Section 16.2 deals with type 5 and 6 (incl. smart metering) services and with metering exit fees.[52] Type 7 metering services and auxiliary metering services other than metering exit fees are considered as a part of the broader ancillary network services in section 16.1.

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49 Jemena, *Response to information request IR - 055*, 28 July 2020, p. 7.

50 Jemena, *Response to information request IR - 055*, 28 July 2020, p. 7.

51 Origin Energy, *Submission: RE: Submission to Victorian electricity distributor's regulatory proposals*, 3 June 2020, p. 8.

52 Metering exit services allow the distributor to recover the written-down value of, as well as the efficient costs of removing and disposing of, AMI meters. This currently occurs when brownfield sites become embedded networks, resulting in the removal of existing meters.

Unlike other jurisdictions in the NEM, the Victorian distributors are the monopoly providers of most metering services, including smart metering services. This approach differs from the Power of Choice reforms that apply across the rest of the NEM, arising from the Victorian Government's decision to implement a smart meter roll-out program:

- In 2006, the Victorian Government initiated a roll-out of smart meters to all households and small businesses with electricity use of up to 160 MWh per annum under the AMI program.[53] Through Orders in Council in 2008, the Victorian Government established obligations on distribution businesses to install meters with specified AMI functionality,[54] together with supporting communications infrastructure, IT systems and processes.
- In 2015 the Australian Energy Market Commission (AEMC) introduced metering contestability to residential and small business electricity consumers through the Power of Choice reforms.[55] These reforms, which apply in other jurisdictions, do not apply in Victoria due to the existing AMI program. Under these reforms, distributors in other jurisdictions in the NEM are no longer the monopoly providers of new meters, and type 5 and 6 meters no longer meet the minimum standards for new meters.
- In 2017, the Victorian Government deferred metering contestability in Victoria through an Order in Council. Consequently, Victorian distributors remain the monopoly providers of type 5 and 6 (incl. smart metering) services, and have the role of metering coordinator, metering provider, and metering data provider for AMI meters for residential and business customers consuming up to 160 MWh of electricity per annum.

Jemena's current meter fleet includes 4 867 legacy non-AMI meters, accounting for 1.42 per cent of the 362 817 total meters on its network.[56]

In this section, we explain our decision for Jemena for the following metering services:

- Type 5 and 6 (inc. smart metering) services (regulated service only)
- Metering exit fees.

For our draft decision on other regulated metering services (for example, type 7 metering services and auxiliary metering services other than metering exit fees) see section 16.1 on ancillary network services.

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53 Victorian Government, *Order-In-Council, No. S 346*, October 2017, cl. 2(b).

54 Department of Primary Industries, *Minimum AMI Functionality Specification (Victoria)*, September 2008.

55 AEMC, *Competition in metering services information sheet*, November 2015.

56 Jemena, *Jemena 2019 – Category Analysis RIN – Templates,* May 2020.

16.2.1 Draft decision

Our draft decision is to:

- reject Jemena's proposed revenues for type 5 and 6 (incl. smart metering) services and substitute alternative revenues for type 5 and 6 (incl. smart metering) services that have been calculated by:
    - updating forecast 2019 values for capital expenditure, operating expenditure, and meter volumes with actual results reported to the AER in regulatory information notices (RINs)
    - applying metering volume forecasts to operating and capital expenditure that incorporate adjustments for the COVID-19 pandemic
    - applying our draft decision rate of return, labour escalators, and inflation forecast consistent with standard control services.[57]
- reject Jemena's proposed metering exit fees and set alternate metering exit fees based on the changes listed above.

16.2.1.1 Type 5 and 6 (inc. smart metering) services revenue

Our draft decision allows for a revenue requirement for type 5 and 6 (inc. smart metering) services for the 2021–26 regulatory control period of $112.06 million ($ nominal) compared to Jemena's proposed $128.21 million ($ nominal). This is expected to lead to lower annual metering charges over the 2021–26 regulatory control period than those proposed by Jemena. However, as our draft decision confirms our F&A position that metering services are subject to a revenue cap, we have not set prices in this draft decision.[58]

Table 16.4 provides the building block components that make up the total revenue requirement.

Table 16.4 Draft decision building block components ($ million, nominal)

	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Return on Capital	2.83	2.61	2.30	1.98	1.75	11.46
Return of Capital (regulatory depreciation)	7.24	8.06	8.69	9.32	10.37	43.67

[57] For further information, see the overview, attachment 3 - rate of return and attachment 6 - operating expenditure of this draft decision.

[58] AER, *Final framework and approach: AusNet Services, CitiPower, Jemena, Powercor and United Energy - Regulatory control period commencing 1 January 2021*, January 2019. See also attachment 14 of this draft decision.

	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Operating Expenditure	9.90	10.23	10.61	11.04	11.53	53.31
Revenue Adjustments	0.00	0.00	0.00	0.00	0.00	0.00
Net Tax Allowance	0.67	0.59	0.76	0.86	0.91	3.79
Annual Revenue Requirement (unsmoothed)	20.63	21.49	22.36	23.20	24.56	112.24
X-factor	n/a	0%	0%	0%	0%	n/a
Smoothed revenue	21.37	21.88	22.40	22.93	23.48	112.06

Source: AER - Draft Decision - Jemena distribution determination 2021–26 - Metering PTRM and exit fees, September 2020.

Once the total revenue requirement is determined from the final building block components, we are required to set a revenue profile for the 2021–26 regulatory control period. We do this by adjusting the annual revenues, but maintaining the same total revenue requirement by measuring the revenue in real 2020–21 dollars (known as the NPV or net present value). This allows us to set or 'smooth' the revenue over the regulatory control period to deliver a preferred revenue profile. For Jemena, this NPV is $98.32 million ($2020–21).

For the 2021–26 regulatory control period, we have set a revenue profile for Jemena that consists of a significant decrease in revenue in the first year, followed by flat expected revenue in real terms for the following years. This means that after the decrease in the first year, the expected revenue in following years will only increase by the relevant inflation, to give a total expected revenue of $98.32 million ($2020–21) to match the NPV based on the total building block components. The movements from year-to-year that create our revenue path are represented by P0 for the first year and X-factors for years 2–5 to easily demonstrate the movements.[59]

Table 16.5 provides the P0 and X-factors that Jemena proposed, and those of our draft decision. Table 16.6 provides the resulting expected or 'smoothed' revenue for the 2021–26 regulatory control period as proposed by Jemena, and set by our draft decision.

[59] X-factors to apply in years 2–5 of the regulatory control period are recalculated prior to use in the relevant annual pricing proposal to reflect updated return-on-debt portfolios.

Table 16.5 Draft decision P0 and X-factors

	2021–22	2022–23	2023–24	2024–25	2025–26
Proposal	17.53%	0.00%	0.00%	0.00%	0.00%
Draft Decision	27.96%	0.00%	0.00%	0.00%	0.00%

Note: P0 movement for draft decision calculated from approved 2020 revenue, and indexed to $2020–21 for comparison.

Source: JEN - Att 07-24 ACS Metering PTRM FY22-2, January 2020; AER - Draft Decision - Jemena distribution determination 2021–26 - Metering PTRM and exit fees, September 2020.

Table 16.6 Draft decision smoothed revenue 2021–26 ($ million, nominal)

Smoothed revenue	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Proposal	24.46	25.04	25.63	26.23	26.85	128.21
Draft Decision	21.37	21.88	22.40	22.93	23.48	112.06

Source: JEN - Att 07-24 ACS Metering PTRM FY22-26, January 2020; AER - Draft Decision - Jemena distribution determination 2021–26 - Metering PTRM and exit fees, September 2020.

16.2.1.2 Exit fees

Our draft decision sets metering exit fees that reflect adjustments 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 (inc. smart metering) revenue, and are therefore subject to the same assessment and reasoning as for the type 5 and 6 (inc. smart metering) revenue.

The metering exit fees resulting from our draft decision are up to 1.8 per cent lower than those proposed by Jemena.

Our draft 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. Our draft decision on the X-factors for metering exit services is also set out in Appendix B.

16.2.2 Jemena's proposal

16.2.2.1 Type 5 and 6 (inc. smart metering) services

Jemena proposed to recover revenue for each year of the 2021–26 regulatory control period in relation to type 5 and 6 (inc. smart metering) services that was 17.5 per cent lower than the approved revenue for 2020 (in real terms).[60] Jemena proposed to apply a building block approach to determine these revenues, consistent with the approach used in the current regulatory control period.[61]

Jemena did not propose to change any allocations of metering IT/communications capital or operating expenditure between type 5 and 6 (incl. smart metering) services and standard control services as they exist in the current regulatory control period. For a discussion of our considerations around the shared benefits of the IT/communications systems used for the remote capabilities of smart meters that fed into the decision for this regulatory control period see Attachment 7 - Operating expenditure (Appendix A.5 - allocation of AMI costs) of our Jemena 2016–20 final decision.

Jemena proposed to use the base-step-trend approach to develop its operating expenditure forecasts. Jemena has not proposed any adjustments or step changes to its base operating expenditure.[62]

Table 16.7 provides Jemena's proposed building block components and revenue requirements (unsmoothed).

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60 Jemena, *2021–26 Regulatory Proposal - Supporting document - Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, p. 6.

61 Jemena, *2021–26 Regulatory Proposal - Supporting document - Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, p. 5.

62 Jemena, *2021–26 Regulatory Proposal - Supporting document - Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, p. 9.

Table 16.7 Jemena's proposed building block component ($ million, nominal)

	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Return on Capital	2.90	2.73	2.46	2.15	1.94	12.18
Return of Capital (regulatory depreciation)	7.24	8.09	8.74	9.37	10.44	43.88
Operating Expenditure	12.55	13.11	13.70	14.31	14.95	68.62
Revenue Adjustments	0.00	0.00	0.00	0.00	0.00	0.00
Net Tax Allowance	0.67	0.59	0.76	0.86	0.91	3.79
Annual Revenue Requirement (unsmoothed)	23.36	24.53	25.65	26.70	28.24	128.47
X-factor	n/a	0%	0%	0%	0%	n/a
Smoothed revenue	24.46	25.04	25.63	26.23	26.85	128.21

Source: Jemena, 2021–26 Regulatory Proposal - Supporting document - JEN - Att 07–24 ACS Metering PTRM FY22-26, January 2020.

16.2.2.2 Metering exit fees

Jemena proposed that its metering exit fees provide for the recovery of:

- the written-down value of that meter and proportion of supporting communication & IT systems
- reasonable and efficient costs of removing the meter.[63]

Jemena proposed to draw the inputs for these elements of meter exit fees from the building block calculations that are used for type 5 and 6 (incl. smart metering) services.[64] This is reflective of the fact the metering exit fees represent the remaining revenue that Jemena is entitled to cover for the remainder of the life of the asset.

Table 16.8 provides Jemena's proposed metering exit fees for the 2021–26 regulatory control period.

[63] Jemena, *Attachment 07-11 - Alternative Control Services*, January 2020, pp. 29-30.

[64] Jemena, *Attachment 07-11 - Alternative Control Services*, January 2020, p. 30.

Table 16.8 Jemena's proposed metering exit fees ($ nominal)

	2021–22	2022–23	2023–24	2024–25	2025–26
Single Phase	235.80	224.09	207.99	193.05	179.60
Single Phase, Two Element	235.80	224.09	207.99	193.05	179.60
Three Phase DC	235.80	224.09	207.99	193.05	179.60
Three Phase CT	235.80	224.09	207.99	193.05	179.60

Source: Jemena, 2021–26 Regulatory Proposal - Supporting document - JEN - Att 07-29 ACS Metering Exit Fees Model, January 2020.

16.2.3 Assessment approach

In our Final Framework and Approach, we classified type 5 and 6 (incl. smart metering) services and Metering exit services as ACS. Accordingly, we made our assessment with regard to the framework for regulating ACS in the National Electricity Law (NEL) and NER.[65]

For our draft decision we also had regard, as relevant, to:

- the wider regulatory context, including the possibility of Victoria adopting a competitive metering framework in the future
- cost allocation principles, and particularly our *Cost Allocation Methodology Guideline* and the approved Cost Allocation Methodology for each distributor[66]
- consistency of approach with other regulated services, including the weighted average cost of capital (WACC) and labour escalators used for standard control services (SCS)
- our decision for the 2016–20 regulatory control period
- comparisons between the Victorian distributors, and
- stakeholder feedback.

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 an alternative control service, the AER has greater discretion under the NER in making our assessment compared to standard control services. We have chosen to apply a streamlined version of a building block approach. This is consistent with our approach adopted for the current regulatory control period.

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65 NER, cl. 11.17.6(a).

66 Jemena, *Cost Allocation Method*, March 2019.

16.2.3.2 Metering exit fees

Consistent with our approach for the current regulatory control period, the inputs we used to calculate metering exit fees are:

- our draft decision on Jemena'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 draft decision on forecast metering capital and operating expenditure (capex and opex) for type 5 and 6 (incl. smart metering) services for Jemena's 2021–26 regulatory control period
- depreciation lives (meters 15 years, communications and IT 7 years), which we have accepted in this draft decision.

16.2.4 Reasons for draft decision

This section sets out in greater detail the reasons for our draft decision for each relevant service.

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

Form of control

We maintain our final F&A position to apply a revenue cap to type 5 and 6 (incl. smart metering) services as the form of control.[67] This revenue cap sets a total annual revenue for each year of the regulatory control period.[68] Jemena is then allowed to set prices that allow them to recover up to the total allowable revenue, calculated with proposed consumption forecasts, through the initial and annual pricing processes.

The revenue for the 2021–26 regulatory control period has been smoothed. The X-factor for each year of the 2021–26 regulatory control period is determined in the post-tax revenue model (PTRM) and is set out in Appendix B. The X-factor will be revised annually for the return on debt.

The control mechanism formula is set out in attachment 14 of this draft decision.

Metering asset base

Jemena proposed a 2021–22 opening metering asset base of $60.34 million ($ nominal) in its regulatory proposal. This opening metering asset base is calculated

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[67] Final Framework and Approach – *AusNet Services, Jemena, CitiPower, Powercor and United Energy Regulatory control period commencing 1 January 2021*, January 2019, p 54.

[68] The initial and annual pricing processes allow for adjustments to the revenue set in our determination to arrive at the total allowable revenue. These include adjustments for updated return on debt, actual inflation, incentive schemes, cost pass-throughs, and the true-up of actual revenues.

in the AER's roll-forward model (RFM), which carries forward the asset base from the 2016–20 regulatory control period, with relevant adjustments for capital expenditure in that period and other factors.

In making our draft decision, we have updated the capital expenditure used to calculate the opening metering asset base. For the 2019 year, we have updated actual capital expenditure to reflect that reported by Jemena in its 2019 annual RINs. For the 2021 period, we have updated the forecast capital expenditure to reflect our decision for the 6-month extension period. This has increased the capital expenditure for the 2016–21 RFM from $13.70 million to $13.95 million ($ nominal).

Our draft decision includes a 2021–22 opening metering asset base of $60.60 million ($ nominal).

Capital expenditure

Jemena proposed capital expenditure of $21.54 million ($2020–21) in its proposal for the 2021–26 regulatory control period.[69] This proposed capital expenditure includes:[70]

- new residential and small business connections
- augmentation of the communication networks to manage new requirements for five-minute interval data for NEM settlement
- communication network lifecycle management - periodic replacement of components of the communications network to ensure capacity, performance, and reliability of the network is maintained
- the upgrade of components of the communication network to allow for the expected shutdown of the 3G network.

Jemena have not proposed any capital expenditure related to meter lifecycle replacement as they do not expect that any meter family end-of-life failures will occur in the 2021–26 regulatory control period that would result in bulk replacements.[71]

We accept the unit rates and related costs that Jemena have proposed in relation to these elements of capital expenditure. However, we do not accept the growth rates and meter volumes, and therefore do not accept the total proposed capital expenditure.

Due to the COVID-19 pandemic, we do not find Jemena's forecast new connection growth to be appropriate. We have made revisions to the forecast customer numbers to reflect an adjusted growth rate for the 2020–22 years. To do this, we have adjusted the forecast customer growth rates for the 2020, 2021, and 2022 years to 81.28 per cent, 62.04 per cent, and 54.51 per cent of the proposed growth rates,

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69 Jemena, *2021–26 Regulatory Proposal - Supporting document - Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, p. 16.

70 Jemena, *2021–26 Regulatory Proposal - Supporting document - Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, pp. 18-21.

71 Jemena, *Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, p. 18.

respectively.[72] These new customer number forecasts have been used to calculate an adjusted new connection growth rate for meters, which also considers the rate of meter abolishment.

In our draft decision, we have also updated 2019 meter volumes for those reported by Jemena in its annual RINs. Our draft decision capital expenditure also reflects our draft decision labour cost escalators (see attachment 6 - operating expenditure) and forecast inflation (see attachment 3 - rate of return).

Table 16.9 provides the draft decision forecast capital expenditure for the 2021–26 regulatory control period.

Table 16.9 Forecast capital expenditure ($2020–21)

Forecast Capex	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Proposal	4.96	3.36	3.01	5.08	5.12	21.54
Draft Decision	4.34	3.01	2.94	4.92	4.96	20.18

Source: Jemena, 2021–26 Regulatory Proposal - Supporting document - JEN - Att 07-24 ACS Metering PTRM FY22-26, January 2020; AER, Draft Decision - Jemena distribution determination 2021–26 - Metering PTRM, September 2020.

Operating expenditure

Jemena proposed operating expenditure of $63.88 million ($2020–21) in its regulatory proposal for the 2021–26 regulatory control period.[73] This proposed operating expenditure includes:[74]

- expenditure related to alteration, testing, and refurbishment of existing meter installations
- expenditure associated with metering data services involving the collection, processing, storage, and delivery of metering data
- other relevant expenses to meet market and regulatory obligations or maintain metering services and networks.

Jemena have used the base-step-trend method to calculate forecast operating expenditure for the 2021–26 regulatory control period.

We accept the use of 2019 as the base year for forecasting operating expenditure for type 5 and 6 (incl. smart metering) services. However, our draft decision replaces the

[72] These adjustment rates reflect the Housing Industry Association's April 2020 dwelling starts forecasts, and are consistent with the adjustments made for the standard control services capital and operating expenditure assessments.

[73] Jemena, *Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, p. 9.

[74] Jemena, *Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, p. 8.

forecast operating expenditure with actual 2019 operating expenditure as reported by Jemena in its annual 2019 RINs. This has reduced the base year operating expenditure significantly from $11.17 million to $9.17 million ($ nominal).

Jemena proposed to trend this base year forward to reflect real price growth and output growth. We accept Jemena's proposed 59.7:40.3 split between labour and non-labour costs as the basis for applying nominal wage and CPI growth forecasts. However, we do not accept the wage growth forecasts proposed by Jemena, which have been calculated as an average of the BIS Oxford and Deloitte Access Economics wage price index forecasts from 2019 reports. Due to the current environment, we consider that these forecasts are not appropriate. Instead, we have used the Deloitte Access Economics wage price index from its 2020 report only. This is due to the BIS Oxford 2020 report not being available at the time of this decision.[75] We have also updated the CPI calculations to reflect the latest actual and forecast inflation data.

We also do not accept Jemena's proposed output growth rates. Due to the COVID-19 pandemic, we do not find Jemena's forecast new connection growth to be appropriate. We have made revisions to the forecast customer numbers to reflect an adjusted growth rate for the 2020–22 years. To do this, we have adjusted the forecast customer growth rates for the 2020, 2021, and 2022 years to 81.28 per cent, 62.04 per cent, and 54.51 per cent of the proposed growth rates, respectively. [76]

Jemena did not propose any step changes or productivity adjustments.[77]

Table 16.10 provides the draft decision forecast operating expenditure for the 2021–26 regulatory control period.

Table 16.10 Forecast operating expenditure ($2020–21)

Forecast Opex	2021–22	2022–23	202–/24	2024–25	2025–26	Total
Proposal	12.26	12.51	12.77	13.04	13.30	63.88
Draft Decision	9.67	9.76	9.89	10.05	10.25	49.63

Source: Jemena, 2021–26 Regulatory Proposal - Supporting document - JEN - Att 07-24 ACS Metering PTRM FY22-26, January 2020; AER, Draft Decision - Jemena distribution determination 2021–26 - Metering PTRM, September 2020.

[75] For more information, see Attachment 6 - Operating expenditure.

[76] These adjustment rates reflect the Housing Industry Association's April 2020 dwelling starts forecasts, and are consistent with the adjustments made for the standard control services' capital and operating expenditure assessments.

[77] Jemena, *2021–26 Regulatory Proposal - Supporting document - Attachment 07-09 - Advanced Metering Infrastructure*, January 2020, p. 9.

Stakeholder feedback

Other stakeholder feedback

Table 16.11 contains a summary of additional stakeholder commentary in relation to type 5 and 6 (incl. smart metering) services, along with AER responses.

Table 16.11 Summary of additional stakeholder commentary and AER response

Stakeholder submission	AER Response
Energy Consumers Australia (ECA)	
It is positive that the cost of metering for consumers in all networks will fall significantly in the 2021–26 period.	With the exception of AusNet Services, our draft decision allows for revenues lower than those proposed by each of the distributors. For these distributors this decision will therefore be expected to result in lower metering charges than those proposed for each distributor. Our draft decision for AusNet Services allows for a revenue requirement that is 1.4 per cent higher than proposed. As discussed in section 16.3.4 of attachment 16 of our Draft Decision for AusNet Services, this reflects our decision to reject AusNet Services' proposal to reallocate 50 per cent of its AMI-related IT and communications costs out of metering ACS to SCS. We also reiterate that our decision sets revenues for type 5 and 6 (incl. smart metering) services; it does not set specific charges. This occurs as part of the annual pricing process. Charges for a given year may be affected by adjustments to revenue provided for as part of this pricing process, and the structure of charges proposed by the distributor to recover these revenues.
We are slightly concerned about the absence of planning for metering replacement in the future. When questioned, all networks responded saying that wide spread replacement of meters would not be required for another 10 years (circa 2030). We are satisfied that a 10 year timeframe provides sufficient time to develop a replacement strategy.	We note the ECA's comments, and suggest the distributors give consideration to this during the 2021−26 regulatory control period.
AusNet explicitly refers to the costs of upgrading its meter fleet from 3G to 4G in its metering revenue proposal. The other networks who face the same issue only refer to the 3G upgrade in their costs for distribution business. Given that all networks have allocated meter costs to the distributor, it is important that all networks attribute the	AusNet Services proposed a 50:50 shared allocation of 3G upgrade capex between metering

telecommunication upgrade in a manner consistent with their cost allocation methodologies. This will ensure that metering costs between networks remain more comparable.	ACS and SCS, which we have accepted in our draft decision.[78] Jemena proposed to allocate 100 per cent of the capex for the upgrade of the 3G elements of its AMI communications network to ACS, which we have accepted in our draft decision.[79] CitiPower, Powercor and United Energy allocated 100 per cent of their 3G upgrade capex to SCS.[80] As set out in our draft decisions for CitiPower, Powercor and United Energy our decision is to allocate some of CitiPower's, Powercor's and United Energy's 3G capex to metering alternative control services. In arriving at our draft decisions we have had regard to the allocations and any supporting justifications provided by each distributor, with consideration given to each distributor's cost allocation methodology where required. While the allocations may differ between distributors, our approach has focussed on satisfying ourselves that any allocations away from ACS are in accordance with the distributor's cost allocation methodology.
United Energy is unusual in its metering cost outcomes. It is unclear why United is able to provide the same service for considerably less cost than its peers. We note the allocation of metering data cost between the distributor and the metering business is the same as Citipower and Powercor (88%:12%). We would welcome more information on this matter to understand whether other companies can also provide services for this lower price.	We agree that it is important to consider the efficiency with which distributors can offer similar services. Our assessment approach includes an assessment of the inputs proposed by the various distributors. We note that this does not always result in the selection of a single rate - for example, for labour rates (as discussed in detail in Section 16.1) we may accept a range of labour rates provided they fall below the maximum efficient labour rates identified by our consultant. In benchmarking the cost inputs and performance of different distributors, we also take into consideration factors such as the concentration or dispersion of customers on the distributor's network (which may affect service times).

78 AusNet Services, *Electricity Distribution Price Review 2021–25 Appendix 9D*, January 2020, pp.4–6.

79 Jemena, *Information Request 45 – Q1*, 17 July 2020, p.iv.

80 CitiPower, *2021–26 Regulatory Proposal - Supporting document - CP MOD 6.03 - AMI comms - PUBLIC*, January 2020; Powercor, *2021–26 Regulatory Proposal - Supporting document - PAL MOD 6.03 - AMI comms - PUBLIC*, January 2020; United Energy, *2021–26 Regulatory Proposal - Supporting document - UE MOD 6.03 - AMI comms - PUBLIC*, January 2020.

	Our assessment has resulted in lower revenues for each distributor than those proposed - with the exception of AusNet Services, where the driver of the increase in revenues is our rejection of the proposed reallocation of costs from ACS to SCS. More detail on our assessments (including benchmarking of inputs) of type 5 and 6 (inc. smart metering) revenues for each distributor is set out in the draft decision documents for each distributor.
Vector	
The Final Framework & Approach Paper for electricity distributors in Victoria for the 2021–2026 regulatory control period (dated January 2019), which informed the Issues Paper, noted the Consumer Challenge Panel's suggestion that analysis be undertaken to determine whether net benefits arise from harmonising Victorian metering arrangements with the rest of the NEM (page 111). While recognising that this is a matter of jurisdictional prerogative (as noted by the AER), we strongly share the Panel's perspective and encourage the Victorian Government and the relevant regulators to actively consider this suggestion so it can inform this ongoing distribution determination process and related decision-making processes.	We note Vector's recommendation. However, we also note that the Victorian government has decided not to introduce metering contestability in Victoria at this stage.[81]
We would find it useful if the Draft Determination the AER will issue following this consultation would provide some guidance for stakeholders on potential changes to the regulatory framework for metering in Victoria that could be triggered by the above reviews/consultations. The Draft Determination could, for example, outline the initial steps the AER will undertake should the Victorian Government or any future state government decide to facilitate the introduction of competition in metering in the state.	As noted in our response above, the Victorian government has decided not to introduce metering contestability in Victoria at this stage. It considers the primary value of AMI has been as a network device and substantial operational and safety benefits have been realised to date. In its review the Victorian government found that introducing contestability at this time may not unlock unrealised benefits to consumers and may potentially diminish some of the current benefits that have been realised.[82] Our draft decision recognises that AMI meters can have wider network benefits and that some IT and communication costs could be shared between ACS and SCS. In making our decision we have

[81] Department of Environment, Land, Water and Planning, *Victorian Government Submission on the electricity Distribution Price Review*, June 2020, p.4.

[82] Ibid.

	been mindful to seek an appropriate allocator to ensure prices reflect underlying costs, should there be a move to contestability in the future. In regards to the steps the AER would undertake should there be a future decision to introduce metering contestability in Victoria, it is difficult to provide guidance in the absence of a specific proposal to introduce contestability. Interested stakeholders may wish to review the approach the AER took in other jurisdictions where metering contestability has already been introduced.

Sources: Department of Environment, Land, Water and Planning, *Victorian Government Submission on the electricity Distribution Price Review*, June 2020; Spencer & Co Business advisory services, *Report to Energy Consumers Australia, A review of Victorian Distribution Networks Regulatory Proposals 2021–26*, June 2020, p.37; Vector, *Submission on the AER's Issues Paper on Victorian Electricity Distribution Determination for 2021 to 2026,* June 2020.

16.2.4.2 Metering exit fees

Form of control

We maintain our final F&A position[83] to apply price caps to auxiliary metering services (such as metering exit fees) as the form of control. This allows Jemena to charge according to a schedule of prices, approved by the AER, in the first year of the regulatory control period, with these prices being escalated by actual CPI and an X-factor for subsequent years.

The control mechanism formula is set out in attachment 14 of this draft decision. The prices for the first year, and X-factors for subsequent years, are set out in Appendix B of this attachment.

Calculation of fees

We accept Jemena's proposed methods of calculation for metering exit fees. These calculations source inputs from the building block components of the type 5 and 6 (incl. smart metering) revenue, which are subject to our draft decision on type 5 and 6 (incl. smart metering) services. The calculation of these fees represent the expense incurred in removing a meter, as well as the remaining costs payable for the asset, usually charged over the life of the asset.

In providing our draft decision on metering exit fees, all adjustments and reasoning for our draft decision on type 5 and 6 (incl. smart metering) services apply.

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[83] AER, *Final Framework and Approach – AusNet Services, Jemena, CitiPower, Powercor and United Energy Regulatory control period commencing 1 January 2021*, Section 2.1, p 54.

Our draft decision results in metering exit fees that are up to 1.84 per cent lower than proposed by Jemena. Our draft 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. Our draft decision on the X-factors for metering exit services is also set out in Appendix B.

16.3 Public lighting services

16.3.1 Draft decision

For public lighting, our draft decision is to amend Jemena's proposed input cost assumptions in relation to operations and maintenance expenditure and light-emitting diode (LED) luminaire costs.

Additionally we have updated the WACC, CPI and wage growth assumptions, and made minor corrections to the proposed public lighting model.

Our draft decision prices for the first year of the regulatory control period are set out in Appendix C. Prices for subsequent years of the regulatory control period will be escalated by CPI growth and X-factors. A summary of the X-factors is provided in Appendix C; further explanation is provided in section 16.3.4.

16.3.2 Jemena's proposal

For public lighting services, Jemena proposed:[84]

- Continuing to deploy more energy-efficient lights across its network. Jemena has proposed to increase its LED deployment from 26 per cent (2021 volumes) to 43 per cent[85] by the end of the 2021–26 regulatory control period, including major and minor roads. This includes the bulk replacement of all Category P mercury lights and spot replacement for all unserviceable Category V lights to LED lights across its network.[86]
- Public lighting revenues that, in total, increase by 33.6 per cent in real terms for the 2021–26 regulatory control period when compared to the current regulatory control period.[87]

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84 Jemena, *2021–26 Regulatory proposal – Attachment 07-12 – Public Lighting Services, Jan2020* 31 January 2020, pp. v-vii.

85 Jemena, *2021–26 Regulatory proposal – Attachment 07-32 – Public lighting Model – Jan2020* 31 January 2020, "DNSP Inputs General" Tab, L48:P78.

86 Category P lights are typically installed on minor roads and streets, while category V lights are typically installed on highways and major roads.

87 Jemena, *2021–26 Regulatory proposal – Attachment 07-32 – Public Lighting Model, Jan2020 – Public*, 31 January 2020, "Cashflow Summary".

- Price changes (-23 to 20 per cent) for LED lights in the first year of the regulatory control period, but more significant price increases for non-LED lights (in the range of 8−87 per cent).[88]

16.3.3 Assessment approach

To determine prices for public lighting services we assessed Jemena'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 Reasons for draft decision

Form of control

We maintain our final F&A position[89] to apply price caps to individual public lighting services as the form of control. This allows Jemena to charge according to a schedule of prices, approved by the AER, in the first year of the regulatory control period, with these prices being escalated by CPI and an X-factor for subsequent years.

The control mechanism formula is set out in attachment 14 of this draft decision. The control mechanism is implemented through a public lighting model. Compliance with the control mechanism is to be demonstrated through the annual pricing proposal by updating the forecast CPI for the actual CPI each year. This approach is consistent with the arrangements for Jemena in the currently regulatory control period, and with other Victorian distributors.

A summary of our draft decision X-factors is provided in Table 16.22 of Appendix C. For full details, see our draft decision public lighting model for Jemena.

Modelling

For the draft decision we have amended the public lighting model to incorporate updated CPI growth, WACC and wage growth figures, consistent with those used for standard control services.

For a discussion of the WACC used in our draft decision see Attachment 3 − Rate of return. Our draft decision substitutes the wage growth forecasts provided by Jemena with those provided by the AER's consultant. For a discussion of the reasons behind this decision see Attachment 6 − Operating expenditure.

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88 Jemena, *2021–26 Regulatory proposal – Attachment 07-32 – Public Lighting Model, Jan2020 – Public*, 31 January 2020, "Output PL Tariffs".

89 AER, *Final Framework and Approach – AusNet Services, Jemena, CitiPower, Powercor and United Energy Regulatory control period commencing 1 January 2021*, Section 2.1, p 54.

We also reviewed the models provided by Jemena and a number of adjustments, including:

- replacing the opening prices used in the model with those approved for 2020[90]
- changing from urban to rural a value that was incorrectly entered in the operations and maintenance calculation
- correcting asset life factors incorrectly entered in the historical regulatory asset base (RAB)
- correcting the unitisation codes used to apportion the RAB and regulatory depreciation to different light types based on their unit costs. This correction has had minimal impact on price movements
- correcting a number of minor formulae errors in the total RAB calculation sheet.

LED Luminaire unit costs

The increasing use of LED lighting reflects the efficiencies offered relative to older-style lighting. LED lights are both typically more energy efficient and have lower maintenance costs than their earlier counterparts. These twin efficiencies create benefits for savings for customers that tend to offset the typically higher cost of the LED luminaire.

The discussion of stakeholder submissions below sets out feedback supporting a transition to LED lighting where it is efficient to do so.

Given the increasing use of LED luminaires in public lighting networks, we have paid close attention to the unit cost of the inputs and the resulting LED public lighting charges. We benchmarked the unit cost of LED luminaires proposed by Jemena against those for other distributors.

Jemena advised that it had recently conducted a tender for LED luminaires and was able to offer more competitive LED luminaire unit costs than those presented in its proposal.[91]

Jemena's revised LED luminaire unit costs were found to benchmark well for Category V L1 and L2 LED luminaires. However, we found the unit cost of Category P LED luminaires for CitiPower, Powercor and United Energy, and the unit cost of Category V L4 luminaires for Powercor, to be lower (see Attachment 16 of the relevant distributors' draft decision documents for further details). For our draft decision, we have amended Jemena's LED luminaire unit costs to reflect these benchmarked rates, as shown in Table 16.12.

We consider it is important that we benchmark against the lowest available LED luminaire unit costs. This reflects the expectations for increasing use of LED lights (and

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90 See Tariffs and Charges for 2020, available on Jemena's website.

91 Jemena, *Response to information request 56*, Q4, 18 August 2020, p. 8.

therefore that these will reflect a greater proportion of additions to the regulatory asset base) and our observation that LED luminaire unit costs have tended to decrease since the initial introduction of this technology in the public lighting sector. In setting prices for a 5-year period, we therefore consider it is important that our decision reflect the most competitive input costs available.

Category V lights

We acknowledge that Jemena has introduced Category V LED lights. We expect that the deployment of more energy-efficient LED technology on major roads will be associated with lower energy and maintenance costs.

Table 16.12: LED luminaire unit costs

LED Category	Proposed	Draft Decision
Category P	$307.04	$205
Category V L1	$782.20	$402
Category V L2	$928.51	$427
Category V L3	$1007.30	$650.88

Sources: AER Analysis; Jemena, 2021–26 Regulatory proposal – Attachment 07-32 – Public lighting Model, January 2020, "DNSP Inputs Capex" Tab; Powercor, 2021–26 Regulatory proposal – PAL MOD 13.01 - Public lighting, 31 January 2020; Jemena, *Response to information request 56*, Q4, 18 August 2020, p. 8.

Stakeholder submissions

Victorian Department of Environment, Land, Water and Planning

DELWP submitted that the replacement of inefficient mercury vapour street lights is consistent with their commitment of reducing demand and energy costs for public lighting customers and end users. It further adds that it supports public lighting customers reducing their greenhouse gas emissions and energy costs through bulk LED replacement programs. DEWLP considers that there is scope for the electricity distribution businesses to support competitive costs for these bulk upgrades.[92]

We acknowledge DEWLP's support for the deployment of LED luminaires and the many benefits they offer. Given the increasing uptake of LED offerings, we have paid particular attention to the LED offerings in our assessment of the Victorian distributors' proposals.

The Victorian distributors have proposed various approaches to the replacement of mercury vapour lighting. In addition to other efficiency benefits, this has been prompted

[92] Department of Environment, Land, Water and Planning (DELWP), Submission on the Victorian Electricity Distribution Regulatory Proposal 2021–26 - June 2020, 29 May 2020, p 5.

by the Australian Government signing the "Minamata Convention on Mercury" in October 2013, which became effective in August 2017. Under the convention import, export and manufacture of Mercury Vapour public lights will be banned from 1 January 2021.[93]

Jemena has proposed to bulk replace Category P mercury lights with LED equivalents. Jemena's proposal notes that councils are supportive of this program. Jemena has also proposed to spot replace any failed Category V luminaires with an equivalent LED light alternative. Interested Jemena customers would also be able to consider additional bulk replacements.[94] With the combination of spot replacement as well as Jemena-initiated and customer-initiated bulk replacements, Jemena expects the deployment of LEDs to increase from 26 per cent at start of 2021 to 43 per cent by the end of the 2021–26 regulatory control period (including major and minor roads).

Local Government Response

Local Government Response (LGR), a group comprising Victorian greenhouse alliances, public lighting group and member councils, provided a detailed submission.[95] In relation to public lighting, the LGR made a number of recommendations. A summary of the relevant recommendations and our response is contained in Table 16.13, with more detail on benchmarking set out below.

Table 16.13: Summary of LGR recommendations and AER response

LGR recommendation	AER response
All distributors should replace current streetlights with LEDs when assets fail. This should be built into all relevant cost models for this coming period	As noted above, Jemena has proposed to bulk replace category P mercury lights and spot replace any failed non-LED Category V lights with LED equivalents during the 2021–26 regulatory control period. Jemena's model incorporates a projected increase in LED use throughout the next regulatory control period.
Customers should determine the approach to bulk replacements to LEDs	We note the LGR's position. Jemena's proposal notes customer support for its bulk LED replacement programs for all Category P mercury lights, and we have not received any specific stakeholder feedback

93 Australian government, Department of Agriculture, Water and Environment website, Minamata Convention on Mercury, as accessed on 7th September 2020.

94 Jemena, *2021–26 Regulatory proposal – Attachment 07-12 – Public Lighting Services, Jan2020 – Public*, 31 January 2020, p. vi.

95 Victorian Greenhouse Alliances, *Local Government Response to Victorian Electricity Distribution Price Review (EDPR) 2021–26*, 25 May 2020, pp. 11-23.

LGR recommendation	AER response
	suggesting this proposal is not supported by customers.
All old lights should be fully recycled	We note the LGR's position and encourage public lighting customers to discuss this issue with Jemena.
Distributors should be required to invest in a smart lighting Control Management System (CMS) to enable customers to effectively manage any smart lighting assets they install	We note the LGR's position and encourage public lighting customers to discuss this issue with Jemena.
The AER should request that a review of the Victorian Public Lighting Code be implemented by the Victorian Essential Services Commission (ESC) in time to influence (where relevant) the next Victorian EDPR	We note the extensive work done by the LGR and the survey results presented that indicate stakeholder support for a review of the Public Lighting Code. We encourage the LGR, public lighting customers and the Victorian distributors to discuss their preferences for a review of the Public Lighting Code with the Essential Services Commission of Victoria.
Ensure all costs models utilise efficient pricing and assumptions.	See discussion relevant to Jemena below.

Source: Victorian Greenhouse Alliances, Local Government Response to Victorian Electricity Distribution Price Review (EDPR) 2021–26, May 2020, pp. 11-23.

One of the issues raised in the LGR submission was a concern about the efficiency of various inputs and assumptions used by distribution businesses in deriving public lighting charges. The LGR submission requested we consider benchmarking and/or standardising the following public lighting inputs:

- Labour rates
- Elevated platform and patrol vehicle rates
- Pole inspection rates
- Replacement and repair rates
- LED luminaire failure rates
- LED luminaire unit costs (and specifically reliance on market tested prices)
- Hours per day.

We have assessed Jemena's public lighting proposal and the corresponding models with a view to considering the LGR's suggested benchmarking of inputs. We do not accept several of the operations and maintenance adjustments proposed by Jemena. Generally speaking, Jemena's proposed changes represent a departure from the

assumptions used by other distributors and/or from the assumptions used in our 2016−20 determination.

We have amended a number of Jemena's proposed input assumptions by substituting inputs that are being maintained and achieved by other distributors. We consider that this type of benchmarking can help to identify where distributors can be operating more efficiently.

In relation to Jemena's proposed increase in its labour rate per hour and labour rate per hour for night patrols, we do not accept scale of the proposed increase. Jemena's proposed rates are the highest of those proposed by any of the Victorian distributors. We have instead substituted in the proposed rates of Powercor, which are in the middle of distributors' proposed rates, which we consider represents an efficient benchmark for Jemena.

In relation to Jemena's proposed reduction in the number of repairs per day, we note that it has reported difficulties in achieving the currently assumed repairs per day.[96] We do not, however, accept the level of reduction in repairs per day submitted by Jemena. Instead, we have substituted the repairs per day being achieved by United Energy for the same light types and have applied these to Jemena. We consider United Energy, a largely urban distributor like Jemena, is the most comparable of the other distributors and we consider that Jemena should be able to achieve the level of repairs per day for the light types being achieved by United Energy.

As noted above, notwithstanding the updated information provided by Jemena, we consider that Jemena's proposed LED luminaire unit costs do not represent the most efficient pricing available for Category P and Category V L4 luminaires. We have accordingly reduced the prices of these inputs.

There are, however, a number of areas where Jemena benchmarked well and where we have not made any adjustments. Specifically in relation to elevated platform, patrol vehicle rates and LED luminaire failure rates.

Jemena provided further information to justify its pole inspection rate of 37 per day and we have accepted this rate. Jemena submitted that its pole inspection standard requires below-ground inspection of poles that are ten or more years old. Such an inspection requires excavation around the base of the pole to expose the underground portion of the pole to see if there are any rust or holes. Approximately 65 per cent of Jemena's dedicated public lighting poles are more than ten years old.[97]

In considering the standardisation of hours worked assumptions, we note that all Victorian distribution businesses used 8 hours per day in their public lighting models for the previous regulatory determination. For the 2021–26 regulatory control period, all

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96 Jemena, *Response to information request 56*, Q3, 18 August 2020, p.6.

97 Jemena, *Response to information request 56*, Q2, 18 August 2020, p. 5.

distribution businesses except AusNet Services have continued to propose 8 hours per day as inputs in their public lighting models.

The LGR submission references a 2010 Impaq Consulting report[98] stating that 7.5 hours should be used by all distribution businesses as a standard for the input of available hours per day for public lighting services. The Impaq Consulting report recommends 7.5 hours on the basis that distributors operate on 9-day-per-fortnight basis, but noted that 8.33 hours was equivalent for a 10-day-fortnight. We consider that 8 hours per day is therefore within a reasonable range and have accepted this assumption in our draft decision for Jemena.

The LGR also recommended that Jemena's rural area premium for public lighting should be removed because of the expansion of greater Melbourne. However, we consider that the treatment of Jemena's regional area should remain consistent with standard control services, which is based on the classification of feeders.[99] If customer and light density increase over time, the rural feeders may then be reclassified to urban.

The table below summarises the adjustments we have made to Jemena's inputs (with the exception of LED luminaire prices, which are listed in Table 16.14).

Table 16.14: Amendments to proposed inputs

Input	Proposed	Draft Decision
Labour rate per hour	$121.52	$117.03
Labour rate for night patrols (per hour)	$171.75	$140.18
Number of repairs in 1 day MV80 urban	15	29
Number of repairs in 1 day MV80 rural	12	24
Number of repairs in 1 day P LED urban	15	25
Number of repairs in 1 day P LED rural	12	20

Sources: AER analysis; Jemena, *2021–26 Regulatory proposal – Attachment 07-32 – Public lighting Model,* January 2020, "DNSP Inputs O & M" Tab.

Victorian Community Organisations

A joint submission from Victorian community organisations submitted that, while in principle they support the transition to more efficient lighting, they note that more efficient lighting is often more expensive to supply and install than the existing approaches. They requested the AER to create a guideline to provide a consistent

[98] Impaq Consulting Report – Review of rates for the proposed ACS – 25 May 2010. The AER had used this report for assessment of ACS charges during the 2011–15 regulatory determination.

[99] Jemena, *Response to information request 56*, Q5, 18 August 2020, p.9.

approach for distributors to apply when assessing whether to change public lighting to more efficient lighting, including explicit consideration of how cost of electricity calculations would feed into this decision.[100]

Through our recent regulatory determinations we have observed that many stakeholders and distributors support the adoption of LED lights. The reduction in energy consumption and reduced maintenance costs, coupled with declining LED unit costs, are continuing to make these lights more attractive and affordable.

We acknowledge that public lighting customers may have differing views about the merits of replacing non-LED lights with LED lights upon failure, or of the benefits of bulk replacement programs. We consider that the regulatory process, with its consideration of stakeholder feedback on distributors' proposals and revised proposals (in addition to any distributor-led consultation carried out prior to or during the regulatory process), provides an appropriate avenue to consider whether public lighting customers and other stakeholders consider that the appropriate balance has been reached in the distributors' proposed approach to the rollout of LED lighting. We encourage public lighting customers to provide their views through these consultation processes, which help to inform our decisions on public lighting pricing.

We consider that active dialogue between public lighting customers and distributors, supported by the framework of the regulatory process, is more likely to deliver outcomes sought by public lighting customers in each relevant distribution zone than a general guideline.

Price movements

Overall, Jemena's proposed revenue for the 2021–26 regulatory control period was 33.6 per cent higher than total estimated revenue for the current regulatory control period.[101]

The amendments we have made in our draft proposal have resulted in a small decrease in revenues for the five year regulatory control period from $30.73 million to $28.00 million (nominal), which has the average effect of reducing the first-year movements in public lighting prices relative to Jemena's proposal.

Our amendments have also led to some further adjustments to prices relativities. For example:

- We corrected the unitisation codes used to apportion RAB values and depreciation to various light types based on their unit costs. The unitisation codes applied in Jemena's public lighting model were incorrect.

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[100] Victorian community organisations, *2021–2026 Victorian EDPR – Joint submission from Victorian community of organisations - summary document*, Section 11 – Public lighting, May 2020, p 79.

[101] This analysis compares the actual revenue provided by Jemena in its Economic Benchmarking RINs for 2016 to 2019 and estimated real 2020 revenue with the real $2020–21 revenue projections proposed for the 2021─26 regulatory control period in Jemena's proposed public lighting model.

- We substituted LED luminaire costs with lower costs as a result of our benchmarking analysis and revised information from Jemena.

Taking these adjustments into account, our draft decision prices for selected 2021–22 public lighting charges are:

- $164.48 for Sodium Pressure 150 watt lights compared to $168.58 proposed by Jemena (2.4 per cent lower)
- $27.33 Category P 18 watt LED lights compared to $30.21 proposed by Jemena (9.5 per cent lower)
- $52.29 for Category V L1 LED lights compared to $59.11 proposed by Jemena (11.5 per cent lower).

On the basis of our analysis of Jemena's models and consideration of stakeholder feedback, we consider that these draft decision prices will provide Jemena with an opportunity to recover the efficient costs of providing its public lighting services and will assist in supporting the transition to more energy-efficient forms of lighting with the associated benefits for customers.

The draft decision prices are set out in Appendix C.

A Ancillary network services prices

Table 16.15 Fee-based ancillary network services prices for 2021–22 ($2020–21), draft decision

Connection services	Draft decision prices[1]			
	Business	After Hours	Wasted site attendance - Business Hours	Wasted site attendance - After Hours
Connection services				
Basic single-phase connection	558.48[2]	739.50[2]	467.41	645.76
Basic three-phase connection	687.36[2]	868.39[2]	467.41	645.76
Ancillary network services				
Temporary single-phase connection	558.48[2]	739.50[2]	467.41	645.76
Temporary three-phase connection	687.36[2]	868.39[2]	467.41	645.76
Field-based energisation	49.03	85.58	49.03	85.58
Field-based de-energisation	70.30	70.30	70.30	70.30
Disconnection (temporary)	363.44	514.36	363.44	514.36
Reconnection	421.10	599.46	421.10	599.46
Basic connection upgrade (single-phase to three-phase)	687.36[2]	868.39[2]	467.41	645.76
Replacement of overhead basic connection (single-phase)	670.02[2]	851.05[2]	467.41	645.76
Replacement of overhead basic connection (three-phase)	743.77[2]	924.80[2]	467.41	645.76
Reserve feeder maintenance	12.89	12.89	NA	NA
Other ancillary network services				
Customer access to electricity consumption data	0.00[3]	0.00[3]	NA	NA
Security lighting	134.99	134.99	NA	NA
Auxiliary metering services				
Remote special meter read	0.00	0.00	NA	NA
Remote energisation	0.00	0.00	NA	NA
Remote de-energisation	0.00	0.00	NA	NA
Remote meter re-configuration	49.39	49.39	NA	NA
Meter alteration (or relocation)	467.41	645.76	467.41	645.76

Field-based special meter reads	47.24	47.24	47.24	47.24
Meter test of types 5, 6 and AMI smart metering installations	509.28	691.40	509.28	691.40
Meter test of types 5, 6 and AMI smart metering installations (each additional meter)[4]	To be proposed by Jemena	To be proposed by Jemena	NA	NA
Type 7 metering (meter data service)	1.43	1.43	NA	NA
Non-contestable unmetered metering ($/device)	16.41	16.41	NA	NA

Notes: 1. The draft decision prices in this table are equal to Jemena's proposed prices unless otherwise indicated.
2. These prices are based on Jemena's revised calculation method, following our information request. For a more detailed discussion, see section 16.1.4.2.
3. Jemena proposed a price of $50.93; however, we consider this service can be offered free of charge. For a more detailed discussion, see section 16.1.4.3.
4. For a more detailed discussion, see section 16.1.4.4.

Table 16.16 Non-exhaustive list of ancillary network services provided on a quotation basis

Description of service
Supply abolishment (non-basic)
Temporary covering of low voltage mains and service lines (fitting of tiger tails)
Rearrangement of network assets at customer request, excluding alteration and relocation of public lighting assets
Elective undergrounding
Reserve feeder construction
Access permits, oversight and facilitation
Sale of approved materials or equipment
Notices of arrangement and completion notices
Network related property services
Network safety services
High load escorts
Fitting of possum guards and aerial markers
Site visit relating to location of underground cables/assets
Third party request for de-energising wires for safe approach
Provision of traffic control and safety observer services by the distributor where required
Planned interruption – customer requested
Customer requested supply interruption

Description of service
Inspection and auditing services
Provision of training to third parties for network related access
Authorisation and approval of third party service providers
Replacement of security lights that are beyond repair
Provision of electricity network data to customers or third parties outside of legislative obligations
Third party requested network alterations or other improvements
Community network upgrades
Non-standard metering services (eg. initial setup of load and inventory table of non-contestable unmetered devices)
Connection management services
Temporary non-basic connections
Temporary disconnection of non-basic connections
Reconnection of non-basic connection after temporary disconnection
Protection and power quality assessment
Customer requested change requiring secondary and primary plant studies
Calculation of a site-specific distribution loss factor on request
Embedded network management
Connection application related services
Alteration and relocation of public lighting assets
New public lighting services including greenfield sites and new light types (distributor provided)
Provision, construction and maintenance of emerging public lighting technology.

Source: Jemena, *Attachment 07-30 ACS Quoted Services Model*, 31 January 2020.

Table 16.17 Quoted service hourly labour rates for 2020–21, draft decision ($2020–21)

	AER draft decision maximum total hourly rate - Business hours	AER draft decision maximum total hourly rate - After hours
Administration	91.05	NA
Field worker	155.06	236.00[1]
Technical	142.39	NA
Engineer	150.69	NA
Senior engineer	197.05	NA

Note: 1. Jemena did not proposed after-hours rates for other labour types.

Table 16.18 AER draft 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	0.2498	0.0726	−0.3673	–0.9966

Source: AER analysis.

Note: We do not apply an X-factor for 2020–21 because we set the 2020–21 ancillary network service prices in this determination.

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

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

Table 16.19 AER draft decision metering exit fees ($ nominal)

Meter type	2021–22
Single phase single element	235.51
Single phase two element with contactor	235.51
Multiphase	235.51
Multiphase CT connected	235.51

Source: AER, Draft decision - Jemena - distribution determination 2021–26 - Metering PTRM - September 2020, "Exit Fees Nominal" tab

Table 16.20 AER draft 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	7.83	9.70	9.58	9.40
AMI three phase	7.83	9.70	9.58	9.40
AMI three phase current transformer	7.83	9.70	9.58	9.40
Basic or MRIM	7.83	9.70	9.58	9.40

Source: AER, Draft decision - Jemena - distribution determination 2021–26 - PTRM & Exit fees - Public - September 2020, "Meter Exit Fees" tab.

C Public lighting prices

Table 16.21 Public Lighting Prices - Draft Decision ($ nominal)

Jemena Lights	Proposed for 2021–22	Draft Decision for 2021–22
Mercury Vapour 80 watt	$59.73	$54.80
Sodium High Pressure 150 watt	$123.05	$120.06
Sodium High Pressure 250 watt	$125.84	$122.82
Fluorescent 20 watt	$74.66	$68.50
Fluorescent 40 watt	$74.66	$68.50
Fluorescent 80 watt	$74.66	$68.50
Mercury vapour 50 watt	$74.66	$68.50
Mercury vapour 125 watt	$87.80	$80.55
Mercury vapour 250 watt	$120.81	$117.91
Mercury vapour 400 watt	$135.91	$132.65
Sodium high pressure 90 watt	$130.43	$127.26
Sodium high pressure 100 watt	$168.58	$164.48
Sodium high pressure 400 watt	$167.37	$163.35
Metal halide 70 watt	$153.51	$140.83
Metal halide 150 watt	$273.17	$266.53
Metal halide 250 watt	$270.57	$264.07
Incandescent 100 watt	$93.18	$85.49
Incandescent 150 watt	$116.47	$106.86
T5 (2 x 14 W)	$65.12	$57.01
T5 (2 x 24 W)	$73.34	$64.20
LED 18W (incl. other standard Category P LED variants)	$30.21	$27.33
Compact Fluoro 32W	$61.74	$54.05
Compact Fluoro 42W	$61.74	$54.05
L1 - LED 70W	$59.11	$52.29
L2 - LED 118W, 155W, 162W	$61.53	$52.76
L4 - LED 275W	$62.83	$56.98

Table 16.22 Public lighting - X-factors

Jemena Lights	2022–23	2023–24	2024–25	2025–26
Mercury Vapour 80 watt	3.9353%	4.0626%	-1.0479%	0.6715%
Sodium High Pressure 150 watt	2.2593%	2.1286%	-0.5925%	0.0767%
Sodium High Pressure 250 watt	2.3604%	2.8152%	-0.5854%	0.0892%
Fluorescent 20 watt	3.9353%	4.0626%	-1.0479%	0.6715%
Fluorescent 40 watt	3.9353%	4.0626%	-1.0479%	0.6715%
Fluorescent 80 watt	3.9353%	4.0626%	-1.0479%	0.6715%
Mercury vapour 50 watt	3.9353%	4.0626%	-1.0479%	0.6715%
Mercury vapour 125 watt	3.9353%	4.0626%	-1.0479%	0.6715%
Mercury vapour 250 watt	2.3604%	2.8152%	-0.5854%	0.0892%
Mercury vapour 400 watt	2.3604%	2.8152%	-0.5854%	0.0892%
Sodium high pressure 90 watt	2.2593%	2.1286%	-0.5925%	0.0767%
Sodium high pressure 100 watt	2.2593%	2.1286%	-0.5925%	0.0767%
Sodium high pressure 400 watt	2.3604%	2.8152%	-0.5854%	0.0892%
Metal halide 70 watt	3.9353%	4.0626%	-1.0479%	0.6715%
Metal halide 150 watt	2.2593%	2.1286%	-0.5925%	0.0767%
Metal halide 250 watt	2.3604%	2.8152%	-0.5854%	0.0892%
Incandescent 100 watt	3.9353%	4.0626%	-1.0479%	0.6715%
Incandescent 150 watt	3.9353%	4.0626%	-1.0479%	0.6715%
T5 (2 x 14 W)	-2.7182%	-2.3661%	-2.2317%	-2.1501%
T5 (2 x 24 W)	-2.7182%	-2.3661%	-2.2317%	-2.1501%
LED 18W (incl. other standard Category P LED variants)	-4.6135%	-3.9434%	-3.5875%	-3.3226%
Compact Fluoro 32W	-2.7182%	-2.3661%	-2.2317%	-2.1501%
Compact Fluoro 42W	-2.7182%	-2.3661%	-2.2317%	-2.1501%
L1 - LED 70W	-3.8597%	-3.2901%	-2.9961%	-2.7044%
L2 - LED 118W, 155W, 162W	-4.0145%	-3.4091%	-3.0877%	-2.7626%
L4 - LED 275W	0.4493%	-4.6257%	-4.0333%	-3.3959%

Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
ACS	alternative control services
AER	Australian Energy Regulator
AMI	advanced metering infrastructure
CAM	cost allocation method
capex	capital expenditure
CCP17	Consumer Challenge Panel, sub-panel 17
CMS	control management system
CESS	capital expenditure sharing scheme
CPI	consumer price index
distributor	distribution network service provider
DSO	distribution system operator
DELWP	Department of the Environment, Land, Water and Planning (Victoria)
ECA	Energy Consumers Australia
EMCa	Energy Market Consulting Associates
ESC	Essential Services Commission (Victoria)
F&A	framework and approach
LED	Light Emitting Diode
LGR	Local Government Response
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NPV	net present value
NSP	network service provider

Shortened form	Extended form
opex	operating expenditure
PTRM	post-tax revenue model
RAB	regulatory asset base
RIN	regulatory information notice
SCS	standard control services
WACC	weighted average cost of capital