



Jemena Electricity Networks (Vic) Ltd

2021-26 Electricity Distribution Regulatory Proposal

Attachment 07-11

Alternative Control Services



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Glossary

Current regulatory period	The regulatory control period covering 1 January 2016 to 31 December 2020.
Intervening period	The period between 1 January 2021 to 30 June 2021. It covers the time between the current regulatory period and the next regulatory period. The Intervening period arises because of the move from a calendar year regulatory year to financial.
Next regulatory period	The regulatory control period covering 1 July 2021 to 30 June 2026.
Previous regulatory period	The regulatory control period covering 1 January 2011 to 31 December 2015.
Public lighting services	Public lighting services include: <ul style="list-style-type: none">• operation, maintenance, repair and replacement public lighting services (OMR)• alteration and relocation of public lighting assets• new public lighting services incl. greenfield sites & new light types (distributor provided) and• provision, construction and maintenance of emerging public lighting technology.
Smart metering services	Smart metering services include meter provision, meter maintenance, meter reading and meter data provision activities, which are bundled into a single metering service for type 5, 6 and smart meters.

Abbreviations

ACS	Alternative Control Services
AEMC	Australian Energy Market Commission
CAM	Cost Allocation Methodology
CES	Certificate of Electrical Safety
CT	Current Transformers
CY	Calendar Year
DNSP	Distribution Network Service Provider
EWP	Elevated Work Platform
EWR	Electrical Work Requests
F&A	Framework and Approach Paper
FY	Financial Year
GIS	Geographical Information Systems
HV	High Voltage
JEN	Jemena Electricity Networks (Vic) Ltd
kW	kiloWatt
MAB	Metering Asset Base
MSATS	Market Settlement and Transfer Solutions
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
O&M	Operation and Maintenance
OMR	Operation Maintenance and Replacement
RAB	Regulatory Asset Base
REC	Registered Electrical Contractors
SCS	Standard Control Services
SO	Service Orders
TAB	Taxation Asset Base
UFE	Unaccounted For Energy
WDV	Written Down Value

Overview

Our standard control services (**SCS**) are central to the supply of electricity and relied upon by all our customers. However, we also provide other distribution services to customers on request; these are termed alternative control services (**ACS**). These services are set out under the following service groupings for the 2021-26 regulatory control period (**next regulatory period**) and are consistent with the AER's final Framework and Approach paper (**F&A**)¹:

- basic connection services—see section 3
- connection management services—see section 4
- enhanced connection services—see section 5
- network ancillary services—see section 6
- auxiliary metering services— see section 7
- public lighting services— see section 8.

Consistent with the control mechanism for alternative control services set out in the AER's final F&A:²

- We propose to charge a fixed fee for some of the alternative control services because the work we have to carry out, and the costs we incur in doing so are relatively constant. We call these services **fee-based services**. For these services, we set prices for the first regulatory year in the next regulatory period and then increase the prices each year to account for real input price escalation (defined as X factors for simplicity)³ and actual CPI
- For other alternative control services, costs can vary significantly depending on the nature of the work. For such services, we propose to price each job separately when the scope of the work is known—taking labour, materials, and contractors costs into account. Of these components, the AER determines the hourly labour rate we apply to each quote. These types of services are referred to as **quoted services**.

This document provides the calculation of key inputs into the price control mechanism for alternative control services (other than smart metering services) – including real price movements (X-factors) for each year of the next regulatory period – and shows how these inputs are used to calculate prices. It therefore provides a demonstration of how the control mechanism is applied to determine prices for smart metering services. For more information on our proposed price control mechanisms, see Attachment 07-07.

This attachment explains the alternative control services we propose to classify as fee-based and quoted services (including describing the commonly requested services); how the charges for the services are calculated and how the proposed labour rates used in the calculation of the charges are derived. The models underpinning these charges and labour rates are in Attachment 07-31 and Attachment 07-30 respectively.

Smart metering services

The F&A also classified smart metering services as alternative control services for which we have a different approach to pricing. Smart metering services include meter provision, meter maintenance, meter reading and meter data provision activities, which are bundled into a single metering service for type 5, 6 and smart meters. Victorian distributors are exclusive providers of smart metering services to residential and small business customers consuming up to 160 MWh of electricity per annum. Consistent with the F&A⁴ and past regulatory determination, we propose smart metering services are classified as alternative control services and are subject

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.

³ The input price escalation includes only labour escalation consistent with our SCS cost escalation assumptions

⁴ AER, *Final framework and approach AusNet Services, CitiPower, Jemena, Powercor and United Energy, Regulatory control period commencing 1 January 2021*, January 2019.

to revenue cap control mechanism for determining prices. We provide more information on these services in Attachment 07-09 and related pricing models.

Change of regulatory year from calendar to financial year for Victorian distributors

On 12 April 2019, the Victorian Minister for Energy, Environment and Climate Change (**Minister**) wrote to the Victorian distribution network service providers (**DNSP**) and the AER, announcing a policy to change the regulatory control period to align with a financial year (**FY**) end, rather than calendar year (**CY**), with the change to take effect from 1 July 2021. The transition to FY regulatory period is proposed to occur by extending the current regulatory period by an additional six-months (**intervening period**).

To give effect to this transition, Jemena Electricity Networks (Vic) Ltd. (**JEN**) has submitted an additional proposal with respect to the intervening period.

This attachment forms part of the JEN's regulatory proposal with respect to the next regulatory period (**2021-26 regulatory proposal**). For details on our proposal for the intervening period, see JEN's regulatory proposal for the intervening period.

1. Our approach to the pricing of alternative control services

JEN proposes to apply fixed prices for some alternative control services where the scope of activities is highly predictable and generally uniform. In our proposal, we refer to these services as **fee-based services**.

For the remaining services, prices will be quoted by way of a cost-pass through using labour rates approved by the AER, along with the cost of materials and contractor services. That is because the scope of the services can vary significantly between jobs and prices can only be determined when the scope of the work is known. We refer to these services as **quoted services**.

We have set out the fee-based services and our proposed fixed prices for each of the services in the first year of the next regulatory period in Table A1–1. Table A1–2 shows our proposed real input price escalation (defined as X factors) for the subsequent years in the next regulatory period.

Similarly, Table 2–6 sets out the labour rate for each of the categories we propose to apply to quoted services in the first year of the next regulatory period and Table 2–7 shows our proposed labour price escalation (defined as X factors) for the subsequent years until 30 June 2026.

Our proposed annual price changes for fee-based services and labour rates for quoted services account for inflation (using CPI) and real input price movements in labour costs (X factors).

1.1 How we determine prices for fee-based services

This Attachment explains how we propose to determine the initial prices and X factors for fee-based services, for the purposes of applying the control mechanism in Attachment 07-07.

We determine our prices for fee-based services in accordance with the price control mechanism for these services set out in the AER's final framework and approach paper. Under this price control mechanism, initial prices for the first year of the regulatory period are set by the AER for each fee-based service in its distribution determination. These prices are then adjusted to account for changes in CPI and real input price escalations (X factors) and the X factors determined by the AER.

We have adopted a bottom-up approach to develop prices for all our 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 services. These costs include:

- labour and materials costs
- charges we pay to service providers
- administrative and other direct costs
- indirect costs (overheads)⁵
- margin
- taxation costs for services that are capital in nature, consistent with JEN's capitalisation procedures and previous AER final decision for JEN.⁶

⁵ See section 2.4 for more details

⁶ See section 3.2.6 for more details

Including a margin for fee-based alternative control is consistent with the principle of competitive neutrality and the revenue and pricing principles in the NEL.⁷ It ensures that customers pay a price similar to that in a competitive market.

The standard labour rates—which include on-costs⁸ but not overheads—we apply in the cost build-up model for fee-based services are the same as those we have proposed for quoted services, and the material costs reflect the forecast cost of materials directly incurred in the provision of the service. We then add the overheads and margin for each of the services; and for those services that are capital in nature, we add the tax liability we incur consistent with our tax obligations.

We have escalated the labour rates by forecast real input price changes over the next regulatory period which has been determined using the average of forecasts by BIS Oxford Economics⁹ and Deloitte Access Economics¹⁰ of wage-price indices for the utilities sector. A report from BIS Oxford Economics explaining their forecast is provided as Attachment 05-07 to our regulatory proposal.

How we derived these prices are described in the relevant sections of this attachment, and the calculations are shown in the cost build-up model for fee-based services in Attachment 07-31.

Wasted site attendance

We propose to charge for a wasted site attendance charge to service requests where, on arrival at the site, it is found the customer's premises are not ready for the scheduled work. For example, the required site preparations have not been made, and therefore the work we were planning to carry out cannot be performed, or if the site is not safe to undertake the work or access to the site is limited. In these circumstances, our administrative staff would have performed the necessary activities and dispatch a service crew; and the field workers would have gone to the site.

The time spent by our administrative staff and line workers would essentially be the same as for a completed service order, except that it would be closed out by both workgroups with an explanation as to why the job was not completed. In these circumstances, the administrative and field worker costs cannot be avoided; and the only cost that can be avoided is the cost of materials.

Our proposed approach to charging for wasted site visits is consistent with the F&A.¹¹

1.2 How we determine prices for quoted services

This Attachment explains how we propose to determine the prices for quoted services, for the purposes of applying the control mechanism in Attachment 07-07.

The activities undertaken for quoted services are not uniform in scope, and therefore we will determine the price on a case-by-case basis. To calculate quoted prices, we 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 and tax:

Price = Labour + Materials + Contractor services + Margin + Tax allowances

Where:

⁷ NEL s. 7A(5) states “A price or charge for the provision of a direct control network service should allow for a return commensurate with the regulatory and commercial risks involved in providing the direct control network service to which that price or charge relates”.

⁸ See section 2.2 for more details

⁹ JEN has used BIS Oxford Economics' forecast Wage Price Index of the Victorian Electricity, Gas, Water and Waste Services ('Utilities') sector, 9 October 2019, sourced from Attachment 05-07.

¹⁰ Deloitte Access Economics, *Labour Price Growth Forecasts prepared for the AER*, 24 June 2019.

¹¹ AER, *Final framework and approach AusNet Services, CitiPower, Jemena, Powercor and United Energy, Regulatory control period commencing 1 January 2021*, January 2019, p. 33

- *Labour* consists of all labour costs directly incurred in the provision of the service, including labour on-costs and overheads, consistent with JEN's Cost Allocation Methodology (**CAM**).¹² The overheads applied to the labour rates do not include any margins. The approved labour rates are escalated annually for CPI and labour escalators. See section 2 on our approach to deriving labour rates.
- *Materials* costs reflect the cost of materials directly incurred in the provision of the service, material storage and logistics on-costs and overheads.
- *Contractor services* costs reflect all costs associated with the use of external labour, including overheads and any direct costs incurred. Direct costs incurred are passed on to the customer.
- *Margin* is an amount equal to JEN's nominal vanilla WACC approved by the AER for SCS and metering services. The margin is applied to the total cost of *Labour*, *Contractor Services* and *Materials*.
- *Tax allowance* reflects the tax JEN incurs on the capital component of the expenditure.¹³

Tax allowance

The approach to classification of alternative control services means that capital expenditure costs will not be added to the Regulatory Asset Base (**RAB**) and therefore does not—on first appearance—give rise to the need for a tax allowance. However, given the capital nature of assets provided in the provision of some connection management and public lighting services, JEN capitalises these costs for tax and accounting purposes and will incur a tax liability for the service on the revenue less depreciation over time.

Clause 7A(2)(a) of the National Electricity Law (**NEL**) requires that a DNSP should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in providing direct control network services, be they alternative control services or standard control services.

As we cannot avoid incurring the tax liability, we believe the tax liability to be an efficient cost and, therefore, consider that the price control formulae must provide an ability to recover the tax liability associated with the connection works. See further discussion on tax liability in section 3.2.6.

Examples of services classified as alternative control services in the F&A¹⁴ that are capital in nature include:

- New public lighting installation
- Alteration or relocation of existing public lighting assets
- Temporary connection greater than 100 amps per phase¹⁵
- Upgrade of overhead supply to underground
- Reserve feeder installation.

Margin

Including a margin in the price cap formula for ancillary network services provided on a quotation basis is consistent with the principle of competitive neutrality and the revenue and pricing principles in the NEL.¹⁶ It ensures that customers pay a price similar to that in a competitive market.

¹² JEN, *Cost Allocation Methodology v3.1*, 29 March 2019, section 3.2.

¹³ For further details, see Attachment 07-07 on our proposed price control mechanisms.

¹⁴ AER, *Final framework and approach AusNet Services, CitiPower, Jemena, Powercor and United Energy, Regulatory control period commencing 1 January 2021*, January 2019, Appendix B, p. 98.

¹⁵ Temporary supply connections greater than 100 amps per phase are provided to developers of large commercial buildings and large public infrastructure projects e.g. road tunnel.

¹⁶ NEL s. 7A(5) states "A price or charge for the provision of a direct control network service should allow for a return commensurate with the regulatory and commercial risks involved in providing the direct control network service to which that price or charge relates".

The AER has accepted a margin in a number of recent decisions for DNSPs.¹⁷ JEN has proposed a definition of ‘margin’ to be equal to JEN’s nominal vanilla WACC, consistent with the AER’s most recent draft decision for SA Power Networks.

For simplicity, we have added the margin component at the end of the formula as a dollar amount based on a fixed percentage.

¹⁷ AER, *Draft Decision - TasNetworks Distribution Determination 2019 to 2024 - Attachment 13 - Control Mechanisms*, September 2018, pp. 13-18 and 13-20 to 20-21; *SA Power Networks distribution determination 2020 to 25, Draft decision, Attachment 13 – Control mechanisms*, October 2019, pp. 13-6 and 13-16 to 13-17.

2. Our approach to deriving labour rates for pricing services

This section outlines our approach to developing JEN's proposed labour rates for quoted services and as used in fee-based services for the next regulatory period. Relative to the categories we use in the 2016 to 2020 regulatory period (**current regulatory period**), we propose an additional labour category, namely Senior Engineer, to the labour categories. Given this, the labour categories for the next regulatory period include:

- administrative employee
- field worker
- technical specialist
- engineer
- senior engineer.

To come up with labour rates for each labour category, we followed the same calculation methodology used in the report prepared for the AER by Marsden Jacob Associates.¹⁸ The report reviews input costs of alternative control services relating to regulatory determinations for distributors in New South Wales (NSW), Tasmania and Northern Territory. We have also used this report to cross-validate or benchmark the rates we are proposing and to verify the robustness of our model outputs. We selected the Marsden Jacob report—as the basis for comparison—prepared for the 2019-24 Ausgrid electricity determination rather than the equivalent report prepared for SA Power Networks because (i) the labour market in NSW is more aligned to the Victorian market than the South Australia labour market, and (ii), the Ausgrid report was the most recently available report at the time we undertook the calculations of the labour rates in this attachment.

The AER has incorporated the recommendations from the Marsden Jacob report in their assessment of the alternative control services labour rates for NSW electricity distributors in the April 2019 final regulatory determinations.¹⁹ Therefore, we believe it is reasonable to follow the same methodology to calculate our labour rates as it is a generally accepted approach for assessing the efficiency of proposed alternative control services related to labour rates.

Although we apply a generally accepted methodology, the model inputs are different because of the differences in jurisdictional requirements and business operations. We used our 2018 raw labour rate for each labour category and adjusted the rate for real labour cost increases that have or are forecast to occur between 2018 and 2021, to derive our 2021 raw labour rates.²⁰ For each labour category, our proposed labour rates comprise of the following components:

- raw labour costs
- on-costs
- overheads
- vehicle allowance for field workers category only.

Our assumptions and the breakdown for each of these components are set out in the following sections.

¹⁸ Marsden Jacob Associates, *Review of Alternative Control Services, Prepared for Australian Energy Regulator*, September 2018.

¹⁹ AER, *Final determinations for Ausgrid, Endeavour Energy, Essential Energy and Evoenergy*, April 2019.

²⁰ The escalator we have applied to internal labour reflects the average of forecasts by BIS Oxford Economics and Deloitte Access Economics of wage price indices for the utilities sector.

2.1 Raw labour rates

We determined the 'raw' labour rate by averaging the total cost of remuneration of a representative workgroup of employees for each labour category and dividing it by the chargeable hours in a year. The 'raw' labour rate is the most basic hourly labour rate. The 'raw' labour rate excludes all on-costs and overheads, as well as basic leave allowances such as sick leave, annual leave, and public holidays.

JEN's Electricity Enterprise Agreement²¹ that underpins the working conditions of our field workers allows 36 ordinary hours of work per week. Our administrative, technical and engineering staff are on individual employment agreements which specify 37.5 ordinary hours of work per week. We calculated the raw labour rates based on the relevant ordinary working hours per week that applies to our employees. As the individual employment agreements do not provide for overtime, we have not proposed overtime labour rates for administrative, technical and engineering staff.

Table 2–1 lists the per hour raw labour rate for each of the proposed labour rate category, including overtime for field workers.

Table 2–1: Raw labour rates (\$ December 2018, dollars)

Labour category	Base hourly rate
Administrative employee	36.66
Field worker	52.57
Technical specialist	57.33
Engineer	69.40
Senior engineer	87.57

2.2 On-costs

We have added two types of on-costs to the 'raw' labour rates of each labour categories:

- Basic leave entitlements, including annual leave, sick leave and public holidays
- Standard on-costs such as superannuation, workers compensation, payroll tax, annual leave loading, and long service leave based on federal and state law requirements. For field worker, we have added an allowance, consistent with the Electricity Enterprise Agreement with the Electrical Trades Union.

We apply the on-costs as a percentage (all on-costs compounded together) to the 'raw' or base rate for each labour category. Table 2–2 outlines the percentages applied to each labour category.

²¹ Electricity Enterprise Agreement with the Electrical Trades Union approved by the Fair Work Commission, effective from 5 April 2017.

Table 2–2: Proposed on-costs (%)

Description	Percent applied on raw labour rate (office based)	Percent applied on raw labour rate (field worker)
Standard leave (annual leave, sick leave, public holidays)	17.15%	18.78%
Superannuation	9.50%	9.50%
Workers compensation	1.50%	1.50%
Payroll tax	4.85%	4.85%
Annual leave loading	1.90%	1.90%
Long service leave	2.10%	2.10%
Allowances (for field workers only)	-	0.70%
Proposed on-costs (compounded percentages)	38.46%	40.81%

Standard leave

We derive a labour standard leave rate as the percentage of net available working hours relative to available working hours in a year.

$$\text{Standard leave rate} = \frac{\text{Standard leave hours}}{\text{Net available working hours}}$$

To calculate the total standard leave hours, we take into account the total leave entitlements in a year—namely four weeks of annual leave plus public holidays plus the sick leave days claimed per year. The sick leave considered in the calculation is the average hours claimed by our office staff and field workers based on historical data, which is less than our employees' entitlement.

Net available working hours equates to the total available work hours (based on 52 weeks of available workdays) less the total standard leave hours.

The calculation is shown in Table 2–3.²²

²² The *net available working hours* are the hours we can recover an employee's standard leave entitlement. The calculation of standard leave hours is consistent with section 1.3.2 of the report prepared for the AER by Marsden Jacob Associates.

Table 2–3: Standard leave calculation

Calculation of standard leave relative to net available working hours	Office Staff	Field employees
Available hours (per day)	7.5	8.0
Available days (per fortnight)	10	9
Available working fortnights (per annum)	26	26
Total available working hours (per annum)	1,950	1,872
Annual leave hours (per annum)	150	144
Public holidays hours (per annum)	82.5	88
Sick leave hours (per annum)	53	64
Total standard leave hours (per annum)	285.5	296
Net available working hours (per annum)	1,664.5	1,576
Standard leave rate	17.15%	18.78%

Superannuation

We have applied a percentage of 9.5% in our model to account for superannuation payments under the Superannuation Guarantee Amendment Act 2012 (Act).²³

Workers compensation

The Workers Compensation component of 1.5% represents JEN's 3-year rolling average insurance cost paid per employee. We use a three-year rolling average to manage the fluctuations in premiums which are impacted by the injuries in a given year.

Payroll tax

Payroll tax is a self-assessed, general purpose state and territory tax assessed on wages paid or payable by an employer when the total wage bill of an employer (or group of employers) exceeds a threshold amount. For Victoria, the threshold is \$650,000 (annually), and the rate is 4.85%.²⁴

Annual leave liability

The 1.9% annual leave liability represents an uplift in the liability arising from annual pay increments for employees who have accrued annual leave balances over the course of their employment. It is based on JEN's average historical annual leave liability.

Long service leave

The long service leave rate of 2.1% included in the build-up of standard on-costs accounts for long service leave liability. It is based on JEN's average historical long service leave liability.

Allowances (for field workers only)

Allowances include items allowed for in the Electricity Enterprise Agreement for field workers—for example, meal allowance, first aid allowance, allowance for working during inclement conditions. The percentage allowance is based on the historical data of actual allowances paid against the total wages.

²³ Recent policy announcements in federal policy may uplift in the amount of superannuation payments from 9.5% to 10%, and possibly more in the latter years of the regulatory period. We anticipate more will be known about these, following submission of this regulatory proposal. We will inform the AER of any developments in our revised regulatory proposal.

²⁴ <https://www.business.vic.gov.au/hiring-and-managing-staff/employer-responsibilities/employee-payroll-tax-and-payg>.

2.3 Standard labour rates

Table 2–4 shows our standard labour rates, which includes total on-costs but not the overheads. We use these standard labour rates to develop prices for fee-based services.

Table 2–4: Standard labour rates for FY22 (\$ June 2021, dollars)

Labour category	Business hours	After hours
Administrative employee	56.54	-
Field worker	82.78	133.04
Technical specialist	88.42	-
Engineer	107.03	-
Senior engineer	135.05	-

(1) Standard labour rates includes on-costs, excludes overheads.

2.4 Overheads

Overheads are costs other than direct costs²⁵ of providing a service. To recover the related costs, we apply the proportion of overheads to direct costs (expressed as a percentage) to the standard labour rates. The overheads applied to the raw labour rates do not include any margins.

We have two categories of overheads:

Network overheads

Network overhead costs related to the provision of network control and management services that cannot be directly identified with specific network operational activity but are necessarily incurred by JEN to provide distribution services. In most cases, they are shared in nature. These costs are captured in cost centres and then allocated on a causal basis in proportion to direct costs for each service classification consistent with our approved CAM.

Network overheads include, but are not limited to:

- management (functional activities that cannot be linked directly to a specific operational activity)
- quality and standards—technical standards, manuals and network records like geographical information systems (**GIS**)
- network IT infrastructure and services
- customer management
- Occupational health & safety functions and training.

Corporate overheads

Corporate overhead costs refer to the provision of corporate support and management services by the corporate office that cannot be linked directly with specific operational activity. Corporate overhead costs typically include, but are not limited to:

- executive management including the office of the Chief Executive Officer or Managing Director

²⁵ Costs that can be directly attributable to specific projects classification—via a WBS—using our ERP system capability. Costs that are directly attributed and their basis for attribution are explained in Jemena Electricity Networks (Vic) Ltd, Cost Allocation Methodology, 29 March 2019

- legal and secretariat
- human resources
- finance
- insurance
- relationships with governments, federal and state regulators, rule-makers, and market operators, and
- non-network IT infrastructure and services.

Table 2–5 shows the total overheads we apply to derive the proposed labour rates. The rates are the average historical overhead rates applied to alternative control services.

Table 2–5: Overhead rates applied to the standard labour rate

Labour category	Business hours
Network	20.93%
Corporate	40.10%

Vehicle allowance for field workers

Consistent with the Marsden Jacob labour rate calculation for field workers and consistent with section 3.2 of our CAM, we have added \$20.04 (real 2018) per hour vehicle rate to the labour rate. We have not applied overhead costs to the vehicle rate.

2.5 After hours labour rate

We propose to apply ‘after hours’ labour rate for any customer requested field works undertaken outside of business hours to recover the additional overtime costs that JEN incurs in providing the service after hours, which is based on penalty rates consistent with the Electricity Enterprise Agreement.

The overtime rate is double time; this is applied to the raw labour rate. Also, the superannuation, workers compensation and payroll tax components of the on-costs are applied to the raw labour rate adjusted for overtime.

We do not propose to apply any ‘after hour’ labour rates for office-based staff who work on any customer requested field works undertaken outside of business hours.

2.6 Proposed labour rates

Based on the calculations outlined in the sections above, Table 2–6 sets out our proposed labour rates inclusive of total on-costs and overheads for quoted alternative control services for the next regulatory period.

Table 2–6: Proposed indicative labour rates for FY22 (\$ June 2021, dollars)

Labour category	Business hours	After hours
Administrative employee	91.05	-
Field worker	155.06	236.00
Technical specialist	142.39	-
Engineer	172.34	-
Senior engineer	217.47	-

(1) Proposed indicative labour rates for FY22 includes on-costs and overheads.

The calculations of these rates are detailed in Attachment 07-30.

2.7 Labour rate escalation

To calculate the real labour rate adjustment, we apply the escalation rate consistent with those used for standard control services. For calculations and reasoning refer to section 5.2 in Attachment 06-01.

Table 2–7: Proposed real labour rate escalation for FY23 to FY26 (per cent)

Labour categories	FY23	FY24	FY25	FY26
Administrative employee	1.02%	1.07%	1.08%	1.08%
Field worker	1.02%	1.07%	1.08%	1.08%
Technical specialist	1.02%	1.07%	1.08%	1.08%
Engineer	1.02%	1.07%	1.08%	1.08%
Senior engineer	1.02%	1.07%	1.08%	1.08%

2.8 Reasonableness of proposed labour rates

Marsden Jacob developed benchmark labour rates for the AER for assessing the reasonableness of the alternative control service prices relating to the recent electricity distribution determination for NSW DNSPs.

We chose to use the ‘raw’ rates in the Marsden Jacob report to benchmark the reasonableness of our proposed labour rates in Table 2–1 because the on-costs such as superannuation, workers compensation, payroll tax vary across jurisdictions.

The ‘raw’ labour rates from Marsden Jacob report and our proposed rates are shown in Table 2–8.

JEN’s ‘raw’ labour rates are either lower or within the range of the ‘raw’ labour rates²⁶ recommended by Marsden Jacobs in the advice to the AER.

²⁶ Marsden Jacobs Associates, *Review of Alternative Control Services, Advice to AER*, Table 2: Maximum hourly rates – ‘raw’ labour rates, inflated to \$ 2018/19, p. 5.

Table 2–8: Raw labour rates comparison

Labour category	JEN 'raw rates' business hours (\$ June 2019, dollars)	Marsden Jacob report 'raw rates' for business hours (\$ real 2018-19, dollars) ²⁷			
		NSW	ACT	TAS	NT
Administration	36.98	41.72	44.33	39.12	39.12
Field worker	53.03	52.15	52.15	52.15	65.19
Technical specialist	57.83	62.59	62.59	62.59	78.23
Engineer	70.00	78.23	78.23	73.02	73.02
Senior engineer	88.33	86.05	86.05	86.05	88.66

(1) JEN 'raw rates' shown in \$ June 2019 dollars for comparison with Marsden Jacob report 'raw rates'.

²⁷ Marsden Jacobs Associates, *Review of Alternative Control Services, Advice to AER*, Table 2: Maximum hourly rates – 'raw' labour rates, inflated to \$ 2018-19.

3. Connection services

In 2016, the Victorian Government made amendments²⁸ to the *National Electricity (Victoria) Act 2005*, which required electricity distributors to implement chapter 5A of the NER and the AER's Connection Charge Guideline.²⁹

In the F&A for the next regulatory period,³⁰ the AER adopted the categories and terminology of connection services specified in chapter 5A of the NER, which are:

- Basic connections—a simple connection of a customer's premises to the network for which the AER has approved a model standing offer. It does not involve extension or augmentation of our shared network
- Standard connections—a connection to the network that is not a basic connection service, for which the AER has approved a model standing offer. It may involve extension or augmentation of our shared network
- Negotiated connections—connections that meet the specific requirements of a connection applicant and the electricity distributor for which the terms and conditions are negotiated. It may involve extension and/or augmentation of our shared network.

A basic connection service is classified as alternative control service in the F&A for the next regulatory period, whereas standard and negotiated connection services are classified as standard control services.

Currently, we provide two types of connections in accordance with Chapter 5A of the NER. They are basic connections and negotiated connections.³¹ In our Connection Policy, we explain how connection charges for negotiated connections are determined.³²

In the sections below, we explain how our proposed basic connection charges are developed.

3.1 Basic connection services up to 100 amps per phase

Basic connection services are provided routinely to residential and small business customers, and for which the AER has approved a model standing offer.³³ The provision of these services involves minimal or no augmentation to or extension of the distribution network. Such services may or may not include micro-embedded generators.

A basic connection may be a single or three-phase connection that is either:

- A standard overhead-service connection that complies with the technical standards set out in the Victorian Service & Installation Rules, and is a single-span electricity connection from an existing distribution pole, where the length of the cable and property crossing is not excessive
- An underground connection from a service pit that has already been installed by a customer at the boundary of the customer's property.

The scope and costs of delivering basic connection services do not vary significantly between customer requests, and the cost of providing the service is directly attributed to a specific customer. Therefore, for the next regulatory period, we propose to classify basic connection services as fee-based alternative control services.

²⁸ National Electricity (Victoria) Further Amendment Bill 2015.

²⁹ AER, *Connection charge guideline for electricity retail customers*, June 2012.

³⁰ AER, *Final framework and approach AusNet Services, CitiPower, Jemena, Powercor and United Energy, Regulatory control period commencing 1 January 2021*, January 2019, p. 35.

³¹ We may at a later date offer standard connection service for a particular class of connection service (that is currently offered as negotiated services) for which a model standing offer has been approved by the AER.

³² See Attachment 05-09.

³³ A model standing offer is a document approved by the AER as a model standing offer for the provision of basic connection services in accordance with NER, Chapter 5A, Part B, Division 1.

3.2 How we develop basic connection prices

We can identify various costs associated with the provision of basic connection services and attribute these to the individual customers who receive them. These are:

- labour and vehicle costs
- material costs
- administrative costs
- overheads
- tax.

We apply the standard labour rate, which includes the raw labour rate plus on-cost (but not the overheads) to calculate the direct administrative and field labour costs; then we add the relevant material, vehicle and contractor costs to determine the total direct cost of a service. The overheads are then applied to the total direct costs. For services of capital nature, we add the tax liability we incur consistent with our capitalisation procedures.

The tasks related costs to complete a basic connection service are detailed in the cost build-up model in Attachment 07-31.

3.2.1 Field labour costs

The field labour and vehicle costs for the provision of basic connections (overhead and underground) are based on two field workers using a vehicle to install a connection plus travel time. To derive the labour costs, we have used the fieldworker labour rate discussed in section 2 of this attachment.

Consistent with the approved average prices for business and after hours new basic connection services in the current regulator period,³⁴ we have proposed average prices for basic connection services in the next regulatory period. We have continued with our previously approved pricing approach, as it would provide stability in fees for our customers.

Basic connection services consist of various tasks, including meter installation, which is performed by the two-person crew. We consider the incremental cost of installing the meter to be zero because it is installed at the same time. In other words, if a meter is not installed, the time taken to complete the connection work would be the same. Hence the proposed fees are the same regardless of whether we or a third-party meter provider are responsible for metering. This is consistent with the approach adopted in our pricing for these services in current regulatory period.

In the final distribution determination of the current regulatory period,³⁵ the AER approved 60 minutes for a two-person field crew to travel to a site, install, test and energise a connection. This was considered reasonable by the AER at that time. However, the increase in road traffic since the start of the current regulatory period has resulted in our service crew experiencing longer travel time between jobs, and we expect this to get worse over the next regulatory period.

The *Road Congestion in Australia* report (2018), published by Australian Automobile Association in October 2018 notes that “Melbourne’s average speeds barely changed from 2013 to 2015, but there has been a marked decline since 2016. The city’s 8.1 per cent fall in average speeds is the worst decline among all capitals.”³⁶

We have therefore included an additional five minutes of travel time (i.e. a total of 65 minutes) for field workers in our fee-based pricing model for the next regulatory period.

³⁴ AER, *Final decision, Jemena distribution determination 2016-20, Attachment 16 – Alternative control services, Appendix A1*, May 2016.

³⁵ AER *Final decision - Jemena resubmitted - Attachment 10.04 – Ancillary Network Services (CONFID)* model.

³⁶ Australian Automobile Association, *Road congestion in Australia*, October 2018, p 16. See, <https://www.aaa.asn.au/wp-content/uploads/2018/10/AAA-Congestion-Report-2018-FINAL.pdf>.

3.2.2 Administrative costs

To derive the back-office costs, we used the administrative labour rate discussed in section 2 of this attachment.

We undertook a detailed analysis of the various tasks performed by administrative staff in delivering basic connection services and found the administrative task times to be the same for a single-phase or three-phase connection. Our analysis indicates that some efficiencies have been gained in the current regulatory period as the AMI systems and processes have matured. However, this efficiency has been offset by the additional service orders (**SO**) we now receive that are related to Power of Choice process changes for a connection service³⁷—thus increasing SO process times and system exceptions.

We propose an average of 60 minutes for one admin person to complete an end-to-end basic-connection service request, which is the same as that allowed for by the AER in the 2016 final price determination.³⁸ The various end-to-end administrative tasks and the average time of each task needed to complete a new connection request are set out in Attachment 07-31.

Below we provide explanations of the administrative effort involved in providing basic connection services to support our proposed 60 minutes to complete an end-to-end basic-connection service request.

Management of phone calls and inquiries

A significant amount of time is spent managing phone calls and enquires and responding to emails. Requests for new and temporary basic connections generally require greater attention due to the technical nature of the service and necessary checks to ensure the connection site is ready to receive the connection. This may involve numerous interactions with the customer and their representatives. Our administrative staff frequently respond to phone calls and enquiries from registered electrical contractors (**REC**)—on technical standards, metering requirements, B2B service orders and paperwork³⁹ that has not been received from the retailer. These types of enquiries take a considerable amount of time to resolve and must be responded to meet our connection-timeframe obligations.⁴⁰

Our staff in the back office also spend time responding to enquiries from our field workers on a range of matters, including inaccurate information on a retailer's service order, site access issues, etc. These calls regularly involve a long waiting period. Our office staff attempt to resolve many of these issues by phoning retailers, RECs and our service provider so that we can avoid returning to the worksite, which could mean a higher cost to the connection applicant.

Administration of email correspondence

Administrative staff also receive emails relating to new connections on a range of issues that are similar to those covered above. Email correspondence generally relates to managing service orders—including explanations, mismatches in paperwork relating to certificates of electrical safety (**CES**), electrical work requests (**EWR**) and solar connection applications—and reissuing service orders to enable us to complete the original connection request.

Management of system exceptions, errors, and publishing new connection details in the NEM

The administrative staff also undertake the management of system exceptions, errors and publication of new connection details in the National Electricity Market (**NEM**) systems. For example, after a new connection is made, the customer details are automatically sent to the NEM within a set period—a requirement under Market Settlement and Transfer Solutions (**MSATS**) procedures. Exceptions in data occur from time to time and when the requisite data is not sent to the NEM within the required timeframe, our IT system sends out alerts that there

³⁷ The three distinct service orders referred to are for NMI creation request, meter request and connection request. Prior to Power of Choice, there was only one service order for a connection request.

³⁸ AER, *Final Decision – Jemena resubmitted – Attachment 10.04 – Ancillary Network Services (CONFD)*, 25 May 2016.

³⁹ Certificate of electric safety, Electrical work requests, micro embedded generation connection applications.

⁴⁰ ESCV, Electricity Distribution Code (August 2018), clause 2.2, requires connections to be made within 10 business days of the request.

is a process issue which may be due to incomplete data or incorrect meter status. These system alerts require investigation, corrective actions and closeouts.

3.2.3 Material costs

We averaged the material costs of overhead and underground connection for single-phase and three-phase connection services. The method we use to average the material costs is shown in our fee-based pricing model.⁴¹ The cost of meters is not included in our proposed materials cost as it is recovered under the advanced metering infrastructure (**AMI**) charges.⁴²

3.2.4 Vehicle costs

Consistent with our CAM, vehicle operating costs are directly attributable to individual projects (and therefore, distribution services).

The standard fleet operating cost rate—which is calculated based on total fleet costs divided by total productive hours—is used for fee-based alternative control services where field workers require a vehicle to deliver the service.

To recover the vehicle costs related to basic connection services, we determined a vehicle unit cost by averaging the cost of operating and maintaining a small elevated work platform (**EWP**) vehicle used to manage overhead supply connections and a van fitted with equipment for making an underground connection; and apply the average unit cost in our fee-based pricing model.

3.2.5 Overheads

We have applied the overheads shown in section (1) to all the direct costs of fee-based services in accordance with our CAM.

3.2.6 Tax liability related to alternative control services

Basic connections including new connections, replacements and upgrades of existing basic connections are classified as alternative control services. From a regulatory point of view, on the first appearance, it does not give rise to the need for a tax allowance because there will not be a Regulatory Asset Base (**RAB**) to which the assets created by a connection (classified as alternative control services) can be added. However, given the nature of connection assets, JEN capitalises these costs for tax and accounting purposes and will incur a tax liability for the service on the revenue less depreciation over time.

Clause 7A(2)(a) of the National Electricity Law (**NEL**) requires that a regulated distribution network service provider (**DNSP**) should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in providing direct control network services, be they alternative control services or standard control services. As we cannot avoid incurring the tax liability—and we believe the tax liability to be an efficient cost—we have included an allowance in fee-based connection and connection management alternative control services cost build-up model to allow for the recovery of the associated tax liability.

We refer to an Australian Tax Office (**ATO**) Interpretative Decision (ATO ID 2011/42)⁴³ made on 12 May 2011 which outlines that tax must be applied to capital works, and therefore, applies in circumstances outlined above.

***Issue:** Is expenditure incurred by a taxpayer on salary or wages an allowable deduction under section 8-1 of the Income Tax Assessment Act 1997 (ITAA 1997), to the extent that the relevant employees perform work on projects to construct and upgrade depreciating assets of the taxpayer?*

⁴¹ Attachment 07-31.

⁴² Attachment 07-09.

⁴³ <https://www.ato.gov.au/law/view/document?docid=AID/AID201142/00001>.

Decision: *No. Expenditure incurred by a taxpayer on salary or wages is not an allowable deduction under section 8-1 of the ITAA 1997, to the extent that the relevant employees perform work on projects to construct and upgrade depreciating assets of the taxpayer as it is capital or capital in nature.*

The connection services to which we propose to apply the tax liability are:

- new basic connection
- temporary basic connection
- replacement of basic connection
- upgrade of basic connection.

We propose to capitalise the total cost of these services consistent with:

- JEN's guidance on capitalisation of fixed assets⁴⁴
- JEN's taxation procedures⁴⁵
- Previous AER final decisions on tax liabilities on connection services classified as alternative control services, where recovery of the tax costs was accepted.^{46, 47}

The calculation of tax recovery cost of fee-based alternative control services is detailed in Attachment 07-31.

⁴⁴ Jemena, *Guidance—Property, plant and equipment—JAA FIN GU0012*, Revision Number 0, 27 July 2018; and *Customer contribution JAA FIN GU 0021*, Revision Number 0, 24 July 2018.

⁴⁵ Jemena, *Tax Fixed Asset Procedures JAA FIN PR 0001*, Revision Number 1, 11 October 2018, p.4.

⁴⁶ AER, *Final decision, Jemena distribution determination – Attachment 16 – Alternative control services*, May 2016, section 16.1.

⁴⁷ AER, *Final decision Victorian electricity distribution network service providers. Distribution determination 2011-15*, October 2010, pp 931-932.

4. Connection application and management services

Connection management services involve works initiated by a customer or a customer's retailer that are specific to the connection point. These services include, but are not limited to:

- temporary connections
- field-based energisation and de-energisation
- relocation of overhead network assets
- replacement of overhead service line due to the relocation of point of attachment
- upgrade of connection services from single-phase to three-phase
- non-basic supply abolishment or reposition non-basic connection
- upgrade from overhead to underground service.

Consistent with the F&A, we propose 'connection application and management services' be classified as alternative control services. For more information on our list of connection application and management services, see our proposed classification services in Attachment 07-06.

The scope and costs of providing some of these services do not vary significantly between customer requests as they are predictable and generally uniform. Therefore, for the next regulatory period, we propose setting standard fees for the following services:

- temporary connection up to 100 amps
- field-based de-energisation and re-energisation
- temporary disconnection and subsequent reconnection
- replacement of overhead service line up to 100 amps per phase
- upgrade of basic connection services from single-phase to three-phase up to 100 amps.⁴⁸

Our proposed fees and the price escalations for the first year of the regulatory period are set out in Table A1–1 and Table A1–2 respectively.

For all other services in the connection application and management services grouping, we propose prices are quoted using the labour rates, along with contractor services and material costs per the price cap formula for quoted alternative control services set out in Attachment 07-07. That is because the scope of the service can vary significantly between customer requests and prices can only be determined when the scope of the work is known.

Below we provide an overview of fee-based connection management services we provide.

4.1 Temporary connection up to 100 amps per phase

A temporary basic connection service (single or three-phase) is provided where supply is requested for a known, but limited period of up to 12 months and removed at a later date. Temporary connections may be provided for such purposes as:

- mobile services, such as health services and X-ray vans
- events such as carnivals, fetes and festivals

⁴⁸ In the current regulatory period, except for field based de-energisation and re-energisation, we provide the listed services under the 'service vehicle visit' service.

- construction of buildings and public transport infrastructure (e.g. rail lines, roads, tunnels, etc)
- builders temporary supplies.

The cost and effort involved in providing a temporary basic connection service are same as that of a new permanent basic connection service, except that the connection is abolished at a later date when the supply is no longer required. Accordingly, our fee for this service is the same as for new permanent basic-connection service, as discussed in section 3.1.

Note:

Where a connection applicant requests a temporary non-basic connection—that is, a connection that does not meet the criteria of basic connection service for the construction of large buildings or public transport infrastructure (e.g. rail lines, roads and tunnels)—we consider a quoted alternative control services classification is more appropriate because the scope and cost of providing these services varies significantly depending on the circumstances. Accordingly, we propose to provide quoted prices for non-basic temporary connection services.

4.2 Replacement of basic overhead connection

Replacement of an overhead service line generally occurs when a customer requests a change in the point of attachment of the overhead service line supplying their property. The cost and effort involved in replacing an overhead service line up to 100 amps per phase are assumed to be the same as for new basic connection services. Accordingly, our fee for this service is the same fees as for new basic connection services, as discussed in section 3.1.

4.3 Field based energisation and de-energisation

Field based energisation services provided to customers moving into new or existing premises that have previously been de-energised by means other than a remote disconnection—for example, service fuse removed.

Field based de-energisation services are provided where customers or a customer's retailers request that the power to a premise is turned off and the fuse is removed. De-energisation requests from retailers mainly relate to customers moving out of a premise, or disconnection for non-payment of electricity bill.

Both of these services require a single person operating out of a van to attend the site to either remove or insert a fuse.

Field-based energisation and de-energisation services are also provided where the metering installations do not have remote service capabilities or are unmetered.

About 98% of the residential and small business customers in our distribution area have smart meters. Since the smart meter installation, requests for field based energisation and de-energisation services have declined as retailers request remote energisation and de-energisation services.

Approach to determining prices

We can identify costs associated with the provision of field based energisation and de-energisation services. They are:

- contractor costs
- administrative costs.
- overheads.

The unit price for de-energisation is higher than energisation due to more extended discussion with the customer on site—especially when it is a disconnection for non-payment.

The administrative functions for de-energisation are similar to that of re-energisation except for the additional checks of the business systems to ensure the customer is not a life support customer and reconciliation of coincidental de-energisation and re-energisation requests we received from different retailers following a customer moving out and another moving in at the same site.

Other direct costs and overheads are as discussed in section 3.2.3.

4.4 Temporary disconnection and subsequent reconnection

Temporary disconnection and subsequent reconnection services are generally provided to customers who request a physical disconnection and reconnection of premises at the distribution network—for example, disconnection at the top of a pole, above a shop veranda or in a service pit. The service requires a two-person crew in an EWP vehicle to perform the work.

Approach to determining prices

We can identify costs associated with the provision of both these services. They are:

- labour and plant costs
- administrative costs
- overheads.

Normally a request for temporary disconnection is followed by reconnection. Our administrative staff process both disconnection and subsequent reconnection requests as a single service order; consequently, we have halved the task time taken by our administrative staff for each of the service requests.

However, the field workers are required to attend the site twice. The time spent at the site by the field workers for disconnection is less than reconnection. We have detailed the tasks and time taken for each task in the cost build-up model in Attachment 07-31.

4.5 Upgrade of basic connection from single-phase to three-phase

The administrative staff and field worker effort and cost involved in upgrading a basic connection from single-phase to three-phase up to 100 amps per phase is assumed to be the same as for a new three-phase basic connection, even though there is additional work in removing the existing single-phase service. Accordingly, our fee for this service is the same as for the new three-phase basic connection service, as discussed in section 3.1 of this attachment.

5. Enhanced connection services

We provide enhanced connection services to our customers on request which may include a second connection from an alternative feeder (a reserve feeder) for higher reliability of supply or excess levels of equipment ratings or connection assets.

In the F&A, enhanced connection services are classified as alternative control services and defined as services provided at the request of a customer or third party that are:

- of a higher reliability standards (where permissible) than required by the NER or any other applicable regulatory instruments. This category includes reserve feeder installation and maintenance; or
- above levels of service or plant ratings required to be provided by the distributor.⁴⁹

Accordingly, for the next regulatory period, we propose that construction and maintenance of assets for enhanced connection services are classified as quoted alternative control services because the scope and costs of delivering network ancillary services vary significantly between customer requests and prices can only be determined when the scope of the work is known.

Further, we propose the maintenance services of the enhanced connection assets are classified as fee-based alternative control services because we can identify the average costs in advance on a \$/kW basis.

5.1 Reserve feeder maintenance charge

In 2018, 21 customers had a second connection from a reserve feeder as a standby supply for higher reliability, connected to the high voltage distribution network. We forecast that the number of customers and their reserve capacity demand to stay constant over the next regulatory period.

To recover the efficient cost of providing operation and maintenance (**O&M**) services for reserve feeders, we propose to apply a fee approved by the AER on a \$/kW basis on the reserve capacity the customer signed-up to. The calculation of the charge for the maintenance of reserve feeder services is based on a top-down calculation approach.

5.2 Calculation of reserve feeder maintenance fee (\$/kW)

To estimate the costs associated with the reserve feeder service, we have adopted the following approach:

- Step 1 – Activity cost centres were identified in our operational works program that relates to the O&M activities of the high voltage (**HV**) distribution network supplying electricity to all customers (reserve feeders included)
- Step 2 – A proportion of each of the HV distribution activities were assigned to the HV network by taking into consideration the volume of HV assets deployed—for example, the number of HV poles, length of HV conductors, HV network operations and faults—as a percentage of the total network assets and the percentage of network operations and faults related to the HV network
- Step 3 – The proportion of the HV distribution activities were then applied to the costs of the activities to derive the estimate of O&M costs for HV distribution
- Step 4 – The total O&M cost for HV distribution was then divided by the total system demand forecast (**kW**) to derive the \$/kW rate for the recovery of the O&M costs of a reserve feeder—which is, total estimated of O&M cost/actual system demand = \$7,039,544/947,000 kW = \$7.43/kW (Real \$2018).

Steps 1, 2 and 3 applying the O&M costs for the 2018 calendar year are shown in Table 5–1.

⁴⁹ AER, *Final framework and approach AusNet Services, CitiPower, Jemena, Powercor and United Energy, Regulatory control period commencing 1 January 2021*, January 2019, p. 109.

Table 5–1: Estimation of O&M expenditure attributed to the high voltage network (\$/kW)

Step 1 – Operational & maintenance activities	Step 2 – Proportion of O&M costs attributed to the HV network (%)	Step 3 – Proportion of O&M costs attributed to the HV network (\$ June 2021, dollars)
Thermo-vision survey	90%	\$509
Planned maintenance of zone substations	100%	\$2,564,121
Unplanned maintenance of zone substations	100%	\$82,205
High voltage installation maintenance	69%	\$913,147
Pole and line inspection	40%	\$777,420
Maintenance of high voltage underground cable	100%	\$58,315
Fault and emergency	36%	\$655,391
Vegetation control	45%	\$1,988,436
Total estimate of O&M costs relating to HV distribution system		

Our proposed unit rate (\$/kW) and real price changes for escalation of costs are set out in Table A1–1 and Table A1–2 respectively.

6. Network ancillary services

In the F&A, the AER grouped several customer or third party initiated services related to common distribution services under the service group ‘network ancillary services’ and classified all the services with the group as alternative control services. Examples of network ancillary services include:

- access permits, oversight and facilitation
- retailer and customer requested planned supply interruption
- inspection and auditing service
- provision of training to third parties for network related access
- authorisation and approval of third party service providers design, work and materials
- network safety services
- customer requested the provision of electricity network data, specification and design enquiry or consumption data outside of legislative obligations
- third party requested network alterations or other improvements
- security lights.

Consistent with the F&A, we propose ‘network ancillary services’ be classified as alternative control services. For more information on our list of network ancillary services, see our proposed classification services in Attachment 07-06.

The scope and costs of providing two services in the ‘network ancillary services’ group—namely, provision of electricity consumption data and security lighting service—do not vary significantly between customer requests as they are predictable and generally uniform. Therefore, for the next regulatory period, we propose fixed fees for both these services.

Further, we propose to classify the remaining network ancillary services as quoted alternative control services because the scope and costs of delivering ancillary network services vary significantly between customer requests and prices can only be determined when the scope of the work is known.

Below we provide detail on how we determine fees for the provision of electricity consumption data and security lighting services.

6.1 Customer access to electricity consumption data

A residential or small business customer may request electricity interval metering data for price comparison purposes. We may impose a charge for the provision of interval metering data, but only if:

- the request is not the first request made by the small customer within the preceding year
- the interval data relates to a period before the preceding two years.⁵⁰

Approach to determining prices

Our proposed price for the provision of customer data includes recovery of direct costs and overheads incurred by our administrative staff. We have applied the same average time for back office tasks approved by the AER

⁵⁰ Advanced Metering Infrastructure (AMI Tariffs) Order, Gazette No S216 Wednesday 19 June 2013.

for the current regulatory period. The tasks performed are detailed in the cost build-up model in Attachment 07-31.

6.2 Security lights

Our security lighting service comprises of operation and maintenance of security lights (also referred to as watchman lights) mounted on distribution power poles. Historically, we provided four types of lights which included high-pressure sodium and mercury vapour lights and the wattage either 250 or 400 Watts. This service is provided only where there is an existing electricity power pole to mount the lights. Alternatively, customers can choose to install their own security light within their premises and wire the light to their electrical switchboard at the premises.

We do not provide *new* security lighting service to business customers any longer as they have the option of installing their own security lighting on their premises. However, we provide the operation and maintenance services of existing security lights. For the next regulatory control period, JEN proposes to continue providing operation and maintenance (**O&M**) services of existing security lights.

The O&M costs we incur for providing security lights are mostly homogeneous and are directly attributed to those customers receiving the service. The O&M service includes replacement of failed (or vandalised) lamps, PE cells and repairs to faulty wiring. However, when a security light becomes unserviceable—that is the entire light fixture (lantern) is beyond repair—we propose to offer the customer a quoted price for the replacement of the unserviceable entire security light. That way, the customer has a choice of accepting our offer to replace the entire security light or install their own security light within their premises.

Approach to determining prices

To determine an annual O&M charge for security lights, we used a bottom-up approach. Our cost build-up includes the following costs:

- We use the same cost input as in the public lighting services to recover costs related to call centre, GIS and complaints handling because the administrative staff who manage public lighting services for municipal councils and VicRoads also manage security lights
- We have allowed two line workers in an EWP vehicle and a travel time of 30 minutes between light repairs and a further 10 minutes to undertake the repair—that is, 12 repairs in an 8-hr day
- Labour and vehicle rates are the same as we have allowed for other fee-based alternative control services
- The unit cost of the lamp is a volume-weighted across the four different light types
- The PE cell is the same as that used in major road Category V lights. The lamp life is similar to the lamp life of major road Category V lights
- We have assumed the same lamp and PE cell replacement frequency as in the public lighting services—that is, once every five years for lamps and ten years for PE cells. As security lights are prone to high rates of vandalism,⁵¹ we have allowed an additional repair once every ten years. Over ten years, we assumed each light would have two lamp failures, one PE cell failure and one failure due to other causes such as vandalism and faulty connections, wiring, etc
- Traffic management costs are assumed to be similar as for major road Category V lights.

Our cost build-up of operation and maintenance service is set out in Attachment 07-31.

⁵¹ Security lighting is commonly installed with the purpose to deter crime.

7. Auxiliary metering services

In addition to regulated meter data and meter provision services for type 5, 6 and AMI smart meters (refer to Attachment 07-09), we provide auxiliary metering services to customers on request.⁵²

We can identify and allocate the costs of providing these services to customers who request them. Further, the cost of providing each type of auxiliary metering service is homogeneous. Accordingly, we propose to continue with the classification of auxiliary metering services in the current regulatory period (where the distributor remains responsible) as fee-based alternative control services.

Auxiliary metering services we provide include:

- field-based special meter read (i.e. off-cycle additional meter read)
- meter tests of type 5, 6 and smart meters (including instrument transformers)
- alteration of an existing metering installation
- remote special meter read (i.e. off-cycle additional meter read)
- remote meter reconfiguration
- remote de-energisation and re-energisation
- operation of type 7 metering
- metering exit service
- non-contestable unmetered metering service.

Below we provide a description of the services and our approach to determining the fees for each of the services.

7.1 Field-based metering services

7.1.1 Special field-based meter read

Special meter reads are required to finalise a customer's bill when they transfer between retailers outside the normal meter reading schedule or move out of their premises. A special read may also be required to verify the meter reading due to a customer complaint that their energy bill is high. In the latter case, the charge only applies if the original reading is found to be correct.

We do not expect many requests for field-based special meter reads, given that more than 98% of residential and small customers have a smart meter and these are remotely read to obtain the meter reading.

The average time taken to process service orders by our administrative staff, contractor costs and overheads are shown in the cost build-up model in Attachment 07-31.

7.1.2 Meter tests of type 5, 6 and smart meters

A customer—or a retailer on behalf of a customer—may request an inspection or investigation including a meter test, to verify that the meter is accurately measuring the amount of energy consumed. This generally occurs after a complaint by a customer about their electricity bill. In the case of a meter being proven to be faulty, we will waive the charge.

⁵² JEN – Att 07-09 Advanced Metering Infrastructure – 20200131 – Public.

We propose to offer meter test services for type 5 and 6, and AMI smart metering installations—including meters with instrument current transformers (**CT**)—where we are responsible for the provision of metering services. We have proposed a single price for testing type 5, 6 and AMI smart single and three-phase metering, as our current underlying costs of testing the various meters are the same.

7.1.3 Alteration to existing metering installations

The cost and effort involved in altering an existing metering installation (e.g. relocation of the meter or changing the type of meter) is the same as replacement of an overhead service line due to relocation of the point of attachment of the connection to the premises, as discussed in section 4.2, except there is no material cost as the cost of the meter is recovered via the AMI metering charge.

7.1.4 Approach to determining prices for field-based metering services

This service incurs the cost of processing the service order from retailers by our administrative staff and fieldwork.

Our proposed prices for field-based metering services include various costs that can be categorised into the following key components:

- external contractor costs
- administrative costs
- overheads.

The average time taken to process service orders by our administrative staff, contractor costs and the overheads applied to the direct costs are shown in the cost build-up model in Attachment 07-31.

7.2 AMI remote services

We provide AMI remote services through our smart meters, which include:

- remote special meter read
- remote meter de-energisation
- remote meter re-energisation
- remote meter reconfiguration.

Remote re-energisation services are provided to retailers on behalf of customers moving into new or existing premises that have previously been de-energised—for example, sites de-energised for non-payment of an electricity bill or residents have moved out.

Remote de-energisation services are provided where customers or retailers request that the power to a premise is turned off. De-energisation requests from retailers mainly relate to customers moving out of a premise, or disconnection for non-payment of electricity bill.

A remote special meter read is a fully automated process in our computer system and rarely requires manual intervention. This service is seldom requested because retailers receive daily meter reads and 99% of these are actual meter reads. Despite this, we still offer the service.

We propose to continue with our current practice of not charging for remote special meter reads in the next regulatory period.

Remote meter energisation and de-energisation processes are also fully automated in our computer system and rarely requires manual intervention. Our administrative staff spend on average three minutes per service order (**SO**) on market system interfaces related to co-incidental de-energisation and re-energisation service orders; service orders related to life support customers and management on system exceptions. Similar to remote special meter read, we propose to not charge for remote meter energisation and re-energisation services during the next regulatory period.

The remote meter reconfiguration service is provided to a retailer or a customer. Meter configuration services include, but are not limited to:

- reconfiguration of the time-of-use periods or maximum demand settings in a meter, to align it with a tariff change
- reconfiguration following the installation of solar to measure the importing and exporting of energy
- reconfiguration of load control turn-on/turn-off times.

Approach to determining prices of AMI remote reconfiguration service

Unlike the other three remote services, discussed above, a remote re-configuration service request requires our administrative staff to perform certain functions:

- check and validate B2B SO
- accept B2B SO or reject B2B SO if required paperwork is incomplete
- execute remote configuration in SAP
- manage exceptions, phone calls and inquiries.

Our proposed charge for remote reconfiguration service applies to residential and small business customers who have AMI meters. The charge includes the recovery of direct costs and overheads incurred in the back office.

The average time taken to process service orders by our administrative staff is shown in the cost build-up model in Attachment 07-31.

7.3 Type 7 metering service

Type 7 metering installation is a notional metering installation at an unmetered connection point—that is, a connection point where the device is connected to the network and uses electricity but does not have a meter. Streetlights and traffic lights are examples of type 7 metering installations.

The type 7 metering service involves the administration and management of IT systems that estimate the unmetered usage using standard data and calculations in accordance with AEMO's metrology procedure for settlement in the NEM.

Approach to determining prices

We have adopted a top-down approach to determine the fee for this service. The method aims to recover the estimated cost we incur while providing the service. Our costs include:

- annual audit of the public lighting inventory table, as required by the metrology procedure for type 7 metering
- meter data transfer to AEMO including data validation and business support by our administrative staff.

The estimated total cost of managing the required activities for type 7 metering service—such as GIS activities, meter data queries, data delivery to the NEM by external service provider, system exceptions, annual audits—are spread over the population of street lights and charged on a price per light basis. We have included this as a unit cost per light in our fee-based pricing model in Attachment 07-31.

7.4 Non-contestable unmetered loads metering service

The Australian Energy Market Commission (**AEMC**) has made a final rule to introduce a ‘global settlements’ framework for the settlement of the demand side of the wholesale electricity market. The new rule⁵³ requires non-contestable unmetered loads must be included in settlements in the wholesale electricity market. The rule requires:

- unmetered loads to be processed through MSATS and the load profile
- trading interval data is required to be calculated for these non-contestable unmetered loads and delivered to the NEM
- the size of the unmetered loads to be agreed by customers, DNSP, retailer and AEMO in accordance with AEMO’s updated metrology procedures and unmetered load guidelines⁵⁴
- AEMO to calculate and publish aggregate unaccounted for energy (**UFE**) quantities that market customers would have received during the soft-start period, from 1 July 2021 to 6 February 2022.⁵⁵

Consistent with the rule requirement, AEMO has published amended metrology procedures.⁵⁶ Specifically, clause 13.1.2 of the metrology procedures on non-contestable unmetered loads requires that metering coordinators must:

- ensure that a list of non-contestable unmetered loads is maintained and kept up to date
- ensure that calculation methodologies and Agreed Loads for non-contestable unmetered loads are maintained and kept up to date
- create and maintain an Inventory Table, to facilitate the calculation of metering data for each non-contestable unmetered load NMI.

Metering data provision service for non-contestable unmetered devices

These non-contestable unmetered loads do not meet the criteria for type 7 metering installation. Consequently, we propose to introduce new metering services relating to non-contestable unmetered loads as a result of the global settlement framework. Further, we propose this metering data provision service is classified as a fee-based alternative control services.

We propose to automate the calculation of the non-contestable unmetered loads as we currently do for type 7 metering. We are required to keep the list of non-contestable unmetered loads up to date, and we intend to do this monthly. The data file sent to the NEM will also require exception management.

⁵³ NER, clause 7.16.3(6A).

⁵⁴ AEMC, *Rule Determination, Five minute settlement and global settlement implementation amendments*, p.19.

⁵⁵ AEMC, *Rule Determination, Five minute settlement and global settlement implementation amendments*, p.36.

⁵⁶ AEMO, *Metrology Procedures: Part B Meter Data Validation, Substitution and Estimation, version 7.1*, 8 October 2019.

Approach to determining prices

We have adopted a top-down approach to determine the fee for this service. The method focuses on recovering our efficient costs for providing the service. Our costs include:

- meter data transfer to AEMO including, data validation
- keeping the list of non-contestable unmetered loads up to date monthly.

The total estimated cost of undertaking the required activities are spread over the population of non-contestable unmetered loads and charged on a price per unmetered device basis. We have included this as a unit cost per unmetered device in our fee-based pricing model in Attachment 07-31.

The costs for this service have been excluded from the meter provision and meter data provision services for regulated metering services for type 5, 6 and AMI smart meters.

Establishing an initial inventory table for a new non-contestable unmetered devices

Metrology procedures clause 13.1.2 require metering coordinators must create and maintain an inventory table, to facilitate the calculation of metering data for each non-contestable unmetered load NMI. For each NMI, a separate inventory table is required that lists a range of information pertaining to each unmetered device.⁵⁷

We propose to recover the costs of establishing the initial inventory table from the connection applicant seeking connection of new non-contestable unmetered devices to our distribution network. This charge will be a once-off charge in addition to the connection charge.

The cost of establishing the initial inventory table would vary depending on the complexity, quantity and type of unmetered devices. Further, the rules and metrology procedures require the size of the unmetered loads to be agreed by the customer, retailer and DNSP. Accordingly, we propose this service be classified as quoted alternative control services.

7.5 Metering exit services

Metering exit services allow us to recover the written down value (**WDV**) of a smart meter, as well as the efficient costs of AMI meter removal and disposal. This currently occurs when brownfield sites—for example, apartment block or shopping centre—become embedded networks, resulting in the removal of the existing meters.

In the F&A for the next regulatory period, the AER classified this service as an alternative control services and grouped it under auxiliary metering services.^{58,59}

7.5.1 How we derive our proposed metering exit fees

To derive our proposed metering exit fees, we updated the inputs of the metering exit fee model which we submitted as part of the 2016-2020 regulatory proposal (**current regulatory period**) and updated some calculations to account for the intervening period.⁶⁰

In simple terms, the model that JEN has used to calculate its proposed exit fee provides for the recovery of:

⁵⁷ AEMO, Metrology Procedures: Part B, Meter Data Validation, Substitution and Estimation, version 7.1, 8 October 2019, clauses 13.2.2, 13.3.2 and 13.5.2.

⁵⁸ AER, *Final framework and approach AusNet Services, CitiPower, Jemena, Powercor and United Energy, Regulatory control period commencing 1 January 2021*, January 2019, p.45.

⁵⁹ We understand, the Victorian Government is undertaking a review on metering competition. Should competition arise, we may have to revise the proposed fee as there will be other costs in the changeover of meters in a contestable market.

⁶⁰ JEN Regulatory Proposal, *Attachment 09-06 JEN ACS Metering – Exit Fee Model*, 6 January 2016.

- the written down value of that meter and proportion of supporting communication & IT systems as part of the exit fee
- reasonable and efficient costs of removing the meter.

JEN's metering exit services model for the next regulatory period is Attachment 07-29. The key inputs into the model are:

- escalation factors consistent with the escalation rates outlined in section 5 of Attachment 06-01
- relay and access point costs required to augment the network to account for the missing meters
- written down values for the **MAB** and **TAB** as per attachment 07-24
- other costs associated with the removal of the metering installation are discussed in section 7.5.2.

The model uses these inputs to calculate:

- the annual escalated costs to decommission a meter including infill communications, execution costs and disposal costs. We included an allocation for costs relating to communications infill costs to maintain the integrity of the mesh network and ensure that JEN can maintain its service level obligations as these are reasonable and efficient costs of removing a smart meter
- the average MAB and TAB WDV in each year, by meter category, based on the average of the start and end year WDV, with the end year WDV figure based on each meter category's share of:
 - the opening balance of all meters plus net capital expenditure incurred within that year less regulatory depreciation for that year
 - plus the allocation of the average WDV per meter in that year for IT, communications and other costs within the asset base
- the tax allowance applicable for the additional meter exit fee revenue which we will incur a tax liability for the service on the revenue.

7.5.2 Other costs associated with the removal of the metering installation

JEN incurs administrative costs of meter removals and subsequent disposal costs. Administrative and meter disposal cost on a per meter basis includes:

- B2B validation – chasing up paperwork pertaining to the removal of a meter
- SAP ERP internal Service Order creation and close out
- Write off meter in the system
- Meter disposal.

JEN's proposed exit fees for each of its relevant meter categories, for each year of the forthcoming regulatory control period are set out in Table A1–3.

8. Public lighting services

Public lighting services are grouped in the F&A as:

- operation, maintenance, repair and replacement (**OMR**) public lighting services
- alteration and relocation of public lighting assets
- new public lighting services including greenfield sites & new light types and
- provision, construction and maintenance of emerging public lighting technology.

We propose to classify public lighting services as alternative control services and subject to price cap control mechanism, consistent with the F&A.⁶¹ Further, we propose classifying OMR public lighting services as fee-based alternative control services and the remainder of public lighting services as quoted alternative control services because the scope and costs of delivering services vary significantly between customer requests.

We provide more information on how we determine OMR charges for public lighting on these services in Attachment 07-12 and related pricing model in Attachment 07-32.

See section 1.2 on how we determine prices for the remainder of public lighting services that are classified as alternative control services.

⁶¹ AER, *Final framework and approach AusNet Services, CitiPower, Jemena, Powercor and United Energy, Regulatory control period commencing 1 January 2021*, January 2019, p. 110.

Appendix A

Schedule of prices

A1. Schedule of prices for alternative control services for the next regulatory period

Table A1–1: Proposed indicative charges for alternative control services FY22 (\$ June 2021, dollars)

Proposed fee-based services	Business Hours (B/H)	After Hours (A/H)	Wasted site attendance (B/H)	Wasted site attendance (A/H)
Connection services⁶²				
New basic connection, single-phase	648.99	648.99	467.41	645.76
New basic connection, three-phase	777.87	777.87	467.41	645.76
Connection management services				
Temporary single-phase connection	648.99	648.99	467.41	645.76
Temporary three-phase connection	777.87	777.87	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
Temporary disconnection	363.44	514.36	363.44	514.36
Reconnection (after temporary disconnection)	421.10	599.46	421.10	599.46
Upgrade of basic connection (1 to 3-phase)	777.87	777.87	467.41	645.76
Replacement of overhead basic connection, single-phase	760.54	760.54	467.41	645.76
Replacement of overhead basic connection, three-phase	834.29	834.29	467.41	645.76
Reserve feeder maintenance (\$/kW)	12.89	12.89	n/a	n/a
Ancillary network services				
Customer access to electricity consumption data	50.93	50.93	n/a	n/a
Security lighting (operation and maintenance)	134.99	134.99	n/a	n/a
Auxiliary metering services				
Remote special meter read	-	-	-	-
Remote energisation	-	-	-	-
Remote de-energisation	-	-	-	-
Remote meter re-configuration	49.39	49.39	n/a	n/a
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
Type 7 metering (\$/light)	1.43	1.43	n/a	n/a
Non-contestable unmetered metering (\$/device)	16.41	16.41	n/a	n/a

Source: Attachment 07-31 ACS Fee Based Services Model.

⁶² The proposed new basic connection fees are the same regardless of whether we or a third-party meter provider are responsible for metering.

Table A1–2: Proposed real price change for alternative control services (per cent)

Proposed real price change	FY23	FY24	FY25	FY26
Connection services				
New basic connection, single-phase	0.76%	0.79%	0.80%	0.81%
New basic connection, three-phase	0.63%	0.66%	0.67%	0.68%
Connection management services				
Temporary single-phase connection	0.76%	0.79%	0.80%	0.81%
Temporary three-phase connection	0.63%	0.66%	0.67%	0.68%
Field-based energisation	1.02%	1.07%	1.08%	1.08%
Field-based de-energisation	1.02%	1.07%	1.08%	1.08%
Temporary disconnection	0.86%	0.90%	0.91%	0.91%
Reconnection (after temporary disconnection)	0.86%	0.90%	0.91%	0.91%
Upgrade of basic connection (1-phase to 3-phase)	0.63%	0.66%	0.67%	0.68%
Replacement of overhead basic connection, single-phase	0.65%	0.68%	0.69%	0.69%
Replacement of overhead basic connection, three-phase	0.65%	0.68%	0.69%	0.69%
Reserve feeder maintenance	-	-	-	-
Ancillary network services				
Customer access to electricity consumption data	1.02%	1.07%	1.08%	1.08%
Security lighting	0.55%	0.58%	0.59%	0.59%
Auxiliary metering services				
Remote special meter read	-	-	-	-
Remote energisation	1.02%	1.07%	1.08%	1.08%
Remote de-energisation	1.02%	1.07%	1.08%	1.08%
Remote meter re-configuration	1.02%	1.07%	1.08%	1.08%
Meter alteration (or relocation)	0.87%	0.91%	0.92%	0.93%
Field-based special meter reads	1.02%	1.07%	1.08%	1.08%
Meter test of types 5, 6 and AMI smart metering installations	1.02%	1.07%	1.08%	1.08%
Type 7 metering (\$/light)	1.02%	1.07%	1.08%	1.08%
Non-contestable unmetered metering (\$/device)	1.02%	1.07%	1.08%	1.08%

Source: Attachment 07-31 ACS Fee Based Services Model.

Table A1–3: Proposed indicative meter exit fees per meter (\$ June 2021, dollars)

Meter category	FY22	FY23	FY24	FY25	FY26
Single-phase	230.35	213.86	193.91	175.82	159.79
Single-phase, two-element	230.35	213.86	193.91	175.82	159.79
Three-phase (direct connect)	230.35	213.86	193.91	175.82	159.79
Three-phase (current transformer (CT) connect)	230.35	213.86	193.91	175.82	159.79

Source: Attachment 07-29 ACS Metering Exit Fee Model.

Table A1–4: Proposed indicative labour rates for quoted services FY22 (\$ June 2021, dollars)

Labour category	Business hours	After hours
Administrative employee	91.05	-
Field worker	155.06	236.00
Technical specialist	142.39	-
Engineer	172.34	-
Senior engineer	217.47	-

Source: Attachment 07-30 ACS Quoted Services Model

Table A1–5: Proposed real labour rate escalation for FY23 to FY26 (per cent)

Labour categories	FY23	FY24	FY25	FY26
Administrative employee	1.02%	1.07%	1.08%	1.08%
Field worker	1.02%	1.07%	1.08%	1.08%
Technical specialist	1.02%	1.07%	1.08%	1.08%
Engineer	1.02%	1.07%	1.08%	1.08%
Senior engineer	1.02%	1.07%	1.08%	1.08%

A2. Schedule of charges for alternative control services for the current regulatory period

Table A2–1: Charges for the current regulatory period – business hours (\$ nominal, dollars)

User requested distribution services	CY16	CY17	CY18	CY19	CY20
Connection – single phase service < 100 amps where JEN is the responsible for metering	553.17	580.69	596.60	614.84	631.01
Connection – three phase service < 100 amps where JEN is the responsible for metering	716.69	752.44	773.05	796.69	817.64
Connection – single phase service < 100 amps where JEN is not the responsible for metering	553.17	580.69	596.60	614.84	631.01
Connection – three phase service < 100 amps where JEN is not the responsible for metering	716.69	752.44	773.05	796.69	817.64
Single-Phase Temporary supply – overhead supply with coincident abolishment	538.78	565.59	581.08	598.85	614.59
Three-Phase Temporary supply – overhead supply with coincident abolishment	689.37	723.77	743.60	766.33	786.48
Manual energisation of new premises	34.98	35.46	36.43	37.55	38.54
Manual re-energisation of existing premises	34.98	35.46	36.43	37.55	38.54
Manual de-energisation of existing premises	53.97	54.72	56.22	57.94	59.46
Temporary disconnect / reconnect for non-payment	66.18	67.11	68.95	71.06	72.93
Manual special meter read	31.24	31.68	32.55	33.54	34.42
Adjust time switch	0.00	0.00	0.00	0.00	0.00
Service vehicle visit	434.69	440.76	452.83	466.68	478.95
Wasted service vehicle visit (not JEN's fault)	403.14	408.77	419.97	432.81	444.19
Fault response (not JEN's fault)	434.69	440.76	452.83	466.68	478.95
Retest of types 5 and 6 metering installations for first tier customers	368.19	373.34	383.56	395.29	405.68
Reserve feeder - \$/kW per annum	14.96	15.17	15.58	16.06	16.48
Single phase non-off peak per meter per annum	130.42	84.96	76.09	79.84	79.64
Single phase off peak per meter per annum	130.42	84.96	76.09	79.84	79.55
Multi-phase direct connect per meter per annum	160.27	103.15	92.39	96.94	96.60
Multi-phase CT per meter per annum	177.87	114.85	102.87	108.05	107.67
Type 7 metering (\$/light per annum)	0.58	0.60	0.62	0.64	0.66
Remote re-energisation	9.45	9.58	9.85	10.15	10.42
Remote de-energisation	9.45	9.58	9.85	10.15	10.42
Remote meter reconfiguration	49.4	50.14	51.51	53.09	54.49
Remote special meter read	0.00	0.00	0.00	0.00	0.00

Table A2–2: Charges for the current regulatory period – after hours (\$ nominal, dollars)

User requested distribution services	CY16	CY17	CY18	CY19	CY20
Connection – single phase service < 100 amps where JEN is the responsible for metering	553.17	580.69	596.60	614.84	631.01
Connection – three phase service < 100 amps where JEN is the responsible for metering	716.69	752.44	773.05	796.69	817.64
Connection – single phase service < 100 amps where JEN is not the responsible for metering	553.17	580.69	596.60	614.84	631.01
Connection – three phase service < 100 amps where JEN is not the responsible for metering	716.69	752.44	773.05	796.69	817.64
Single-Phase Temporary supply – overhead supply with coincident abolishment	538.78	565.50	581.08	598.85	614.59
Three-Phase Temporary supply – overhead supply with coincident abolishment	689.37	723.77	743.60	766.33	786.48
Manual energisation of new premises	55.58	56.36	57.90	59.67	61.24
Manual re-energisation of existing premises	55.58	56.36	57.90	59.67	61.24
Manual de-energisation of existing premises	70.86	71.85	73.82	76.08	78.08
Temporary disconnect / reconnect for non-payment	73.90	74.94	76.99	79.34	81.43
Service vehicle visit	571.36	579.35	595.22	613.42	629.55
Wasted service vehicle visit (not JEN's fault)	571.36	579.35	595.21	613.41	\$629.54
Fault response (not JEN's fault)	571.36	579.35	595.22	613.42	629.55
Retest of types 5 and 6 metering installations for first tier customers	605.97	614.44	631.26	650.57	667.67

Table A2–3: Labour rates for quoted services - business hours (\$ nominal, dollars)

Labour category	CY16	CY17	CY18	CY19	CY20
Administrative employee	83.57	84.74	87.06	89.72	92.08
Field worker	103.65	105.10	107.98	111.28	114.21
Technical specialist	143.42	145.42	149.41	153.98	158.02
Engineer	186.59	189.20	194.38	200.32	205.59

Table A2–4: Labour rates for quoted services - after hours (\$ nominal, dollars)

Labour category	CY16	CY17	CY18	CY19	CY20
Administrative employee	-	-	-	-	-
Field worker	128.30	130.09	133.66	137.74	141.36
Technical specialist	167.84	170.19	174.85	180.19	184.93
Engineer	204.27	207.12	212.80	219.30	225.07

Table A2–5: Meter exit fee (\$ nominal, dollars)

Meter category	CY16	CY17	CY18	CY19	CY20
Single-phase	611.69	561.71	585.925	559.13	535.31
Single-phase, two-element	613.08	559.99	583.633	559.10	537.65
Three-phase (direct connect)	631.55	584.38	615.437	588.85	565.10
Three-phase (current transformer (CT) connect)	634.37	587.55	617.659	590.56	566.17