



**PRELIMINARY DECISION**  
**Powercor distribution**  
**determination**  
**2016 to 2020**

**Attachment 16 – Alternative**  
**control services**

October 2015

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## Note

This attachment forms part of the AER's preliminary decision on Powercor's revenue proposal 2016–20. It should be read with all other parts of the preliminary decision.

The preliminary decision includes the following documents:

Overview

Attachment 1 - Annual revenue requirement

Attachment 2 - Regulatory asset base

Attachment 3 - Rate of return

Attachment 4 - Value of imputation credits

Attachment 5 - Regulatory depreciation

Attachment 6 - Capital expenditure

Attachment 7 - Operating expenditure

Attachment 8 - Corporate income tax

Attachment 9 - Efficiency benefit sharing scheme

Attachment 10 - Capital expenditure sharing scheme

Attachment 11 - Service target performance incentive scheme

Attachment 12 - Demand management incentive scheme

Attachment 13 - Classification of services

Attachment 14 - Control mechanism

Attachment 15 - Pass through events

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## Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AMI	Advanced metering infrastructure
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
Expenditure Assessment Guideline	Expenditure Forecast Assessment Guideline for electricity distribution
F&A	framework and approach
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure

Shortened form	Extended form
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital

## 16 Alternative control services

Alternative control services are services provided by distributors to specific customers. They do not form part of the distribution use of system revenue allowance approved by us for each distributor. Rather, distributors recover the costs of providing alternative control services through a selection of prices with most charged on a 'user pays' basis. Metering is provided to all electricity customers, but also charged on a per customer basis.

In this attachment, we set out our preliminary decision on the prices Powercor is allowed to charge customers for the provision of ancillary network services, public lighting and metering.

### 16.1 Ancillary network services

For the purposes of this preliminary decision, we have referred to the service groups previously identified as 'fee based services' and 'quoted services' collectively as a single group called 'ancillary network services'.<sup>1</sup>

Ancillary network services share the common characteristic of being non-routine services provided to individual customers on an as requested basis.<sup>2</sup> The existing fee based services and quoted services groupings describe the basis on which service prices are determined.<sup>3</sup>

We classify ancillary network services as direct control services. Having decided to apply a direct control classification, we must further classify ancillary network services as either standard control or alternative control.<sup>4</sup> We have classified them as alternative control services because they are attributable to individual customers.<sup>5</sup>

#### 16.1.1 Preliminary decision

We generally accept Powercor's proposal for ancillary network services. We consider the underlying labour rates of Powercor's prices do not exceed maximum labour rates which we consider efficient for providing these services. Our reasoning is detailed in section 16.1.4.

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<sup>1</sup> AER, *Final framework and approach paper for the Victorian electricity distributors—Regulatory control period commencing 1 January 2016*, 24 October 2014, p. 60.

<sup>2</sup> AER, *Final framework and approach paper for the Victorian electricity distributors—Regulatory control period commencing 1 January 2016*, 24 October 2014, p. 60.

<sup>3</sup> AER, *Final framework and approach paper for the Victorian electricity distributors—Regulatory control period commencing 1 January 2016*, 24 October 2014, p. 60.

<sup>4</sup> AER, *Final framework and approach paper for the Victorian electricity distributors—Regulatory control period commencing 1 January 2016*, 24 October 2014, p. 61.

<sup>5</sup> AER, *Final framework and approach paper for the Victorian electricity distributors—Regulatory control period commencing 1 January 2016*, 24 October 2014, p. 61.

However, there are some aspects of Powercor’s proposal we do not accept and we have subsequently made the following adjustments for our preliminary decision:

- Adjusted the consumer price index (CPI) escalation from 2014 to 2015 to include the Australian Bureau of Statistics (ABS) published September 2014 quarter index
- Applied our preliminary decision labour price growth
- Adjusted times taken to perform some services based on benchmark times taken by other distributors.

These adjustments have changed the ancillary network service prices proposed by Powercor. Our reasoning for these adjustments is detailed in sections 16.1.4.3, 16.1.4.4 and 16.1.4.5.

Appendix A contains our preliminary decision on the prices Powercor can charge for ancillary network services for the first year of the 2016–20 regulatory control period. Table 16.12 sets out the approved prices for fee based services and Table 16.13 sets out the approved labour rates for quoted services. We note these prices are in real 2015 dollar terms and will be escalated into real 2016 dollar terms in Powercor’s initial pricing proposal.

We also note the Victorian Department of Economic Development, Jobs, Transport and Resources requested us to ensure that the Victorian distributors charge customers with manually read meters and customers with remote read meters accordingly.<sup>6</sup> Our preliminary decision is satisfied that wherever required, Powercor has developed separate prices for manually read and remotely read metering services. These separate prices are demonstrated in Table 16.12 and Table 16.13 in appendix A.

## Form of control

Our preliminary decision applies price cap forms of control to ancillary network services.<sup>7</sup> Figure 16.1 and Figure 16.2 set out the control mechanism formulae for fee based services and quoted services, respectively. They are consistent with the formulae which Powercor agreed on in its regulatory proposal.<sup>8</sup>

### Form of control—fee based services

Our preliminary decision applies a price cap form of control to fee based services.<sup>9</sup> Under this form of control, we approve a schedule of prices for the first year (2016) of the regulatory control period. These approved prices are set out in Table 16.12 of

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<sup>6</sup> Victorian Department of Economic Development, Jobs, Transport & Resources, *Submission to Victorian electricity distribution pricing review—2016 to 2020*, 13 July 2015, p. 4.

<sup>7</sup> AER, *Final framework and approach for the Victorian electricity distributors: Regulatory control period commencing 1 July 2016*, 24 October 2014, pp. 89–93.

<sup>8</sup> AER, *Final framework and approach for the Victorian electricity distributors: Regulatory control period commencing 1 July 2016*, 24 October 2014, pp. 89–93; Powercor, *Regulatory proposal 2016–20*, 30 April 2015, pp. 301–302.

<sup>9</sup> AER, *Final framework and approach for the Victorian electricity distributors: Regulatory control period commencing 1 July 2016*, 24 October 2014, pp. 92–93.



appendix A. From 2017 and for each subsequent year, the year t prices are determined by adjusting the previous year's prices by the formula set out in Figure 16.1. The X factors applied in this formula adjust for annual labour price growth.

**Figure 16.1 Fee based ancillary network services formula**

$$\bar{p}_t^i \geq p_t^i \quad i=1,\dots,n \text{ and } t=2,3,4,5$$

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

Where:

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

$p_t^i$  is the price of service i in year t.

$CPI_t$  is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities<sup>10</sup> from the June quarter in year t-2 to the June quarter in year t-1, calculated using the following method:

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

divided by

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

minus one.

For example, for the 2017 year, t-2 is the June quarter 2015 and t-1 is the June quarter 2016 and in the 2018 year, t-2 is the June quarter 2016 and t-1 is the June quarter 2017 and so on.

$X_t^i$  is the X factor for service i in year t, as set out in Table 16.1.<sup>11</sup>

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<sup>10</sup> If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

<sup>11</sup> Our final F&A erroneously stated the X factor in this formula would incorporate annual adjustments for updates to the trailing cost of debt. However, we note these services do not incorporate a cost of capital and therefore the X factors will not be applied in this manner. Rather, consistent with the price caps applied to these services in other jurisdictions, the X factors will adjust for annual labour price growth as set out in Table 16.1.

**Table 16.1 AER preliminary decision on X factors for each year of the 2016–20 period (per cent)**

	2017	2018	2019	2020
X factor	-0.80	-1.28	-1.48	-1.37

Source: AER analysis.

Note: To be clear, the labour price growth is positive for each year of the regulatory control period. However, in operating as de facto X factors in the price caps, positive labour price growth is presented as a negative value.

## Form of control—quoted services

Our preliminary decision applies a formula to determine the cost build-up of services that are priced on a ‘quoted’ basis.<sup>12</sup> Figure 16.2 sets out the price cap formula and Table 16.13 in appendix A sets out the approved 2016 labour rates for quoted services.

### Figure 16.2 Quoted services formula

$$\text{Price} = \text{Labour} + \text{Contractor Services} + \text{Materials}$$

Where:

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

$\text{CPI}_t$  is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities<sup>13</sup> from the June quarter in year  $t-2$  to the June quarter in year  $t-1$ , calculated using the following method:

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

divided by

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

minus one.

<sup>12</sup> AER, *Final framework and approach for the Victorian electricity distributors: Regulatory control period commencing 1 July 2016*, 24 October 2014, p. 89.

<sup>13</sup> If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

For example, for the 2017 year, t–2 is the June quarter 2015 and t–1 is the June quarter 2016 and in the 2018 year, t–2 is the June quarter 2016 and t–1 is the June quarter 2017 and so on.

$X_t^i$  is the X factor for service i in year t, as set out in Table 16.1.<sup>14</sup>

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

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

### 16.1.2 Powercor's proposal

Powercor proposed to use a cost build-up method to establish initial prices (or base prices) for fixed fee services in the first year of the 2016–20 regulatory control period.<sup>15</sup>

Powercor assumed the price caps will operate in the following way for fixed fee services:

- The initial price (or base price) will be set for each service in the first year of the regulatory control period.
- From year two onwards of the regulatory control period, services will be subject to the price caps using the controls provided in the formulae in Figure 16.1 and Figure 16.2.
- The price cap formula allows prices to be annually adjusted for:
  - inflation
  - real cost escalation.

The result of the above essentially limits the annual movement in prices to an annual adjustment or escalation. This is primarily driven by changes in CPI and other changes to underlying cost drivers for different services.

### 16.1.3 Assessment approach

We have focused on the key inputs in determining prices for ancillary network services. We considered:

- Powercor's regulatory proposal<sup>16</sup>

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<sup>14</sup> The X factors applied in this formula adjust for annual labour price growth.

<sup>15</sup> Powercor, *Regulatory proposal 2016–20*, 30 April 2014, pp. 299–302.

<sup>16</sup> Powercor, *Regulatory proposal 2016–20*, 30 April 2014, pp. 299–302 & 306–309.

- maximum total labour rates we developed for Victoria. Our findings are based on our consultant, Marsden Jacob Associates', analysis<sup>17</sup>
- labour is the key input in determining an efficient level of prices for ancillary network services. Therefore, we focused on comparing Powercor's proposed total labour rates against maximum total labour rates that we developed. In this preliminary decision 'total labour rates' comprise raw labour rates, on-costs and overheads.
- the times taken to perform the services, as these times are another key input into the final price.

We note that Powercor also used contractors in delivering some of its ancillary network services. In assessing these contractor rates we considered:

- the competitiveness of the process in procuring the contractor
- our maximum total labour rates
- contractor rates we have previously approved
- contractor rates used by other Victorian distributors.

Our preliminary decision maximum total labour rates apply the following labour components to arrive at a maximum total labour rate (for particular labour types).

- a maximum raw labour rate
- a maximum on-cost rate
- a maximum overhead rate.

As we explain in more detail in section 16.1.4, we obtained maximum rates for each of these components. We applied these maximum (component) rates to derive maximum total labour rates. We consider that using our maximum total labour rates to determine appropriate prices for services will provide Powercor with a reasonable opportunity to recover at least the efficient costs it incurs in providing these services. It will promote the efficient provision of electricity services and allow a return commensurate with the regulatory and commercial risks involved for the provision of those services.<sup>18</sup>

Where a distributor's proposed total labour rates exceed our maximum total labour rates—which we consider are efficient—we applied our maximum total labour rates to determine ancillary network service charges.

As a further check of our analysis, we have benchmarked components of the Victorian distributors' proposed labour costs against one another.

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<sup>17</sup> Marsden Jacob Associates, *Final provision of advice in relation to alternative control services—public version*, 20 October 2014.

<sup>18</sup> NEL, ss. 7A and 16.

## 16.1.4 Reasons for preliminary decision

### 16.1.4.1 Maximum total labour rates

We accept Powercor's proposed total labour rates, as they do not exceed our maximum total labour rates which we consider are efficient.

As set out in section 16.1.3, we compared Powercor's total labour rates against our developed maximum (rather than, for example, average) total labour rates. As labour is the major input in determining prices for ancillary network services, we consider it prudent to use maximum total labour rates as an input to assess prices for ancillary network services. Maximum total labour rates act as 'ceilings' on the rates we consider Powercor should pay for the various labour types. Where a distributor reveals rates lower than the maximum total labour rates, we consider those lower rates should be the inputs for deriving ancillary network services prices.

We note the Victorian distributors used different names and descriptions for different labour categories. However, we found that the types of labour used to deliver ancillary network services broadly fell into one of five categories:

- Administration
- Technical services
- Engineers
- Field workers, and
- Senior engineers.

We note Powercor only used two types of labour in developing its ancillary network service prices. Table 16.2 shows the maximum total labour rates we developed for our assessment of Powercor's labour types.

In developing our maximum total labour rates, we assessed raw labour rates, on-costs and overheads separately and derived maximum rates for each component (discussed below). We then applied these maximum rates to produce the maximum total labour rates. It was this maximum rate that was important in our deliberations. The components that make up that maximum were of less relevance and individually did not form the basis of our reasoning.

We used these maximum total labour rates to determine whether Powercor's proposed prices for ancillary network services reflect the underlying cost of an efficient labour rate. We consider this to be a prudent approach. It provides the distribution business with a reasonable opportunity to recover at least its efficient costs. We consider prices based on labour rates higher than the maximum total labour rates would be inefficient.

**Table 16.2 Maximum allowed total labour rates**

Powercor labour category	AER maximum total labour rates (\$2014)
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Powercor labour category	AER maximum total labour rates (\$2014)
Support staff	\$91.88
Skilled electrical worker	\$160.79

Source: AER analysis.

### **Raw labour rates**

In developing maximum raw labour rates (that is, excluding on-costs and overheads), we examined Hays 2014 salary data. The Hays 2014 salary reports draw on information from 2,500 companies across Australia and New Zealand. Relevant distributors in the Hays data who gave permission to be named were ActewAGL, Jemena, and CitiPower.<sup>19</sup> The Hays rates draw from a wide pool of labour which the Victorian distributors would likely have access to. We therefore consider these rates provide a good representation of the competitive market rate for appropriate categories of labour.

We reviewed salary information from all Australian cities. However, we only used Victorian salary data to develop our maximum raw labour rates.<sup>20</sup>

For illustrative purposes, we also looked at raw labour rates (across the five benchmark labour categories) for Sydney and Auckland. Labour rates in each category did not vary significantly across these locations. The differences observed probably captured differences between locations including economic conditions, labour laws, and population. For these reasons, we consider that the Victorian rates alone were acceptable to develop maximum labour rates for ancillary network service charges for the Victorian distributors.

To calculate the maximum raw labour rates, we used job titles from Hays' energy specific salary guide.<sup>21</sup> We supplemented this with data from the Hays office support salary guide.<sup>22</sup> This ensured that the 'administration' category was sufficiently covered.

We analysed 66 different job titles and used 36 of these to develop maximum raw labour rates for the five labour categories.

Table 16.3 shows the job titles we used to develop maximum labour rates for each of the five labour categories. These 36 labour job titles involved tasks which clearly fell

<sup>19</sup> A list of contributors to the Hays 2014 salary data who gave permission to be named is available on Hays, *Contributors—Hays 2014 Salary*, accessed 12 February 2015, Guide [http://www.hays.com.au/salary-guide/HAYS\\_375078](http://www.hays.com.au/salary-guide/HAYS_375078).

<sup>20</sup> Marsden Jacob Associates, *MJA analysis*.

<sup>21</sup> Hays, *The 2014 Hays salary guide: salary & recruiting trends*, 2014.

<sup>22</sup> Hays, *The 2014 Hays salary guide: salary & recruiting trends*, 2014.

into either the 'administration', 'technical specialist', 'engineer', 'field worker', or 'senior engineer' labour categories. We excluded job titles that were not relevant to electricity distributors such as 'wind farm engineer'.

**Table 16.3: Job titles we used to develop maximum labour rates**

Labour category	Job title
Administration	Project secretary / Administrator
	Client liaison (residential)
	Data entry operator
	Records officer
	Administration assistant (12+ months experience)
	Project administration assistant (3+ years experience)
	Project coordinator
Technical specialist	Technician
	Control room operator
	Control room manager
	E&I technician
	Protection technician
	Generator technician
	Operator / manager
	Site engineer
	Planner / scheduler
	OHS supervisor
	OHS manager
Engineer	Design engineer
	Project engineer (EPCM)
	Power systems engineer
	Protection engineer
	Transmission line design engineer
	Asset engineer (3 to 7 years)
	Project engineer
Field worker	Leading hand
	Electrician
	Mechanical fitter

Labour category	Job title
	Line worker
	G&B linesworker
	Cable joiner
	Cable layer
Senior engineer	Senior design engineer
	Principal design engineer
	Senior project engineer (EPCM)
	Commissioning engineer

Source: Marsden Jacob Associates' analysis.

We considered the range of data provided for each labour category across the various job titles. In doing this, we derived salary ranges for each labour category by:

- identifying the lowest salary from all job titles in the labour category
- identifying the highest salary from all job titles in the labour category.

We consider this range represents the full pool of labour (and raw labour rates) that Powercor would have access to in a competitive market. We consider that the maximum raw labour rate for each labour category should be used to develop its maximum total labour rate. We consider this to be a prudent approach. It provides the distribution business with a reasonable opportunity to recover at least its efficient costs, while promoting the efficient provision of services.

**Table 16.4: AER maximum raw labour rates**

Powercor labour category	AER maximum raw labour rates (\$2014)
Support staff	38.46
Skilled electrical worker	67.31

Source: AER analysis.

### ***On-costs***

We consider that a maximum on-cost rate of 44.78 per cent should apply to the Victorian distributors. We calculated this maximum on-cost rate by developing a 'bottom up' estimate of on-costs for the Victorian distributors, with reference to the following factors:

- the superannuation levels included in each distributor's enterprise bargaining agreement
- a conservative estimate of workers compensation premium



- standard payroll tax rates in Victoria
- annual leave loading of 17.5 per cent loading on four weeks annual leave, which equates to 1.35 per cent of total salary.
- a conservative long service leave allowance based on three months leave for every ten years of service, equating to 2.5 per cent per year.
- an assumed rate of 18.18 per cent standard leave (including annual leave, sick leave, and public holidays) for all businesses.
- Victorian State Payroll Tax.<sup>23</sup>

We used this maximum on-cost rate of 44.78 per cent in deriving our maximum total labour rates. It provides the distribution business with a reasonable opportunity to recover at least its efficient costs.

Table 16.5 shows our maximum on-cost rate and the breakdown of that on-cost rate.

**Table 16.5: On-cost rate breakdown and maximum, per cent**

On-cost rate component	Maximum rates
Standard leave	18.18
Superannuation	10.00
Workers compensation	2.25
Payroll tax	4.85
Annual leave loading	1.35
Long service leave allowance	2.5
<b>Total on-cost rate</b>	<b>44.78</b>

Source: AER analysis.

## Overheads

Our determination of the maximum overhead rate is informed by the Marsden Jacob Associates' report which assessed alternative control services for NSW and ACT distributors. Marsden Jacob Associates recommended a 65 per cent overhead rate

<sup>23</sup> State Revenue Office of Victoria, *Payroll tax—current rates* (<http://www.sro.vic.gov.au/payroll-tax-current-rates>), accessed 31 July 2015.

maximum in its report.<sup>24</sup> We consider 65 per cent is a conservative estimate for the Victorian distributors which have historically applied an overhead rate of less than 65 per cent to its ancillary network services. Therefore, we consider that a maximum overhead rate of 65 per cent should apply to all Victorian distributors. It provides the distributors with a reasonable opportunity to recover at least its efficient costs.

#### **16.1.4.2 Contractor rates**

We accept the contractor rates Powercor applied in delivering some of its ancillary network services. In assessing these contractor rates we considered:

- our maximum total labour rates
- contractor rates we have previously approved
- contractor rates used by other Victorian distributors.

Our assessment showed Powercor's contractor rates to be generally consistent with our maximum total labour rates, contractor rates applied by other distributors and consistent with those we accepted for the 2011–15 regulatory control period.

#### **16.1.4.3 Consumer price index escalation**

We do not accept the CPI escalation Powercor applied in its cost build-up method to escalate inputs from 2014 dollar terms into 2015 dollar terms. We note Powercor's method applied an escalation on different terms to that applied historically, which is based on percentage changes in the annual ABS September quarter index. However, we consider in developing first year prices that percentage changes in the ABS September quarter index should be applied as it is consistent with the historical application and is transparent. Therefore, our preliminary decision has substituted in the 2014 September quarter index number to calculate the escalation from 2014 dollar terms into 2015 dollar terms in Powercor's cost build-up method for first year prices.

We also note in demonstrating compliance with the price caps over the 2016–20 regulatory control period, Powercor will need to apply annual CPI escalation based on the percentage changes in the ABS June quarter index. The change in timing of the escalation is due to distributors being required to submit their annual pricing proposals a month earlier than they were previously required to do so.<sup>25</sup> This change will create an overlap of the September quarter CPI when the transition to the June quarter CPI occurs (this will occur in the distributors 2017 annual pricing proposals). This is because the CPI for the September quarter 2015 will be reflected in both 2016 and 2017 prices. However, we consider this is only a transitional issue and will not have a material impact on Powercor's prices or revenue.

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<sup>24</sup> Marsden Jacob Associates, *Provision of advice in relation to alternative control services—advice prepared for the Australian Energy Regulator*, 20 October 2014, p. 5.

<sup>25</sup> NER, cl. 6.18.2(a).

#### 16.1.4.4 Labour cost escalators

We do not accept the proposed labour price growth applied by Powercor in its cost build-up method for ancillary network services. Consequently, we have substituted in our preliminary decision labour price growth which is set out in Table 16.1. Our preliminary decision on labour price growth is discussed in attachment 7 — operating expenditure.

#### 16.1.4.5 Time taken to perform services

Powercor's proposed cost build-up method multiplies labour rates and times taken to perform the services to deduce the total direct cost of providing the service. Therefore, in addition to our maximum total labour rate benchmarking, we have also considered the times taken to perform ancillary network services as this is another key input into the final price. In gaining a better understanding of Powercor's proposed times taken to perform services, we developed benchmarks to compare them against based on the time taken by other distributors. We consider the benchmark time taken demonstrates the efficient time taken by distributors to perform the service. Therefore, where a proposed time exceeds the benchmark time it has not been accepted and the benchmark time taken has been substituted. This is the same approach we applied for our assessment of fee based services for distributors in other jurisdictions and our analysis has been informed by the Marsden Jacob Associates' benchmarking analysis

Based on our assessment, we do not accept Powercor's proposed time taken to perform manual meter accuracy tests. Our benchmarking against other distributors indicates Powercor's proposed times to perform these services is inefficient.

Excluding time for travel and back office/administration, our benchmarking analysis of other distributors indicates that the time taken to perform single phase meter accuracy tests is no more than 60 minutes. We note other Victorian distributors proposed a time of 30 minutes to perform these tasks for single phase meters. Based on our benchmarking analysis, we consider Powercor's proposed time of one and half hours to perform the same tasks to be inefficient. Therefore, our preliminary decision has substituted in the benchmark time of 60 minutes. We consider 60 minutes to perform these tasks is a conservative estimate and will provide Powercor with a reasonable opportunity to recover at least its efficient costs.

For multi-phase meters, the Marsden Jacob Associates' benchmarking analysis considered a total time to perform this task (including travel time) should be no more than 3 hours.<sup>26</sup> We note the Marsden Jacob Associates' analysis included Powercor in its sample. Therefore we consider Powercor's proposed total time of just less than 4 hours to perform these tasks is inefficient.

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<sup>26</sup> Marsden Jacob Associates, *Provision of advice in relation to alternative control services—advice prepared for the Australian Energy Regulator*, 20 October 2014, pp. 8–9.

Our own benchmarking analysis has demonstrated that some distributors consider 45 minutes is required to perform the site work for multi-phase meter tests —excluding time for travel and back office/ administration. We note Powercor proposed a time over two and half hours to perform these tasks (excluding travel time and back office/administration). Based on our analysis we consider Powercor’s proposed time is inefficient.

We note Marsden Jacob Associates’ analysis considered that it may be reasonable to allow additional time for rural networks to perform this task for additional travel time. Taking this into account, we have substituted in the Marsden Jacob Associates’ benchmark time of 3 hours plus an additional 30 minutes for Powercor to perform these tasks which includes travel time. We consider 3.5 hours is a conservative estimate and will provide Powercor with a reasonable opportunity to recover at least its efficient costs.

## **16.2 Public Lighting**

### **16.2.1 Preliminary decision**

We do not approve the proposed public lighting charges because we have determined;

- a real pre-tax WACC of 4.06 per cent instead of the proposed 5.71 per cent
- a labour rate per hour of \$100 instead of the proposed \$123.77 in 2016
- a labour rate per hour for night patrols of \$119.78 instead of the proposed \$145.35 in 2016
- labour escalation of 0.80 per cent in 2016-17 instead of the proposed 1.87 per cent in 2016
- urban elevated work platform vehicle per hour cost of \$45.38 instead of the proposed \$77.70 in 2016
- patrol vehicle rural per hour cost of \$31.08 instead of the proposed \$42.91 in 2016
- an opex overhead of 25 per cent instead of the proposed 31.4 per cent in 2016
- account management costs of \$0 instead of the proposed \$136,534 in 2016
- average cost per phone call complaint of \$11.34 instead of the proposed \$16.12 in 2016
- amendments to the proposed public lighting model as detailed below

In all other respects we have approved the proposal.

Classification of the Victorian distributors public lighting services and the reasons for departing from the classification of all dedicated public lighting services as a negotiated service, is discussed in this section and further set out in attachment 13 — Classification of Services.

## **Form of Control**

We are applying caps on the prices of individual services consistent with the current regulatory arrangements in Victoria.

Although the public lighting service is subject to an alternative control classification the control mechanism is implemented through a public lighting model under a building block approach.

Compliance with the control mechanism is to be demonstrated by the Victorian distributors through the annual pricing proposal, by updating the forecast CPI for the actual CPI each year.

### **16.2.2 Powercor's proposal**

Powercor have used internal and outsourced labour, the latter determined through competitive tenders, to provide public lighting services. Powercor have proposed:

- the 2014 labour rates which have been escalated for the next regulatory control period
- input price escalation rates for consistent with standard control services
- a rate of return consistent with that applied to standard control services
- updated average fault rates based on analysis of the actual fault rates over the last five years . Fault rates for T5 and P LED light types have remained unchanged due to limited actual historical data

### **16.2.3 AER's assessment approach**

We assess the distributors' public lighting proposals by analysing the assumptions used in the build-up of proposed costs and benchmarking these costs and assumptions amongst distributors and against independent data and information. This approach is consistent with the assessment approach used in the New South Wales and Queensland public lighting determinations.<sup>27</sup>

Our primary assessment approach is to benchmark inputs and costs of Victorian distributors against their peers. We have also done this based on the inputs decided in the 2011–15 determination and included in the modelling. In this way we achieve consistency with the approach we adopted for the 2011 determination and by the State regulator before that.<sup>28</sup>

This approach seeks to achieve consistency in assumptions and costs across distributors; nonetheless public lighting prices will always vary somewhat amongst the

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<sup>27</sup> AER, *Draft decision Ausgrid distribution determination – Attachment 16 – Alternative control services*, November 2015, pp. 16–81..

AER, *Preliminary decision Ergon Energy – Attachment 16 – Alternative control services*, April 2015, pp. 16–56.

<sup>28</sup> Essential Services Commission of Victoria, *Final Decision, Review of Public Lighting Excluded Services*, August 2004, pp. 70–73.

five Victorian distributors because of each distributor's particular circumstances (size of asset base, geographic patch to cover, mix of luminaire types, among others). We have previously explained this in prior public lighting determinations.<sup>29</sup>

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<sup>29</sup> AER, *Final Decision, 2011-15 Victorian Electricity Distribution*, p. 836.

## 16.2.4 Reasons for preliminary decision

In our preliminary decision for public lighting, we have adopted the same estimate of WACC as for standard control services. The reasons for the real pre-tax WACC are discussed in attachment 3—Rate of return.

The labour rate per hour and night patrol labour rate proposed by Powercor are a significant increase from the labour rates of \$98.07 and \$112.78 for 2015 respectively (real \$2015) set in the 2011–15 determination.<sup>30</sup> We agree with the observation from Victorian Greenhouse Alliances that these labour rates are significantly higher than other distributors.<sup>31</sup>

Powercor has not justified this increased labour rate and we do not consider it efficient in comparison to the labour rates proposed by other distributors. Powercor's existing labour rate is at the upper end of Victorian distributors and the proposed increases in its labour rates exceed the benchmark of other distributors. AusNet Services for instance is a rural distributor like Powercor and proposed a labour rate per hour of \$95.83 and \$119.78 (real \$2015) for 2016, \$27.94 and \$25.57 (real \$2015) or 29 per cent and 21 per cent respectively below what Powercor has proposed.

We consider it efficient to allow a smaller increase of Powercor's 2015 labour rate per hour from \$98.07 to \$100 per hour in 2016, which is more in line with the increases and approved labour rates of the other Victorian distributors.

Powercor's existing night time labour rate benchmarks better than its normal labour rate against the other Victorian distributors. We do not however accept the proposed increase as it is significantly above other Victorian distributors and we consider it efficient to allow a smaller increase. We consider AusNet Services approved labour rate of \$119.78 per hour efficient and have used it as a benchmark for Victorian distributors and substituted for that proposed by Powercor. This allows an increase in Powercor's labour rates but maintains a level of consistency across labour rates for Victorian distributors.

Powercor has not justified its proposed urban elevated work platform per hour cost of \$77.70 and patrol vehicle per hour rural cost of \$42.91. These are significant increases from the approved rate of \$39.70 and \$28.85 respectively in 2015. We agree with the observation from Victorian Greenhouse Alliances that the range in costs for Powercor's and CitiPower's urban elevated work platform from other distributors is high. Powercor's proposed patrol vehicle per hour cost is also higher than other distributors. The proposed increases do not benchmark well against the proposals of other Victorian distributors.

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<sup>30</sup> AER, Final Decision, *2011–15 Victorian Electricity Distribution*, p. 851.

<sup>31</sup> Victorian Greenhouse Alliances, *Local Government Response to the Victorian Electricity Distribution Price Review 2016–20*, July 2015, p. 13.

We do not consider either cost efficient in comparison to the urban elevated work platform and patrol vehicle per hour costs proposed by AusNet Services of \$45.38 and \$31.08. AusNet Services is a rural distributor like Powercor and we have substituted in their approved urban elevated work platform per hour cost of \$45.38 and patrol vehicle per hour cost of \$31.08 for 2016. This allows an increase in Powercor's rates but maintains a level of consistency across elevated work platform rates for Victorian distributors.

The increase in Powercor's proposed opex overhead to 31.4 per cent, now including a related party margin, has not been justified and we do not consider it efficient. Public lighting in Victoria has had an opex overhead of 25 per cent applied across all distributors since the 2011 determination, based on Impaq consulting analysis.<sup>32</sup> The Impaq analysis recommended a low case of 7 per cent and a high case of 25 per cent for opex overheads. We continue to consider a 25 per cent opex overhead prudent and efficient. We observe that the 25 per cent opex overhead benchmark has been maintained in AusNet Services proposals. We are continuing to apply a 25 per cent opex overhead consistently across all Victorian distributors as the prudent and efficient amount to account for overheads.

Powercor has not provided information or supporting material to justify the inclusion of account management costs and an increase in the average cost of phone calls complaints. Therefore these are not approved.

We accept the proposed Geographical Information System (GIS) costs. Without a GIS system, the Victorian distributors will not be able to track lights within their network. This system is necessary to meet the minimum requirements set out in clauses 2.3.1, 5.1 and 5.2 of the Victorian Public Lighting Code 2005 (the Code), regarding provision of public lighting data to customers.<sup>33</sup>

We have considered the Streetlight Group of Councils (SLG's) claims that GIS costs are a one-off for the establishment of these systems and should not continue to be paid by customers.<sup>34</sup> GIS services costs were included for distributors to establish the spatial location of assets and to provide web based access to public lighting customers back in 2004. However, GIS component costs are required for the ongoing maintenance of the Victorian distributor's public lighting data and are ongoing. Accordingly, we maintain the position established in our 2011 determination to allow an annual GIS component cost.

We disagree with SLG's contention that the network use of system charges for unmetered supplies recovers GIS costs. Rather, that charge recovers the costs of energy consumption emitted by the public lighting luminaire only. It does not recover

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<sup>32</sup> AER, *Draft Decision, 2011–15 Victorian Electricity Distribution*, p. 799–800.

<sup>33</sup> Victorian Public Lighting Code, pp. 2, 7–8.

<sup>34</sup> Streetlight Group of Councils, *Response to Distributor regulatory proposals and the AER's proposed negotiated distribution service criteria*, July 2015, pp. 9–10.



GIS costs which are instead recovered as part of the annual operating, maintenance and replacement charges set out in this section.

We consider the GIS system cost of \$113,443 and complaints handling costs of \$34,033 (updated from the benchmark costs set in the 2011 determination) are prudent and efficient.

We have made amendments to the proposed public lighting model, including:

- Material premium in poles & brackets capex
  - Jemena included this in their model. Having accepted that, we have also included it in all distributors' models.
- Accept new price factor for the "Fluorescent 20W" & "Fluorescent 40W" lights—no impact on revenue because there are no forecast volumes for these luminaire types.
- Accept 50.4 per cent as proportion of lights on dedicated poles
- Correct a minor cell reference error in HP 250W opex calculation in 2020
- Capex for Luminaire Replacements— Other Light types (excluding T5s)
  - Include capex in the public lighting asset base

Our preliminary decision approved labour escalation is set out in attachment 7 — operating expenditure. The approved labour escalators are consistent with standard control services.

Preliminary decision prices have also been split out into the replacement (capex) and opex components in the public lighting decision model as requested by stakeholders.<sup>35</sup>

Preliminary decision charges for each light type are set out in Table 16.6.

**Table 16.6 Public Lighting Charges (\$ nominal)**

	2016	2017	2018	2019	2020
Mercury Vapour 80 watt	47.93	50.77	53.50	56.54	59.54
Sodium High Pressure 150 watt	90.56	94.73	99.03	103.72	108.39
Sodium High Pressure 250 watt	91.74	96.11	100.56	105.43	110.28
Fluorescent 20 watt	101.62	107.62	113.43	119.86	126.22
Fluorescent 40 watt	101.62	107.62	113.43	119.86	126.22
Mercury Vapour 50 watt	66.63	70.56	74.37	78.59	82.75

<sup>35</sup> Streetlight Group of Councils, *Response to Distributor regulatory proposals and the AER's proposed negotiated distribution service criteria*, July 2015, p. 3,

	2016	2017	2018	2019	2020
Mercury Vapour 125 watt	64.71	68.53	72.23	76.32	80.37
Mercury Vapour 250 watt	69.72	73.04	76.43	80.13	83.81
Mercury Vapour 400 watt	80.73	84.58	88.49	92.78	97.05
Mercury Vapour 700 watt	122.01	127.82	133.75	140.23	146.68
Sodium Low Pressure 90 watt	122.26	127.89	133.69	140.03	146.33
Sodium Low Pressure 180 watt	122.26	127.89	133.69	140.03	146.33
Sodium High Pressure 400 watt	122.01	127.82	133.75	140.23	146.68
Incandescent 100 watt	133.26	141.13	148.74	157.17	165.51
Incandescent 150 watt	133.26	141.13	148.74	157.17	165.51
Metal Halide 250 watt	122.01	127.82	133.75	140.23	146.68
Metal Halide 400 watt	122.01	127.82	133.75	140.23	146.68
Metal Halide 70 watt	101.62	107.62	113.43	119.86	126.22
Metal Halide 150 watt	120.45	125.99	131.71	137.95	144.16
T5 2X14W	39.58	39.46	40.40	41.34	42.24
T5 (2x24W)	38.94	38.82	39.75	40.67	41.55
Compact Fluoro 32W	38.05	37.93	38.84	39.74	40.60
Compact Fluoro 42W	38.05	37.93	38.84	39.74	40.60
LED 18W	26.31	25.67	26.19	26.64	27.04
LED 47W	26.31	25.67	26.19	26.64	27.04

Source: AER analysis.

### *Victorian Public Lighting Framework*

The framework for public lighting in Victoria is set out in the Victorian Public Lighting Code 2005 (the Code).

Distributor's licences' stipulate that the terms and conditions for providing public lighting services must be consistent with the Code. Importantly, the Code only extends to the provision by distributors of the ongoing operation, maintenance and replacement of public lighting assets that they own (clause 1.3).

The explanatory note in clause 3 of the Code states that the distributor and the public lighting customer may agree that after the construction and commissioning of the assets, ownership of the assets will transfer to the distributor. Where such an agreement is made, the assets become subject to the applicable provisions of the

Code. If no agreement is reached, asset ownership remains with the public lighting customer and are not subject to regulation under the Code.

Our decision on public lighting charges is made in accordance with the Code and as such, we are only determining the charges to be levied by distributors for assets that they own.

### ***Service Standards***

The Code sets out minimum levels of service from distribution businesses and protections for Councils for public lighting in Victoria.

In relation to service standards we consider that there is a trade-off between the prices paid by Councils and the service provided by distribution businesses.

We see our role as setting a minimum level of protection. Councils can seek to negotiate with distributors to secure lower prices than those set by our determination but the Code mandates minimum service standards. Regulated charges are set for these minimums. Councils can negotiate for superior service but the trade-off is likely to be higher charges for a customised service.

### ***Classification of Public Lighting***

In the framework and approach we classified dedicated public lights as a negotiated service in response to submissions we received from stakeholders during the framework and approach. A dedicated public light is a light that sits on a dedicated public lighting pole, not shared with electricity distribution assets.

However we departed from this classification in response to the submissions we received on distributor's proposals, arguing against classifying dedicated public lights as a negotiated service.

Classification of the Victorian distributors public lighting services and the reasons for departing from the classification of all dedicated public lighting services as negotiated services are set out in attachment 13 — Classification of Services.

We however remain open towards considering a move towards a negotiated classification for public lighting in the 2021-25 regulatory control period if there is a desire from stakeholders for such a change and other appropriate amendments are made to relevant jurisdictional requirements.

Councils and other stakeholders that want such a change, should use the time before the 2021-25 regulatory control period to consider all of the issues that might be involved, seek to engage with all of the stakeholders involved and submit their proposal with a workable framework for public lighting to become a negotiated service.

## **16.3 Metering**

We are responsible for the economic regulation of the regulated metering services provided by the Victorian distribution businesses.

Type 1–4 (advanced) meters for large customers are competitively provided in Victoria and are therefore unregulated. We regulate all other metering in Victoria.

Since 2009, there has been a derogation in Victoria which has meant that the scope of our regulation has been set under the Advanced Metering Infrastructure Cost Recovery Order-in-Council (the Order) made by the Victorian Government. The Order mandated distributors install advanced remotely read interval meters together with appropriate communications and information technology systems for all small electricity customers in Victoria.

Our Framework and Approach Paper (F&A) introduced the term 'smart meters' to refer to the advanced remotely read interval meters installed under the derogation.<sup>36</sup> From 2009 to 2015, the Order directed the AER to set budgets and charges for the AMI rollout under a prescribed regime instead of the NER.

The rollout of smart meters in Victoria is now effectively complete with almost 2.8 million meters installed across the state.<sup>37</sup> As a result, metering in Victoria is entering a "business-as-usual" phase in the 2016–20 regulatory control period. To facilitate this transition, metering services will now be regulated under the NEL and NER, subject to certain modifications set out in the Order.

The AEMC's expanding competition in metering final rule change will be published in November 2015.<sup>38</sup> As such, some of the details have yet to be confirmed. For jurisdictions that are part of the national metering framework, the new rules are expected to take effect from 1 December 2017.<sup>39</sup> It is not clear at this stage the extent to which the Victorian Government will adopt the national framework.

We make this preliminary decision taking into account the jurisdictional context. This preliminary decision focuses on facilitating smooth transition from the Order to the NER, noting the national context for introducing competition to metering. We have maintained many of the same elements currently in the Order: a revenue cap and recovering the capital for new and upgraded meters as part of the annual charge. However, the Order requires us to set restoration and exit fees in accordance with the Order and also provide additional factors we may have regard to when determining 2016-20 metering service charges.

In this section of the alternative control services chapter, we explain our decision on 'default' metering services that are common to regulated metering customers:

- Type 5–6 and smart metering services (regulated service only), referred to as annual metering charges (revenue cap)
- Type 5–6 and smart metering exit fees (individual price caps)

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<sup>36</sup> AER, *Final Framework and Approach for the Victorian Electricity Distributors*, October 2014, p. 48.

<sup>37</sup> Victorian Government, Department of Economic Development, Jobs, Transport and Resources <http://www.smartmeters.vic.gov.au/about-smart-meters/end-of-rollout>, accessed 11 October 2015.

<sup>38</sup> AEMC, *Information: Extension of time for final rule on provision of metering services*, 2 July 2015.

<sup>39</sup> AEMC, *Information: Extension of time for final rule on provision of metering services*, 2 July 2015.

- Type 7 metering charges (individual price caps)

Powercor has chosen not to propose a meter restoration fee.<sup>40</sup>

Our determination on ancillary metering services (specifically requested services) is set out in the ancillary network services section of this chapter (section 16.1).

## **16.3.1 Preliminary decision**

### **16.3.1.1 Cost allocation**

Our preliminary decision is that all metering costs should be recovered through alternative control services.

As a result, our preliminary decision reallocates \$26.2 million (\$2015) in metering opex from Powercor's proposed opex for standard control services, to alternative control metering services.

### **16.3.1.2 Annual metering charges**

Our preliminary decision accepts a total revenue requirement of \$351.0 million (\$ nominal) over the 2016–20 regulatory control period for metering services. It includes the following building blocks:

- forecast capex of \$33.5 million (\$2015), amounting to 74 percent of Powercor's proposal
- forecast opex of \$91.7 million (\$2015), amounting to 89 percent of Powercor's proposal
- an opening metering regulatory asset base as at 1 January 2016 of \$ 333.4 million, rather than the proposed \$ 338.3 million (\$ nominal)
- with respect to depreciation, standard asset lives of 15 years for metering assets and 7 years for communications/IT assets
- the same WACC and gamma values for standard control network services. We will also annually adjust for return on debt.

The above building blocks result in the following approved revenue requirement for metering show in Table 16.7.

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<sup>40</sup> Powercor, *Regulatory Proposal 2016–20*, p. 280.

**Table 16.7 Preliminary Decision - metering annual revenue requirement 2016–20 regulatory control period (\$ nominal)**

	2015	2016	2017	2018	2019	2020
Depreciation		31.6	34.6	37.4	35.6	26.3
Return on capital		20.1	19.0	17.4	15.4	13.5
Opex <sup>a</sup>		18.9	19.4	19.9	20.4	20.9
Tax		-	-	-	-	0.5
Unsmoothed revenue requirement		70.6	73.0	74.7	71.4	61.2
X factor (%) <sup>b</sup>		13.96%	8.5%	8.5%	8.5%	8.5%
Smoothed revenue requirement	89.7	79.1	74.2	69.6	65.3	61.2

Source: AER analysis.

(a) Operating expenditure includes debt raising costs.

(b) The X factor from 2017 to 2020 will be revised to reflect the annual return on debt update. Under the CPI-X framework, the X factor measures the real rate of change in annual expected revenue from one year to the next. A negative X factor represents a real increase in revenue. Conversely, a positive X factor represents a real decrease in revenue.

Our preliminary decision on the approved revenue requirement will result in metering prices decreasing over the 2016–20 regulatory control period. As metering services is subject to a revenue cap, we have not set prices in this preliminary decision. Actual metering prices will be approved during the annual pricing process.

Broadly, however, we expect the price path to follow the X factors included in the table above. That is, a large decrease in 2016 followed by more modest decreases in the following years of the regulatory control period.

### 16.3.1.3 Form of control for annual metering charges

Our preliminary decision applies a revenue cap form of control to annual metering charges.<sup>41</sup> Under this form of control, annual metering charges revenues are capped for each year of the 2016–20 regulatory control period. Figure 16.3 contains the annual metering charges revenue cap formula.

Under a revenue cap, Powercor’s annual metering charges revenue will be adjusted annually to clear (or true-up) any under or over recovery of actual revenue collected. With these arrangements, there is a two year lag between the year in which the under or over recovery of revenue occurs and the year in which adjustments are made to

<sup>41</sup> AER, *Final framework and approach for the Victorian electricity distributors: Regulatory control period commencing 1 July 2016*, 24 October 2014, pp. 89–93.

'clear' the under or over recovery. To account for this lag our method includes net present value adjustments. These adjustments are calculated in the unders and over account detailed in appendix B and applied to the forthcoming annual metering charges revenue through the B factor detailed in Figure 16.3.

Our final F&A stated the revenue cap for any given regulatory year is the maximum allowable revenue for annual metering charges. However, we consider the use of maximum allowable revenue might be confused with maximum allowed revenue which is a defined term in the NER relating to transmission services. To avoid confusion, this preliminary decision uses 'total annual revenue for metering' (or TARM) for clarity.

For each year after the first year of a regulatory control period, side constraints will apply. Consistent with the application of side constraints for standard control services, the permissible percentage increase will be the greater of CPI–X plus 2 per cent or CPI plus 2 per cent. The side constraint formula is set out in Figure 16.4.

**Figure 16.3 Annual metering charges revenue cap formula**

$$(1) \quad TARM_t \geq \sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_t^{ij} \quad i=1,\dots,n \text{ and } j=1,\dots,m \text{ and } t=1,\dots,5$$

$$(2) \quad TARM_t = AR_t + T_t + B_t \quad t = 1,2,\dots,5$$

$$(3) \quad AR_t = AR_{t-1}(1 + \Delta CPI_t)(1 - X_t) \quad t = 1,2,\dots,5$$

where;

$TARM_t$  is the total annual revenue for annual metering charges in year t.

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

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

$AR_t$  is the annual revenue requirement for year t. When year t is the first year of the 2016–20 regulatory control period,  $AR_t$  is the annual revenue requirement in the annual metering charges Post Tax Revenue Model (PTRM) for year t.

$T_t$  is equal to zero for all years except 2017 and is a once off adjustment to 2017 charges for the unders and overs recoveries relating to Advanced Metering Infrastructure actual revenues and actual costs incurred in 2014 and 2015.

$B_t$  is the sum of annual adjustment factors in year t as calculated in the unders and overs account in appendix B.

$AR_{t-1}$  is the annual revenue requirement for year t–1.

$\Delta CPI_t$  is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities<sup>42</sup> from the June quarter in year t-2 to the June quarter in year t-1, calculated using the following method:

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

divided by

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

minus one.

For example, for the 2017 regulatory year, t-2 is June quarter 2015 and t-1 is June quarter 2016 and for the 2018 regulatory year, t-2 is June quarter 2016 and t-1 is June quarter 2017 and so on.

$X_t$  is the X factor for each year of the 2016-20 regulatory control period as determined in the annual metering charges PTRM.

#### Figure 16.4 Side constraints

$$p_t^i \leq p_{t-1}^i (1 + \Delta CPI_t) (1 - X_t^i) (1 + 2\%) + T_t^i + B_t^i$$

where:

$p_t^i$  is the price of annual metering charges service 'i' in year t.

$p_{t-1}^i$  is the price of annual metering charges service 'i' in year t-1.

$\Delta CPI_t$  is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities<sup>43</sup> from the June quarter in year t-2 to the June quarter in year t-1, calculated using the following method:

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

divided by

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

minus one.

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<sup>42</sup> If the ABS does not or ceases to publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

<sup>43</sup> If the ABS does not or ceases to publish the index, then CPI will mean an index which the AER considers is the best available alternative index.



For example, for the 2017 regulatory year, t–2 is June quarter 2015 and t–1 is June quarter 2016 and for the 2018 regulatory year, t–2 is June quarter 2016 and t–1 is June quarter 2017 and so on.

$X_t$  is the X factor for each year of the 2016–20 regulatory control period as determined in the annual metering charges PTRM.

$T_t$  is the annual percentage change for the unders and overs recoveries relating to Advanced Metering Infrastructure actual revenues and actual costs incurred in 2014 and 2015. It is equal to zero for all years except 2017 and is a once off adjustment to 2017 charges.

$B_t$  is the annual percentage change from the sum of annual adjustment factors in year t as calculated in the unders and overs account in appendix B.

With the exception of the CPI and the X factor, the percentage for each of the other factors above can be calculated by dividing the incremental revenues (as used in the total annual revenue formula) for each factor by the expected revenues for regulatory year t–1 (based on the prices in year t–1 multiplied by the forecast quantities for year t).

#### 16.3.1.4 Metering exit fees

We are required to specify an exit fee for Powercor.<sup>44</sup>

The exit fees we have accepted in this preliminary decision are set out in Table 16.8.

**Table 16.8 Powercor preliminary decision – meter exit fees (\$ nominal)**

Meter type	2016	2017	2018	2019	2020
AMI single phase	N/A	494.43	461.30	419.53	380.60
AMI three phase	N/A	611.13	572.31	524.24	477.07
AMI three phase current transformer	N/A	1209.13	1153.26	1085.09	1013.25
Non AMI NMIs	N/A	42.10	43.70	45.43	47.19

Source: AER analysis.

#### 16.3.1.5 Type 7 metering services

Powercor will not charge a fee for type 7 metering services in the 2016-20 regulatory control period.<sup>45</sup>

<sup>44</sup> NER, cl. 11.17.6.

<sup>45</sup> , Powercor, *Regulatory proposal 2016–20*, 30 April 2015, p. 277.

## 16.3.2 Powercor's proposal

### 16.3.2.1 Cost allocation

In allocating costs, Powercor's proposal included metering opex in standard control and alternative control services. The relevant costs related to IT opex.

From 1 January 2016, Powercor stated that the only IT system that it will primarily use to provide metering services is "Utility IQ".<sup>46</sup> As such it proposed that any IT opex which is not related to Utility IQ should be removed from its alternative control metering opex and reallocated to its standard control services proposal.<sup>47</sup> The amount which Powercor considered should be reallocated is \$24.6 million (\$2015).<sup>48</sup>

### 16.3.2.2 Annual metering charges

Powercor proposed a revenue cap as the price control for annual metering charges in the 2016–20 regulatory control period.<sup>49</sup> This price control is consistent with our F&A for type 5, 6 and smart metering (regulated service).<sup>50</sup>

To forecast its proposed revenue, Powercor used a building block approach.<sup>51</sup> It built up a revenue forecast by estimating the value of discrete cost categories, or "building blocks". For the 2016–20 regulatory control period, Powercor used this approach to propose:

- a forecast metering alternative control capex of \$45.5 million (\$2015)<sup>52</sup>
- when both alternative and standard control costs are combined, a forecast metering opex of \$102.7 million (\$2015)<sup>53</sup>
- an opening metering regulatory asset base as at 1 January 2016 of \$338.3 million (\$2015)<sup>54</sup>
- a standard asset life of 15 years for smart meters and seven years for communications/IT assets<sup>55</sup>
- the same WACC and gamma values for standard control network service, including annually updating the return of debt.<sup>56</sup>

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<sup>46</sup> Powercor, *Regulatory proposal 2016–20*, 30 April 2015, p. 290.

<sup>47</sup> Powercor, *Regulatory proposal 2016–20*, 30 April 2015, p. 290.

<sup>48</sup> Powercor, *Regulatory proposal 2016–20, Attachment: PAL Public MOD 1.2 – CP Metering capex & opex – Public version*, 30 April 2015, "Opex" tab.

<sup>49</sup> Powercor *Regulatory proposal 2016–20*, 30 April 2015, p. 280.

<sup>50</sup> AER, *Framework and approach: Victorian distribution determination 2016–20*, 24 October 2014, p. 73.

<sup>51</sup> Powercor, *Regulatory proposal 2016–20*, 30 April 2015, p. 280.

<sup>52</sup> Powercor, *Regulatory Proposal 2016–20, Attachment: PAL PUBLIC MOD 1.4 - PAL Metering PTRM 20151015*, October 2015, tab 'PTRM inputs', cells G143:K143.

<sup>53</sup> Powercor, *Regulatory proposal, Attachment: PAL Public MOD 1.2 – PAL Metering capex & opex – Public version*, 30 April 2015, "Opex" tab.

<sup>54</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 280.

<sup>55</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 281.

### 16.3.2.3 Metering exit fee

An exit fee was proposed to apply when a metering customer chooses to replace a regulated meter installed under the derogation with a competitively sourced meter.<sup>57</sup> Powercor notes that the Advanced Metering Infrastructure Order in Council states that:

- an exit fee must be paid by the retailer to the distributor, where the retailer becomes responsible for the metering installation that was previously the responsibility of the distributor (clause 7.1) and
- The exit fee is to be determined in such a way that enables the distributor to recover costs in a lump sum which is payable upon a change in the person responsible for the metering installation (clause 7.2).<sup>58</sup>

The proposed exit fee has the following components:

- recovery or sunk capital costs (residual asset base value)
- administrative costs to process the customer exit
- costs of lost economies of scale, so that remaining customers are no worse off by another customer's decision to exit.<sup>59</sup>

Departing customers will be charged the fee when they choose to take their metering services from a competitively provided source, rather than Powercor, from 2017. In this instance, we will no longer regulate the customer's metering charge. The corollary is that customers will not pay this fee at all if they continue to receive metering services from their distributor.

**Table 16.9—Powercor proposed exit fees (\$, nominal)**

	2017	2018	2019	2020
AMI single phase	478.12	432.72	390.05	356.49
AMI three phase	596.56	537.29	489.46	450.45
AMI three phase current transformer	1,209.92	1,101.08	1,025.62	957.48
Non AMI NMIs	41.92	42.63	43.35	44.08

Exit fee is charged on a per National Meter Identifier basis.

Source: Powercor, *Regulatory Proposal 2016–20*, p. 296, Table 15.18.

<sup>56</sup> Powercor, *Regulatory Proposal 2016–2020*, April 2015, p. 281.

<sup>57</sup> Powercor, *Regulatory Proposal 2016–2020*, April 2015, p. 293.

<sup>58</sup> Powercor, *Regulatory Proposal 2016–2020*, April 2015, pp. 295–296.

<sup>59</sup> Powercor, *Regulatory Proposal 2016–2020*, April 2015, p. 294.

#### 16.3.2.4 Restoration fee

Powercor have not proposed a restoration fee because it assumes it will not be the metering provider of last resort when the derogation expires.<sup>60</sup>

### 16.3.3 AER's assessment approach

#### 16.3.3.1 Cost allocation

We had regard to Powercor's approved CAM<sup>61</sup> and the wider regulatory context. That is, the future prospect of competition in metering in Victoria and how the allocation of costs across standard and alternative control service may affect competitive entry.

#### 16.3.3.2 Annual metering charge

As an alternative control service, the AER has a greater discretion under the NER in making our assessment compared to standard control services. We have chosen to apply a streamlined version of a building block approach.

#### **Forecast capex**

There are three categories of metering capex: remotely read interval meters, IT and communications.

To assess remotely read interval meter capex, we reviewed unit rates and volumes. We benchmarked proposed meter hardware unit costs across the businesses. We consider this to be appropriate because the Victorian businesses all use the same six meter types and so the costs can be compared. Further, as these are proposed amounts by the businesses themselves, we are confident that these are current, commercially available unit costs in Victoria and therefore are a reasonable benchmark.

We compared the overall amounts of communications/IT capex proposed across the businesses to understand the relative overall amounts of expenditure being proposed. If a business proposed a relatively high amount of metering communications/IT metering capex, we did a further review on an individual project basis.

#### **Forecast opex**

We considered Powercor's proposed metering opex by developing our own alternative forecast. To do this we used a top-down 'base-step-trend' approach. This is our preferred approach to assessing most opex categories.<sup>62</sup> In particular, we:

- used the "revealed costs" approach as the starting point

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<sup>60</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 296.

<sup>61</sup> Powercor, *Approved cost allocation method*, April 2014.

<sup>62</sup> AER, *Better regulation: Expenditure forecast assessment guideline for distribution*, November 2013, p. 32.

- in contrast to past metering decisions for non–Victorian distribution businesses, decided against the use of benchmarking
- adjusted for any step changes if we were satisfied that a prudent and efficient service provider would require them
- trended forward the base opex (plus any step changes) by considering the forecast changes in output, price and productivity.

Each of these components to our assessment is discussed in more detail below.

### Base

We began our assessment of the base by applying the revealed costs approach.<sup>63</sup>

The revealed costs approach uses a network service provider's historical costs to derive a base level of opex. In applying this approach, we sought to identify a level of opex that would be most reflective of future operating costs. When applying the revealed costs approach, we considered if we should select a single, or an average of multiple, years' worth of historical metering opex.

The next step we took was to remove any non–recurrent expenditure. To do this we considered the operating environment in the selected base year(s). In particular, we had regard to the extent to which the network service provider had completed its rollout of AMI and, by virtue of this, entered into a business–as–usual operating environment.

Once we were satisfied that non–recurrent expenditure had been removed, we assessed whether the base contained any material inefficiencies. If we observed any, then we applied an efficiency adjustment.

### Benchmarking

In past metering decisions we have used data on "opex per customer" as a partial performance indicator to benchmark the relative efficiency of non–Victorian distribution businesses' base opex. We, however, consider that the rollout of AMI services means that circumstances in Victoria are sufficiently different to other regions. In Victoria, metering costs are largely fixed and relate to IT and communications that tend not to vary according to customer numbers. In contrast, a majority of operating costs in the other regions are not fixed. Specifically these relate to 'manual meter reads' – the cost of which does vary according to the number of customer. As such, we have not used benchmarking techniques.

This conclusion should not be taken to exclude the use of benchmarking in other decisions. Additionally, in the future new circumstances or additional data may come to light which makes the use of benchmarking with respect to smart metering a reasonable technique for the AER to apply.

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<sup>63</sup> Victorian Cost Recovery Order In Council, cl. 5K(iv).

## Step changes

We considered whether we should apply any step changes. These are adjustments which increase or decrease a distribution business' efficient expenditure.<sup>64</sup>

As outlined in our *Expenditure Forecast Assessment Guideline*, our approach to step changes is that we will only accept them if they are associated with a new regulatory obligation or a capex/opex trade off.<sup>65</sup>

For step changes arising from new regulatory obligations, we will assess (among other things):

- whether there is a binding (that is, uncontrollable) change in regulatory obligations that affects their efficient forecast expenditure
- when this change event occurs and when it is efficient to incur expenditure to comply with the changed obligation
- what options were considered to meet the change in regulatory obligations
- whether the option selected was an efficient option—that is, whether the distribution business took appropriate steps to minimise its expected cost of compliance from the time there was sufficient certainty that the obligation would become binding.<sup>66</sup>

For capex/opex trade-off step changes, we will assess whether it is prudent and efficient to substitute capex for opex or vice versa.<sup>67</sup>

## Trend

We trended forward base opex (plus any step changes) by considering forecast changes in output, price and productivity.

## **Depreciation**

With respect to depreciation, we considered Powercor's proposed standard asset lives and had regard to the opening of competition to metering services.

## **Opening metering regulatory asset base**

In assessing the proposed MAB as at 1 January 2016, we reviewed how Powercor had rolled forward the opening value.

### **16.3.3.3 Interrelationships**

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<sup>64</sup> AER, *Expenditure assessment forecast guideline*, November 2013, p. 9.

<sup>65</sup> AER, *Expenditure assessment forecast guideline*, November 2013, p. 11.

<sup>66</sup> AER, *Expenditure assessment forecast guideline*, November 2013, p. 11.

<sup>67</sup> AER, *Expenditure assessment forecast guideline*, November 2013, p. 11.

We apply the same WACC and gamma values for all direct control services (standard and alternative control services).

Our preliminary decision on Powercor's alternative control metering proposal, therefore, interrelates with our preliminary decisions on rate of return and imputation credits. Please refer to Attachments 3 and 4 for the WACC and gamma values we accept for direct control services, along with our reasons.

#### **16.3.3.4 Exit fee**

When calculating the exit fee required under the Order, the inputs we used were:

- Powercor's opening metering RAB as of 1 January 2016
- the forecast metering capex and opex which we have accepted in this preliminary decision for Powercor's 2016–20 regulatory control period
- in relation to an administration component of the exit fee, our preliminary decision on the real labour cost escalators applicable in Victoria.

We also had regard to the revenue and pricing principles that the distributors should be afforded full cost recovery (see also clause 7.2 of the Order).

### **16.3.4 Reasons for preliminary decision**

#### **16.3.4.1 Cost allocation**

This is not a straightforward application of Powercor's approved Cost Allocation Method because of the wider regulatory context related to metering.

We consider some of the key framework issues for Victorian metering in the 2016–20 regulatory control period are:

- facilitating a smooth transition of governance under the Order to regulation under the modified NER
- the possibility of Victoria adopting the competitive metering framework sometime in the future.

The Victorian businesses have all proposed different ways to allocate the costs that were previously regulated under the Order across standard and alternative control services. They have all, to varying extents, allocated some metering related opex to standard control services. AusNet Services, United Energy and Jemena have allocated proportions of metering related IT/communications capex to standard control. As well, AusNet Services has proposed to include past AMI IT/communications assets into the standard control regulatory asset base.

We consider a consistent approach across Victorian service providers is preferable to the allocation of costs that previously were regulated under the Order.

While metering services are not currently subject to competition, given policy developments in this area, it is likely they will be at some point in time.<sup>68</sup> The cost allocation approaches by incumbent providers have the potential to affect competition from new entrants and competition between existing providers in Victoria.

Based on the current guidance from the AEMC, we will be required to develop and publish distribution ring fencing guidelines by 1 December 2016.<sup>69</sup> We consider any cost allocation issues relating to metering costs would be best dealt with in the development of this guideline in accordance with a nationally consistent approach.

In the interim, before these guidelines are developed, our preferred approach is to allocate all costs formerly regulated under the Order to alternative control services. This maintains the status quo until we consider this further through the ring fencing guideline process.

We note that the allocation of costs between standard control services and metering services makes no difference to the assessment of the efficiency of these costs. Further, as both metering services and standard control services are regulated under a revenue cap the ability of the Victorian businesses to recover their efficient costs is not affected.

To give effect to our decision on cost allocation, our building block analysis is inclusive of forecast metering costs proposed across both standard and alternative control services.

#### **16.3.4.2 Annual metering charges**

##### ***Forecast capex***

##### ***Remotely read interval meters***

##### **Meter hardware unit costs**

We do not accept Powercor's proposed meter hardware unit costs.

Our substitute unit costs are based on the lowest forecast unit costs for each meter type submitted by a Victorian business in its proposal for the 2016–20 regulatory control period.

The fact that other Victorian businesses have been able to obtain lower unit costs for the same meter types indicates to us that our substitute unit costs are currently commercially available in Victoria and therefore are a reasonable benchmark.

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<sup>68</sup> AEMC, *Draft Rule Determination - National Electricity Amendment (Expanding Competition in Metering and Related Services) 2015*, 26 March 2015.

<sup>69</sup> AEMC, *Information: Extension of time for final rule on provision of metering services*, 2 July 2015.



## **Meter installation unit costs**

We do not accept Powercor's proposed meter installation unit costs.

To develop our substitute meter installation unit cost, we have used time taken for a new connection multiplied by the field worker hourly labour rate that Powercor have proposed.

Powercor will recover metering installation costs associated with new connections and alteration/additions through ancillary charges. The proposed meter installation costs included in the annual metering capex building block relate to replacements (faults and company initiated) only.

We consider that the time taken for a replacement meter installation should, as an upper limit, take no more time than a new connection service. This is because a new connection involves time to install a meter and other activities as well.

We have not accepted Powercor's proposal that replacement meter installation should vary by meter type. We note that the labour component of a new connection service does not vary by meter type. Further, even if there were some differences in the work involved for various replacement meter installation types, any variation should still be completed within substitute time taken which we consider to be the upper limit of time taken for a replacement meter installation.

## **Meter volumes (hardware and installation)**

For the preliminary decision, we have accepted Powercor's metering volume forecasts. We may revisit forecast metering volumes in the final decision if more information becomes available. For example, if the Victorian government confirms whether the derogation will expire or continue.

### *IT/Communications*

We have accepted Powercor's proposed \$4.2 million (\$2015) metering IT capex and \$14.3 million (\$2015) metering communications capex.

### *Forecast opex*

We accept \$91.7 million (\$2015) in opex for annual metering charges. This is equal to approximately 89 percent of Powercor's proposed \$102.7 million (\$2015).

### *Base*

Our determination on Powercor's base level of metering opex applied the revealed costs approach. We also adjusted for any non-recurrent costs or material inefficiencies. Table 16.10 breaks down each component of our preliminary decision regarding Powercor's base metering opex.

**Table 16.10 AER assessment of the base**

Component	(\$m, 2015)
Raw base	18.9
Adjustment for non–recurrent costs	–1.0
Adjustment for material inefficiencies	0.0
<b>Total</b>	<b>17.9</b>

Source: AER analysis; Powercor, *Regulatory proposal: Attachment PAL Public MOD 1.2 – PAL Metering capex & opex – Public version*, 30 April 2015, “Opex” tab.

Using the revealed costs approach, we selected Powercor’s actual metering opex in 2014 as our starting point. Powercor’s actual metering opex in 2014 was \$17.9 million (\$2015).

We selected Powercor’s actual metering opex in 2014 for two reasons. First, it is the last completed year from which we have audited accounts on Powercor’s metering opex. Second, the costs incurred in 2014 should best resemble business–as–usual opex for metering in the forthcoming 2016–20 regulatory control period. This is because Powercor had been set a target to have completed its rollout of AMI before the commencement of the 2014 year.<sup>70</sup>

When applying the revealed costs approach, we considered if we should select an average of multiple, instead of a single, years’ worth of historical metering opex. Such an approach would be consistent with previous AER metering decisions.<sup>71</sup> This is where we used an average of multiple years of a business’s actual metering opex to derive the base. In the case of Powercor, the adoption of this approach would involve calculating the base by taking an average of its actual opex in years inclusive of and prior to 2014.

We have decided against using a multi–year approach. In years prior to 2014, Powercor was in the midst of its AMI rollout. In the 2016–20 regulatory control period, however, its metering operations should be in a business–as–usual phase. We therefore decided against using the multiple–year approach since it would capture costs incurred in a different operating environment to that which Powercor will experience in the forecast period.

<sup>70</sup> AMI Cost Recovery Order, cl. 14.1.

<sup>71</sup> AER, *Ausgrid: Final decision for 2014–19 regulatory control period, Attachment 16*, April 2015; AER, *Endeavour Energy: Final decision for 2014–19 regulatory control period, Attachment 16*, April 2015; AER, *Essential Energy: Final decision for 2014–19 regulatory control period, Attachment 16*, April 2015; AER, *ActewAGL: Final decision for 2014–19 regulatory control period, Attachment 16*, April 2015; AER, *SA Power Networks: Preliminary decision for 2015–20 regulatory control period, Attachment 16*, April 2015; AER, *Energex: Preliminary decision for 2015–20 regulatory control period, Attachment 16*, April 2015; AER, *Ergon Energy: Preliminary decision for 2015–20 regulatory control period, Attachment 16*, April 2015.

The next step in our assessment of the base involved considering whether we should make any adjustments for non–recurrent expenditure. With regard to this aspect of our assessment, we note that in the 2016–20 regulatory control period Powercor should be in a business–as–usual phase of delivering smart metering services to customers. This means that any opex incurred in the base year which is strictly related to the roll-out smart metering infrastructure should be regarded as non–recurrent, or "one–off", expenditure that should be removed from the base.

In its proposal, Powercor stated that it forecast base level of opex already adjusts for non–recurrent costs.<sup>72</sup> In developing its base, it removed costs incurred in the base that relate to manually reading meters.<sup>73</sup> It also adjusted for fewer overheads in the 2016–20 regulatory control period, compared to the 2014 base year.<sup>74</sup> Table 16.11 sets out the adjustments Powercor made to the base year and their magnitude.

**Table 16.11 Non–recurrent expenditure**

Cost category	(\$2015 million)
Manual meter reads	0.5
Direct overheads	0.5
Total	1.0

Source: AER analysis; Powercor, Regulatory proposal: Attachment PAL Public MOD 1.2 – PAL Metering capex & opex – Public version, 30 April 2015, "Opex" tab.

We consider Powercor proposal to have adjusted for non–recurrent expenditure and, accordingly, we have not made any further adjustments. In reaching this conclusion, we are satisfied that the removal of costs relating to manual meter reading sufficiently reflects a change in how Powercor is able to recover those costs. Specifically, from 1 April 2015 it is able to recover the cost of conducting manual meter reads directly from customers.<sup>75</sup>

We are also satisfied with the extent to which Powercor has adjusted for direct overheads. In particular, Powercor has removed an amount which we consider to reasonably reflect the fewer overheads it will require. This is given that it will enter a business–as–usual phase. As well, the introduction of contestability in metering will lead to fewer overheads, which we consider Powercor to have accounted for in its proposed adjustments to the base.

Once we were satisfied that Powercor’s proposal had removed non–current expenditure, we considered if there are any material inefficiencies in the base for which

<sup>72</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 289–290.

<sup>73</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 289–290.

<sup>74</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 289–290.

<sup>75</sup> Order in Council, cl. 14AAB.

we should adjust. In past metering decisions, we have used benchmarking to conduct this assessment. We, however, consider this approach to be inappropriate for Powercor circumstances for the reasons outlined in section 16.3.3.2 above.

We consider that following the removal of non–recurrent expenditure, Powercor’s actual opex in 2014 does not contain material inefficiencies. We reached this conclusion on the basis that the Victorian distribution businesses are generally efficient. This is compared to their counterparts in other regions of the national electricity market.<sup>76</sup> We have therefore decided not to make an efficiency adjustment to the base level of opex.

We consider a base of \$17.9 million (\$2015) is efficient.

### *Step*

Our preliminary decision is to accept Powercor proposed step change associated with the testing of current transformer (CT) meters.<sup>77</sup> These are three phase meters which are generally installed for small commercial customers.<sup>78</sup>

We will only accept a proposed step change if it is associated with a new regulatory obligation or a capex/opex trade-off.<sup>79</sup> This position is consistent with our *Expenditure forecast assessment guideline*.<sup>80</sup>

Powercor submitted that its proposed step change relates to a new regulatory obligation. In support of this, it stated that it installed 5 004 smart CT meters during its AMI rollout which, in accordance with the NER, must be tested during the 2016-20 regulatory control period.

We are satisfied that the testing of CT meters is a new regulatory requirement. As noted by Powercor,<sup>81</sup> clause 7.6 and schedule 7.3 of the NER require CT meters to be tested within five years of installation. The relevant meters were installed in Powercor 2011–15 regulatory control period. Thus, we accept that to comply with the NER it will have to test them in the 2016–20 regulatory control period.

Our preliminary decision is to accept the proposed step change for CT meter testing. This is on the basis that we have determined that the associated costs relate to a new regulatory obligation.

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<sup>76</sup> AER, *Preliminary decision for Powercor 2016–20*, October 2015, Attachment 3

<sup>77</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 290.

<sup>78</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 290.

<sup>79</sup> AER, *Expenditure assessment forecast guideline*, November 2013, p. 11.

<sup>80</sup> AER, *Expenditure assessment forecast guideline*, November 2013, p. 11.

<sup>81</sup> Powercor, *Regulatory Proposal 2016–20*, April 2015, p. 290.

## *Trend*

We trended forward the base. In doing so we did not adjust for metering customer growth. We also applied zero forecast real price and productivity growth.

We have decided not to adjust for customer growth on the basis that the majority of operating costs associated with delivering AMI services are fixed. More specifically, the relevant costs involve IT and communications infrastructure; the cost of which tends not to vary according to the number of customers a service provider has. We conclude that it is unnecessary to adjust for any growth in metering customers Powercor may experience.

Additionally, we expect Powercor's opex to be relatively flat over the 2016–20 regulatory control period. This is on account of the fact that it will be entering a business-as-usual phase of its AMI operations. Because of this, we have decided to apply zero forecast real price and productivity growth. We also reached this conclusion after adopting the view that Powercor should be able to manage any real price changes through productivity improvements.

Once trended forward, we calculated an alternative metering opex forecast of \$91.7 million (\$2015).

## *Depreciation*

We accept Powercor's proposed approach to depreciation. As a result, this preliminary decision specifies a standard asset life of:

- 15 years for remotely read interval meters and transformers
- 7 years for IT, communications, and other metering related assets.

Our preliminary decision is to accept the proposed asset lives because, in each instance, they reflect the likely technical life of the assets. We consider this to arrive at an efficient outcome whereby the economic and technical lives of the assets are likely to coincide.

## *Opening metering regulatory asset base*

Our preliminary decision is to substitute Powercor's proposed metering RAB, as of 1 January 2016, of \$338.3 with \$333.4 million (\$nominal).

We do not accept Powercor's use of actual capex for 2014 and 2015 in determining its opening metering RAB value. We will assess actual capex for these years as part of the distributors' AMI transitional charges next year.

We have instead used forecast capex for 2014 and 2015 from the AMI Charges Model (2015 Charges Application), updated for CPI, to calculate our substitute opening RAB value.

### **16.3.4.3 Meter exit fee**

We have not accepted Powercor's proposed exit fees.

The exit fee recovers Powercor's historical, sunk capital costs. To calculate it, we applied our assessment of Powercor's opening metering RAB as of 1 January 2016. Our preliminary decision on the opening metering RAB is set out in section 16.3.1.2.

Powercor's annual metering services expenditure for the 2016–20 regulatory control period is also an input into the calculation of the exit fee. We accordingly adjusted Powercor's proposed exit fees for our preliminary decision on Powercor's forecast capex and opex. Our preliminary decision on these aspects of Powercor's proposal is set out in section 16.3.1.2.

We have also approved an administrative cost component of the exit fee. It should be noted that the approval of this aspect of Powercor's proposal is potentially in contrast with the decisions we made during the New South Wales, Queensland, South Australia and Australian Capital Territory determinations in April 2015. Specifically, we rejected the administrative costs those distributors proposed in the case of removing a meter.<sup>82</sup> While we found that the costs were not sufficiently material in those jurisdictions, the Order requires that we set an exit fee; and thus we have accepted the inclusion of an administrative cost component. We have nonetheless adjusted it for our preliminary decision on the labour cost escalators applicable in Victoria in the 2016–20 regulatory control period.

Our substitute exit fees, on account of our approved capex and opening RAB are set out in section 16.3.1.4.

# A Approved prices for ancillary network services

## A.1 Ancillary network services

**Table 16.12 Fee based ancillary network services prices for 2016, preliminary decision (\$2015)**

Fee based service	Hours	Proposed price	Preliminary decision price
Meter investigation test	Business hours	391.18	379.90
	After hours	448.07	435.22
Meter accuracy test – Single phase	Business hours	488.73	419.43
	After hours	562.63	481.65
Meter accuracy test – Single phase additional meter	Business hours	197.39	176.01
Meter accuracy test – Multi phase	Business hours	620.96	505.34
	After hours	717.91	582.54
Meter accuracy test – Multi phase additional meter	Business hours	330.16	320.95
Meter accuracy test – CT	Business hours	609.04	591.78
	After hours	703.91	684.05
Disconnection	Business hours	53.65	53.28
Disconnection for non-payment	Business hours	53.65	53.28
Reconnections (incl. customer transfer)	Business hours	50.49	50.12
Reconnections (same day)	Business hours	82.05	81.68
Reconnections (incl. customer transfer)	After hours	221.75	221.38
Special reading	Business hours	44.15	44.01
Manual meter reading		44.15	44.01
Access to meter data		46.38	44.71
Service truck visit	Business hours	616.14	598.61
	After hours	740.09	719.40
Wasted truck visit	Business hours	338.89	329.27
	After hours	391.51	380.45
Remote meter reconfiguration		54.12	52.17
Remote re-energisation		10.20	9.84
Remote de-energisation		10.20	9.84
Reserve feeder – High voltage – \$ per KVA		4.20	4.14

Fee based service	Hours	Proposed price	Preliminary decision price
Reserve Feeder – Low voltage – \$ per KVA		9.30	9.16
<b>New connections – Powercor responsible for metering</b>			
Single phase	Business hours	490.90	479.53
	After hours	550.44	537.44
Multi-phase DC	Business hours	605.24	593.88
	After hours	664.78	651.78
Multi-phase CT	Business hours	2385.48	2325.30
	After hours	2954.26	2883.94
<b>New connections – Powercor NOT responsible for metering</b>			
Single phase	Business hours	459.02	448.52
	After hours	512.99	501.02
Multi-phase DC	Business hours	573.36	562.86
	After hours	627.33	615.36
Multi-phase CT	Business hours	2033.77	1988.74
	After hours	2308.76	2256.19

Source: AER analysis; Powercor, *PAL ACS Model*.

Note: Our preliminary decision prices will be escalated into real 2016 dollar terms using the percentage changes in the annual ABS September quarter index in Powercor's 2016 pricing proposal.

**Table 16.13 Quoted service ancillary network services hourly labour rates for 2016, preliminary decision (\$2015)**

Powercor labour category	Proposed labour rate	Preliminary decision labour rates
Support staff	70.62	68.08
Skilled electrical worker – Business hours	123.77	120.37
Skilled electrical worker – After hours	147.80	141.36

Source: AER analysis, Powercor, *PAL ACS Model*.

Note: The difference between Powercor's proposed labour rates and the preliminary decision labour rates is due to the correction for CPI and the application of our preliminary decision labour price growth. Our preliminary decision prices will be escalated into real 2016 dollar terms using the percentage changes in the annual ABS September quarter index in Powercor's 2016 pricing proposal.



**Table 16.14 Powercor’s quoted services**

Quoted service	Description
Routine connections—customers above 100 amps	This charge applies when customers above 100 amps request a routine connection.
Supply abolishment (>100 amps)	This charge applies when customers above 100 amps request a permanent removal of our supply assets. A separate charge applies per site.
Rearrangement of network assets at customer request, excluding alteration and relocation of existing public lighting assets	<p>This charge applies when a customer requests capital work for which the prime purpose is to satisfy a customer requirement other than new or increased supply, other than where Guideline 14 is applied. Examples include:</p> <ul style="list-style-type: none"> <li>• Vic Roads and Council requested asset relocations to allow for new road works; and</li> <li>• customer removal or relocation of service wire to allow work on private installation.</li> </ul>
Auditing, design and construction	<p>This charge applies when either a third party requests or we deem it necessary to review, approve or accept work undertaken by a third party. Examples include:</p> <ul style="list-style-type: none"> <li>• customer provided buildings, conduits or ducts used to house our electrical assets;</li> <li>• customer provided connection facilities including switchboards used in the connection of an electricity supply to their installation;</li> <li>• any electrical distribution work completed by our approved contractor that has been engaged by a customer under Option 2 provisions;</li> <li>• provision of system plans and system planning scopes, for Option 2 designers; and</li> <li>• reviewing and/or approving plans submitted by Option 2 designers.</li> </ul>
Specification and design enquiry fees	<p>This charge applies when an element of detailed design is required to fairly assess the costs so that an Offer for Connection Services can be issued to a customer. Examples include:</p> <ul style="list-style-type: none"> <li>• the route of the network extension required to reach the customer’s property;</li> <li>• the location of other utility assets;</li> <li>• environmental considerations including tree clearing; and</li> <li>• obtaining necessary permits from State and Local Government bodies.</li> </ul>
Elective undergrounding where above ground service currently exists	This charge applies when a customer with an existing overhead service requests an underground service, other than where Guideline 14 is applied.
Damage to overhead service cables caused by high load vehicles	This charge applies to an identifiable third party when overhead service cables require repairing because they have been damaged by high load vehicles pulling down cables.
High load escorts —lifting overhead lines	This charge applies when a third party requires safe

Quoted service	Description
	clearance of overhead lines to allow high load vehicles to pass along roads.
Covering of low voltage mains for safety reasons	This charge applies when customers request coverage of powerlines for safety reasons. The charge applied will depend on the time taken to perform the service. Differing charges can arise as a result of the type of line being covered; street mains (two wires or all wire) or service cables.
After hours truck by appointment	<p>This charge applies when a request is received to undertake larger scale works by a Service Truck. Examples of types of works include:</p> <p>Disconnection of complex site;  Reconnection of complex site;  Metering Additions or Alternations; and  Shutdowns (includes preparation works).</p>
Reserve feeder maintenance	<p>This charge applies when a customer requests continuity of electricity supply should the feeder providing normal supply to their connection experience interruption.</p> <p>The fee covers the maintenance of the service, it does not include the capital required to implement or replace the service as this is covered in the connection agreement.</p> <p>This service is not available to new customers.</p>

Source: Powercor, *Regulatory Proposal 2016–20*, pp. 308–309.

## B Annual metering charges unders and overs account

To demonstrate compliance with the distribution determination applicable to it during the 2016–20 regulatory control period, Powercor must maintain an annual metering charges unders and overs account in its annual pricing proposal.

Powercor must provide the amounts for the following entries in their annual metering charges unders and overs account for the most recently completed regulatory year (t–2) and the next regulatory year (t):

1. The amount of revenue recovered/to be recovered from annual metering charges, less the TARM for the regulatory years t–2 and t.
2. The calculated under/over recovery of revenue for regulatory years t–2 and t.
3. An interest charge for two years on the under/over recovery of revenue for regulatory year t–2. This adjustment is to be calculated using the approved nominal weighted average cost of capital (WACC). This adjustment is to be calculated using the respective approved nominal weighted average cost of capital (WACC) for each intervening year between regulatory year t–2 and year t.<sup>83</sup> The WACC applied for each year will be that approved by the AER for the relevant year.
4. Sum of items 2–3 to derive a closing balance for regulatory year t–2.
5. Opening balance in regulatory year t which is the closing balance in item 4.
6. Offsetting over/under recovery of revenue amount in item 5 to derive a closing balance as close to zero as practicable for regulatory year t. This amount will become the approved annual metering charges revenue under/over recovery for regulatory year t.

Powercor must provide details of calculations in the format set out in Table 16.15. Amounts provided for the most recently completed regulatory year (t–2) must be audited. Amounts provide for the next regulatory year (t) will be regard as a forecast.

In proposing variations to the amount and structure of annual metering charges, Powercor is expected to achieve a closing balance as close to zero as practicable in its annual metering charges unders and overs account in each forecast year in its annual pricing proposal during the 2016–20 regulatory control period.

As this is the first time Powercor will be subject to a revenue cap form of control mechanism there will be no adjustments for under or over recovery of revenue until regulatory year t is 2018. Therefore, the annual metering charges unders and overs

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<sup>83</sup> For clarity, two WACC adjustments are applied: one for a year of interest between year t–2 and year t–1; and a second for a year of interest between year t–1 and year t. The WACC for each year will be that approved by the AER for the respective year, such that rolling WACC's are applied.

account must show a zero under/over recovery of revenue for regulatory year t–2 when regulatory year t is 2016 and 2017.

**Table 16.15 Example calculation of annual metering charges unders and overs account (\$'000, nominal)**

	Year t–2 (actual)	Year t (forecast)
<b>(A) Revenue from annual metering charges</b>	<b>8449</b>	<b>6360</b>
<b>(B) Less TARM for regulatory year =</b>	<b>7349</b>	<b>6360</b>
+ Annual revenue requirement revenues (ARt)	7382	7559
+ T factor (Tt) – true-ups relating to the AMI–Order in Council	17	14
+ B factor (Bt) – revenue under/over recovery approved	–50a	–1213b
<b>(A minus B) Under/over recovery of revenue for regulatory year</b>	<b>110</b>	<b>0</b>
<b>Annual metering charges unders and overs account</b>		
Nominal WACC t–2 (per cent)	5.00%	
Nominal WACC t–1 (per cent)	5.00%	
Opening balance	n/a	1213
Under/over recovery of revenue for regulatory year	1100	–1213b
Interest on under/over recovery for 2 regulatory years	113	n/a
<b>Closing balance</b>	<b>1213</b>	<b>0c</b>

Notes: (a) Approved annual metering charges revenue under/over recovery for regulatory year t–2.  
 (b) Amount should offset the closing balance for annual metering charges unders and overs account for year t–2.  
 (c) Powercor is expected to achieve a closing balance as close to zero as practicable in its annual metering charges unders and overs account in each forecast year in its annual pricing proposal during the 2016–20 regulatory control period.