



**FINAL DECISION**  
**Essential Energy**  
**Distribution Determination**

**2019 to 2024**

**Attachment 15**  
**Alternative control services**

April 2019

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Inquiries about this publication should be addressed to:

Australian Energy Regulator  
GPO Box 520  
Melbourne Vic 3001

Tel: 1300 585 165

Email: [AERInquiry@aer.gov.au](mailto:AERInquiry@aer.gov.au)

## Note

This attachment forms part of the AER's final decision on the distribution determination that will apply to Essential Energy for the 2019-2024 regulatory control period. It should be read with all other parts of the final decision.

As a number of issues were settled at the draft decision stage or required only minor updates, we have not prepared all attachments. The attachments have been numbered consistently with the equivalent attachments to our longer draft decision. In these circumstances, our draft decision reasons form part of this final decision.

The final decision includes the following attachments:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 4 – Regulatory depreciation

Attachment 7 – Corporate income tax

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

Attachment 12 – Classification of services

Attachment 13 – Control mechanisms

Attachment 15 – Alternative control services

Attachment 18 – Tariff structure statement

Attachment A – Negotiating framework

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## Shortened forms

Shortened form	Extended form
ACS	alternative control services
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Augex	augmentation expenditure
Capex	capital expenditure
CCP10	Consumer Challenge Panel, sub-panel 10
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIAM	demand management innovation allowance (mechanism)
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

Shortened form	Extended form
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
Repex	replacement expenditure
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
SCS	standard control services
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital
LED	Light Emitting Diode

## 15 Alternative control services

This attachment sets out our final decision on the prices Essential Energy (Essential) is allowed to charge customers for the provision of alternative control services (ancillary network services, public lighting and metering).

Alternative control services are customer specific or customer requested services and so the full cost of the service is attributed to a particular customer, or group of customers, benefiting from the service. We set service specific prices to provide a reasonable opportunity to the distributor to recover the efficient cost of each service from customers using that service. This is in contrast to standard control services, where costs are spread across the general network customer base.

### 15.1 Final decision

For ancillary network services, our final decision is to reject Essential's revised proposal. Specifically, we do not consider the proposed labour rates in Essential's revised proposal are efficient. Therefore, our final decision is to apply our own efficient labour rates for fee based and quoted services. Our final decision fees and labour rates are available in Appendix A.

Our final decision on Essential's revised public lighting proposal is to accept changes to their public lighting model in response to Orana Joint Organisation of Councils' (OROC) submission<sup>1</sup> on our draft decision and Essential's revised proposal. These changes are summarised below (section 15.2). However, we do not approve Essential's proposed 65.77 per cent for opex overheads, substituting it with 50.36 per cent, consistent with our draft decision. We have also updated the WACC, CPI and labour escalators in our models, to those applied to standard control services.

With respect to metering, Essential accepted our draft decision,<sup>2</sup> including our reduction of proposed metering opex by \$2.8 million. Therefore, our final decision only updates the inputs in Essential's metering model to reflect actual metering expenditure in 2017–18, our final decision WACC, and the most recent CPI escalation.

The detail of our final decision is set out in the following sections:

- 15.4 – Ancillary network services
- 15.5 – Public lighting
- 15.6 – Metering services.

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<sup>1</sup> OROC, *Submission on Essential Energy draft decision and revised proposal*, February 2019.

<sup>2</sup> Essential Energy, *Revised Regulatory Proposal 2019-24*, January 2019, p. 39.

## 15.2 Essential Energy's revised proposal

Essential's revised proposal largely accepted our draft decision on ancillary network services subject to what they characterised as 'minor changes' to recover efficient costs.<sup>3</sup> This included accepting that the same labour rate should apply to the administration and paralegal categories.

Essential's changes were primarily around setting labour rates above our efficient maximum, with consequential increases in fees above what we accepted in our draft decision. We discuss Essential's rationale for these changes in section 15.4.2.

Essential also proposed significant increases to security lighting fees following a review of their rates in response to a comment in our draft decision that their fees were low compared to Ausgrid and Endeavour.<sup>4</sup> Essential subsequently advised that its initial proposal fees were based on public lighting mechanisms, which are inappropriate for security lighting.<sup>5</sup> Essential therefore considered that the revised charges are less likely to lead to under-recovery of their efficient costs.<sup>6</sup> Essential also made changes to the descriptions of some fees.

In our draft decision on public lighting, we requested that Essential address the limitations of its initial public lighting proposal and model, and respond to stakeholder issues and our draft decision positively, as part of its revised proposal.<sup>7</sup>

In developing their revised proposal, Essential undertook a public lighting engagement program with key stakeholders to provide further reasoning and updated data on its public lighting expenditure. The engagement program brought significant positive outcomes to Essential's revised public lighting model.

Essential's revised proposal provided detailed justification on issues raised by OROC in response to Essential's initial public lighting proposal. Essential also addressed the limitations of its previous public lighting model by providing volume and revenue data, and implementing corrections to some inputs and assumptions.

In its revised proposal, Essential continued to propose component based pricing, with modifications resulting in a 7 per cent reduction on Essential's initial total public lighting revenue from maintenance charges. Refer to Table 15.1 below.

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<sup>3</sup> Essential Energy, *Revised regulatory proposal 2019-24*, January 2019, p.39.

<sup>4</sup> Essential Energy, *Revised regulatory proposal 2019-24*, January 2019, p.42. AER, *Draft Decision: Essential Energy distribution determination 2019 to 2024 - Attachment 15 - Alternative Control Services*, November 2018, p.15-16.

<sup>5</sup> Essential Energy, *Response to AER information request #044 – ACS – Security lighting*, 9 April 2019.

<sup>6</sup> Essential Energy, *Revised regulatory proposal 2019-24*, January 2019, p.42.

<sup>7</sup> AER, *Essential Energy 2019–24 Draft decision – Attachment 15 – Alternative control services*, November 2018, p. 15-24.



**Table 15.1 Revenue reduction from maintenance charges<sup>8</sup>**







	2019-20	2020-21	2021-22	2022-23	2023-24	NPV
Proposal	\$12,931,992	\$12,209,803	\$10,959,094	\$10,488,900	\$10,177,326	\$48,181,421
Revised Proposal	\$11,194,337	\$10,881,300	\$10,320,077	\$10,194,662	\$10,183,971	\$44,595,132
Reduction \$	\$1,737,655	\$1,328,503	\$639,017	\$294,238	-\$6,645	\$3,586,289
Reduction %	13%	11%	6%	3%	0%	7%

Table 15.2 summarises the numerous modifications Essential made in its revised public lighting proposal and accompanying model.

**Table 15.2 Changes made to public lighting model based on the AER’s draft decision**

No.	Issue description	Initial Proposal	Draft Decision	Revised Proposal	Reduction /Increase	Comments
1.	Spot Replacement Hours (man hours)	2.2	1.9	1.64		Essential reviewed average time for a spot repair and revised it to a rate lower than our draft decision.
2.	Other maintenance costs – materials (\$)	155,124	4063	31,275.76		Essential initially misallocated assets towards other maintenance costs. They have now proposed a smaller amount compared to their initial proposal, reflecting appropriate asset allocation towards other maintenance costs.
3	Other maintenance costs – labour (\$)	1,355315.80	1,170500.01	1,010326.32		The spot replacement rate of 1.64 man hours Essential proposed in their revised proposal further reduced the amount of other maintenance labour costs.
4	Additional material costs for bulk replacement (\$)	310,885.59	0	0		Essential accepted our draft decision that these costs were accounted for previously by mistake

<sup>8</sup> Essential Energy, *Revised regulatory proposal – Public lighting - Attachment 13.1*, p. 3 of 9.

No.	Issue description	Initial Proposal	Draft Decision	Revised Proposal	Reduction /Increase	Comments
						and removed it from their revised proposal
5	High failure rate for 70W HPS lamps (%)	13.2	10.88	10.88		Essential accepted our draft decision.
6.	Pole Design costs (\$)	518.88	0	448.56		Essential have removed Cat P <sup>9</sup> steel pole columns from pole design costs.
7	Night Patrol costs (\$/year)	360,860	360,860	195,468		Essential initially included other repair costs in night patrol costs. These have been modified in their revised proposal.
<b>Additional Issues raised by Essential on their revised proposal</b>						
8	Failure rates for Mercury Vapor and Metal Halide lamps	MV 250 W – 10.37% MV 400 W – 12.55% MH reactor controlled 1000W – 28.89%	MV 250 W – 5.01% MV 400 W – 5.01% MH reactor controlled 1000W – 5.65%	MV 250 W – 10.37% MV 400 W – 12.55% MH reactor controlled 1000W – 28.89%		Essential rejected our draft decision on the failure rates of these lamps. Essential considered that for a 4-year bulk replacement period, mercury vapour lamps witness a failure rate greater than 5 per cent. Reverting the failure rates back to their initial proposal, this change brings an increase in the maintenance costs for these lamps.
9	Recovery of non system overheads (%)	0	0	15.41%		Essential missed adding non system overheads in their original proposal. This omission increased the proposed overhead rate from 50.36 per cent to 65.77 per cent.
10	High bracket installation	Cat P road – 50.02	Cat P road – 50.02	Cat P road – 16.67		Essential reduced high bracket installation

<sup>9</sup> Cat P poles are poles located on Category Pedestrian minor street roads.

No.	Issue description	Initial Proposal	Draft Decision	Revised Proposal	Reduction /Increase	Comments
	costs (\$) – Installation requiring traffic control	Cat V – 400.15	Cat V – 400.15	Cat V – 133.38		costs as they are installed with the luminaire and not by a separate crew. Essential also removed additional traffic control costs from bracket installation, leading to reduced opex costs.

Finally, Essential’s initial public lighting proposal included a formula to calculate residual value that did not include cost of capital. Their revised proposal corrected the formula to recover cost of capital, so that the charging mechanism allowed for present value of future annuities.<sup>10</sup> The initial and revised formula are provided below.

Residual Value Charge formula in Essential’s initial proposal:

**Residual Value Charge = (Economic Life – Installed Life)x Rate**

Essential changed the Residual Value Charge formula in its revised proposal to:

$$\text{Residual Value Charge} = P \left[ \frac{1 - (1 + r)^{-n}}{r} \right] * (1 + n)$$

However, the revised formula proposed by Essential contains an error. Consequently, we have amended the formula. The correct formula that we approve for calculating Residual Value Charge is:

$$\text{Residual Value Charge} = P \left[ \frac{1 - (1 + r)^{-n}}{r} \right] * (1 + r)$$

Where:

P = Annual capital annuity charge for the year the asset is replaced

r = Pre-tax real WACC

n = Remaining life of asset at the end of the financial year it is being replaced.

For metering, Essential’s revised proposal accepted our draft decision.<sup>11</sup>

<sup>10</sup> Essential Energy, *Revised regulatory proposal – Attachment 13.1 Public lighting 2019-24*, January 2019, p. 9.

<sup>11</sup> Essential Energy, *Revised regulatory proposal 2019-24*, January 2019, p. 39.

## 15.3 Assessment approach

Our final decision assessment approach is the same as for our draft decision. In terms of labour rates, in our draft decision we indicated that while our consultant, Marsden Jacob, had provided maximum reasonable labour rates, we considered them efficient for our purposes.<sup>12</sup> We maintain this view for our final decision.

For Essential's revised public lighting proposal, we assessed the inputs and assumptions by reviewing stakeholder submissions and seeking feedback from Essential. We also engaged Motorbis Pty Ltd to conduct further analysis on price movements and tariff outcomes, based on changes in the inputs and proposed increase in overheads. We also assessed the validity of data and calculations provided in the public lighting model.

In reaching our final decision, we considered additional information submitted by Essential in its revised proposal, and had regard to stakeholder submissions.

## 15.4 Ancillary network services

Ancillary network services share the common characteristic of being non-routine services provided to individual customers as requested. Ancillary network services are either grouped as 'fee based' or 'quoted' services, depending on how the service price is determined.

We determine fee based service prices for the next regulatory control period as part of our determination, based on the cost inputs and the average time taken to perform each service. These services tend to be homogenous in nature and scope, and can be costed in advance of supply with reasonable certainty. By comparison, prices for quoted services are based on quantities of labour and materials, with the quantities dependent on a particular task. Prices for quoted services are determined at the time of a customer's enquiry and reflect the individual requirements of the customer's service request. For this reason, it is not possible to list prices for quoted services in our decision.

### 15.4.1 Ancillary network services—Final decision

#### X-Factors

Our final decision X-factors for ancillary network services are provided in Appendix A. They have changed marginally from the draft decision based on our revised labour escalation forecasts.

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<sup>12</sup> AER, *Draft Decision: Essential Energy distribution determination 2019 to 2024 - Attachment 15 - Alternative Control Services*, November 2018, p.15-14.

## Fee based and quoted services

Our final decision is to reject Essential’s proposed labour rates, both ordinary time and overtime, and to apply the maximum total labour rates determined in our draft decision (with minor changes for inflation and modelling corrections).<sup>13</sup> While we acknowledge that the Consumer Challenge Panel supported Essential’s revised labour rates,<sup>14</sup> in considering Essential’s revised proposal we remain unsatisfied that the increases proposed are prudent or efficient.

Our maximum total labour rates (inclusive of on-costs and overheads) are based on the recommended benchmark labour rates developed by our consultant, Marsden Jacob.<sup>15</sup> We consider that these total labour rates provide an efficient maximum that allows Essential a reasonable opportunity to recover their efficient costs. This is consistent with the approach we have taken for other network businesses.

Table 15.3 shows our final decision on maximum total labour rates for quoted services. These then flow into our final decision on prices for fee based services which are outlined in Appendix A. We have not revised prices where Essential accepted our draft decision, as shown in Essential’s ancillary network services model.<sup>16</sup>

**Table 15.3 AER final decision - maximum quoted service hourly rates (incl. on-costs and overheads, \$2019–20)**

Essential labour category	Essential's revised proposed total hourly rate	AER labour category <sup>1</sup>	AER final decision - maximum total hourly rate
Admin (NH)	114.85	Admin (NH)	<b>104.74</b>
Admin (AH)	200.54	Admin (AH)	<b>179.10</b>
Paralegal (NH)	114.85	Admin (NH)	<b>104.74</b>
Paralegal (AH)	200.54	Admin (AH)	<b>179.10</b>
Indoor tech (NH)	172.30	Technical specialist (NH)	<b>157.11</b>
Indoor tech (AH)	300.86	Technical specialist	<b>268.66</b>

<sup>13</sup> AER, *Draft Decision: Essential Energy distribution determination 2019 to 2024 - Attachment 15 - Alternative Control Services*, November 2018, pp. 15-9 to 15-11.

<sup>14</sup> CCP10, *Response to the Essential Energy revised regulatory proposal 2019-24 and AER draft determination*, February 2019, p. 33.

<sup>15</sup> Marsden Jacob Associates, *Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018.

<sup>16</sup> In *Essential Energy – Revised Proposal – 13.3 ANS Model – 20190108 – Public*, there were four fees where Essential’s model accepted our draft decision, but the fees shown were different to our draft decision. We have substituted our draft decision prices for these services. These services are: 8.6 Warning Markers (NEW) -Hire - Tiger Tails; Hire - Warning Markers; Purchase - Warning Markers and 13.8 Inspection Customer Installation (NEW) - Inspect Installation (customers) per CCEW.

Essential labour category	Essential's revised proposed total hourly rate	AER labour category <sup>1</sup> (AH)	AER final decision - maximum total hourly rate
Outdoor tech (NH)	208.47	Technical specialist outdoor (NH)	177.59
Outdoor tech (AH)	337.03	Technical specialist outdoor (AH)	303.69
Prof/Engineer (NH)	215.36	Engineer (NH)*	196.39
Prof/Engineer (AH)	376.04	Engineer (AH)*	335.83
Field worker (NH)	179.73	Field worker (NH)	151.41
Field worker (AH)	286.84	Field worker (AH)	258.92

Source: Essential Energy, *Revised regulatory proposal 2019-24*, January 2019, p.42; AER Analysis.

Note: AER final decision labour rates vary marginally to our draft decision due to a slight change in inflation; correct application of the overtime rate of 1.71 in our draft decision; and the application of the \$20 vehicle allowance to outdoor tech as recommended by Marsden Jacob.

NH = Normal Hours; AH = After Hours

\* This labour category was incorrectly identified as 'Senior Engineer' in our draft decision.

## Changes to fees and fee descriptions

Essential's revised proposal included wording changes to a number of their fee descriptions. They also included changes and corrections to how some fees would be calculated (i.e. from fee based to quoted, and vice-versa and different labour categories). For example, for 'Basic connection – technical review' Essential proposed shifting from a quoted to fixed fee in response to stakeholder feedback to provide greater clarity and consistency of prices. Our final decision is to accept these changes in our determination of labour rates and fees. Consistent with our final decision on service classification, we have not priced Essential's proposed 'Urgent restoration and security of supply following a fault on a customer's high voltage network'.<sup>17</sup>

## Security Lighting

Essential's revised proposal included significant increases to security lighting fees relative to our draft decision, as well as a proposed new fee for 'Nightwatch 1000W' lights.<sup>18</sup> Essential advised that their initial proposal security lighting fees were based on public lighting mechanisms, which are inappropriate, given the differences in the two services. This would have led to revenue decreasing from around \$1.27 million in

<sup>17</sup> See AER, *Overview of Final Decision for Essential Energy*, April 2019, section 5.1.

<sup>18</sup> Essential Energy, *Revised Proposal – 13.3 ANS Model – 20190108 - Public*.

2018–19 to \$0.35 million per annum for 2019–24.<sup>19</sup> The revised proposal fees lead to estimated revenue of \$1.12 million per annum.<sup>20</sup>

Our final decision is to accept the proposed security lighting prices, as we consider they provide Essential with a reasonable opportunity to recover its efficient costs, unlike the fees proposed in the initial proposal, which would have resulted in a significant under-recovery. This decision is consistent with the Consumer Challenge Panel’s submission.<sup>21</sup>

### **New ancillary network services**

Consistent with our draft decision, if new services arise during the 2019–24 regulatory control period with characteristics that are the same or essentially the same as other alternative control services,<sup>22</sup> we consider that they should be priced as a quoted service until the next regulatory period. Any new ancillary network service and pricing methodology should be disclosed through each distributor’s annual pricing process.

## **15.4.2 Ancillary network services—Reasons for final decision**

### **Fee based and quoted services – labour rates**

Essential proposed labour rates above the efficient maximum we determined in our draft decision. Our efficient maximum labour rates are based on recommendations from our consultant, Marsden Jacob, who developed benchmarked labour rates based on *Hays 2017 Energy sector and office support salary data*. As Essential proposed going above our maximum efficient rates, it is worth noting the following from the Marsden Jacob report:

“It is important to reiterate that the maximum hourly rates in Table 5 include the highest of the Hays salary rates for each labour category. While we consider these to be reasonable maximum rates, they are not necessarily efficient rates. In the next review, we recommend the AER consider whether it is appropriate to reduce the maximum rates to reflect more efficient benchmarks.”<sup>23</sup>

Our final decision is to adopt the maximum reasonable labour rates recommended by Marsden Jacob, and consider them efficient for the purposes of the 2019–24 regulatory

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<sup>19</sup> Our draft decision noted that Essential expected security lighting revenue of \$5,000 per annum. In response to our information requests, Essential has advised that this figure was incorrect.

<sup>20</sup> Essential Energy, *Response to AER information request #044 – ACS – Security lighting*, 9 April 2019.

<sup>21</sup> CCP10, *Response to the Essential Energy revised regulatory proposal 2019-24 and AER draft determination*, February 2019, p. 33.

<sup>22</sup> Service classification is set out in attachment 12 of our final decision. We generally classify services in groupings rather than individually. This obviates the need to classify services one-by-one and instead defines a service cluster, such that where a service is similar in nature it would require the same regulatory treatment. This provides distributors with flexibility to alter the exact specification (but not the nature) of a service during a regulatory control period.

<sup>23</sup> Marsden Jacob Associates, *Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018, p. 8.

control period. This is consistent with our draft decision. We expect that distributors should be able to operate within the rates Marsden Jacob set.

Essential's revised proposal suggested changing some of the component rates that make up the total labour rate, as well as the interaction between these components. This included applying our draft decision lower on-cost rate, but then increasing its overhead rate to our higher rate, while still applying its non-system capex mark-up. Marsden Jacob set a maximum labour rate that deliberately provided an upper bound to what we would consider efficient, inclusive of all overhead costs, without comparing different overhead sub-categories which are not consistent between businesses. For this reason, we do not consider it appropriate to alter components of the calculations or factors in this case. Our response to Essential's specific suggestions are in Table 15.4.

**Table 15.4 AER Final decision response to Essential's proposed changes to the labour rate build-up**

Essential's proposed change	Essential's reasoning	AER response
Fleet costs should be included in the direct costs to which overheads are applied	The AER's approach of excluding fleet costs from direct costs (which overheads are based on) is inconsistent with the AER's Cost Allocation Methodology (CAM), and will lead to the under-recovery of overheads.	<p>As noted in our draft decision, while the CAM provides a method of allocating costs, it does not relate to efficient costs.<sup>24</sup></p> <p>The maximum overhead rate of 61 per cent contained in our total labour rate, encapsulates all other costs outside of the base labour and on-costs, rather than specifically covering what each distributor defines as overheads.</p> <p>Our total labour rate provides an efficient maximum rate for Essential to recover all related costs.</p>
Additional staff on-costs are incurred for work outside normal hours	Payroll tax and workers compensation costs are directly related to work hours and cannot be avoided. On-costs for overtime work should be increased by 9.63 per cent to reflect this.	<p>In our draft decision we accepted Essential's proposed overtime escalator of 171 per cent as it fell within the range suggested by Marsden Jacob, but applied it to our labour rates. Our final decision is to continue this approach.</p> <p>This implicitly means that all of the components that make up the total hourly labour rate, including on-costs related to payroll tax and workers compensation, are also escalated by 171 per cent. Essential, therefore, has already been given the opportunity to recover additional on-costs related to work outside of normal hours.</p>
Recovery of non-system capex relevant to ANS should be included in ANS prices	<p>ANS labour costs should include the non-system capex rate, per the CAM, as they are not encompassed by the overhead rate.</p> <p>The AER accepted the recovery of non-system capex in the</p>	<p>The maximum overhead rate of 61 per cent contained in our total labour rate, encapsulates all other costs outside of the base labour and on-costs (including recovery of non-system capex), rather than specifically covering what each distributor defines as overheads.</p> <p>Our total labour rate provides an efficient maximum</p>

<sup>24</sup> AER, *Draft Decision: Essential Energy distribution determination 2019 to 2024 - Attachment 15 - Alternative Control Services*, November 2018, p. 15-15.



Essential's proposed change	Essential's reasoning	AER response
	metering space.	rate for Essential to recover all related costs.

Source: Essential Energy, *Revised regulatory proposal 2019-24*, January 2019, p. 39.

Essential's revised proposal noted that its changes to labour rates would avoid a 'dip' in some labour rates between 2018–19 and 2019–20 (real \$19–20). As discussed earlier, our final decision aims to provide a reasonable opportunity to recover efficient costs, and were based on recommendations by Marsden Jacob. In undertaking this work, Marsden Jacob did not just roll forward the labour rates it recommended for our 2015 decision. Instead, they based their recommended labour rates on more recent raw salary data (Hays 2017), as well as applying escalation factors to take into account low salary movements, inflation and labour escalators.<sup>25</sup>

### Security lighting

Our draft decision noted that Essential's proposed security lighting fees were lower than those proposed by Endeavour and Ausgrid. In response to our information request, Essential advised that its initial proposal was incorrectly based on public lighting mechanisms, whereas security lighting prices should use a different mechanism as:

- electricity consumption should be included
- capital costs should be recovered over a shorter period due to shorter contracts. Essential's revised proposal shifted to a 3-year capital recovery period from the 10-year period in its initial proposal
- security lighting repairs are unscheduled and completed 'on the spot'
- security lighting includes installation fees that can be waived depending on the contract length
- a margin of 20 per cent is applied to reflect that this service is provided in a contestable market.<sup>26</sup>

Our analysis shows that Essential's revised security lighting fees result in forecast total revenue below that in 2018–19, indicating that customers will not be faced with price shock. Further, the proposed security lighting fees are now broadly in line with those for Ausgrid and Endeavour, which we accepted in the respective draft decisions, noting that there are differences in installation costs, capital recovery and other inputs. For these reasons, our final decision is to accept the proposed security lighting prices.

<sup>25</sup> Marsden Jacob Associates, *Review of Alternative Control Services - Advice to Australian Energy Regulator - PUBLIC version*, September 2018, p. 4.

<sup>26</sup> Essential Energy, *Response to AER information request #044 – ACS – Security lighting*, 9 April 2019; Essential Energy, *Revised Proposal - 13.4 - 15.1\_Security Lights - 20190108 – Public*; Essential Energy, *17.7 ANS Model 15.1\_Security Lights (NEW) - 20180430 – Public*.

## 15.5 Public lighting

### 15.5.1 Public Lighting - Final decision

Our final decision is to approve Essential's revised public lighting proposal except for opex overheads, and minor modifications to WACC, CPI and labour escalators. The final decision provides a nominal price reduction between 1.5 to 4 per cent for capex charges and about 9.3 to 9.4 per cent in opex charges, when compared to the revised proposal.

### 15.5.2 Public lighting – Reasons for final decision

Orana Regional Organisation of Councils (OROC) and Riverina Eastern Regional Organisation of Councils (REROC) were highly complementary of Essential's active engagement with them in framing the revised proposal. This included Essential providing a clear proposal and working pricing model to stakeholders for consideration. This has resulted in improved customer confidence in the revised proposal.

Stakeholders acknowledged Essential's efforts on their submission to the revised proposal. In particular, REROC<sup>27</sup> commented that:

“the steps undertaken by Essential towards customer engagement has improved the transparency of its public lighting proposal, most importantly by providing clear proposals and unredacted, working pricing model for consideration by customers and their advisors for the first time.”<sup>28</sup>

While the above feedback and Essential's revised proposal demonstrate the extensive stakeholder engagement program undertaken, REROC and OROC have a number of outstanding concerns, as detailed in their submissions to the revised proposal.

The following sections include reasons for our final decision on Essential's revised public lighting proposal, and consideration of outstanding issues raised by stakeholders.

#### **Failures rates for traditional luminaires**

##### 70W HPS failure rate

Our draft decision modified failure rates for 70W HPS lamps from 13.2 per cent to 10.88 per cent, consistent with our final decision for the 2014–19 regulatory control period. Essential's revised proposal accepted our 10.88 per cent failure rate for 70W HPS lamps. However, Energy and Management Services (EMS), engaged by OROC,<sup>29</sup> considered that a failure rate of 10.88 per cent is high.

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<sup>27</sup> Riverina Eastern Regional Organisation of Councils (REROC) represents 41 councils in Southern NSW.

<sup>28</sup> REROC, *Submission on Essential Energy 2019-24 draft decision and revised proposal*, November 2018.

<sup>29</sup> Energy and Management Services, *Submission on behalf of OROC to Essential's revised proposal*.

EMS noted that 70W HPS lights deployed on Essential’s network are a mix of internal and external ignitor lamps, where the external ignitor lamps have a failure rate lower than 10.88 per cent. Essential shared inventory data with councils when developing their revised proposal, which showed a 70/30 split between external and internal ignitor lamps. EMS considered, based on manufacturer’s data on the weighted average survival curve for 70W HPS external ignitors lamp, which is around 5 per cent, that the failure rate for all 70W HPS lamps should be lower.

Essential submitted that the failure rates observed on the network are influenced by multiple factors. For instance, moving to a 4-year bulk replacement cycle causes delays in replacing some lamps, which influences the actual failure rate witnessed in the field. Essential added that lowering the failure rate for 70W HPS lamps, even the external ignitor type, will not enable them to recover the efficient costs incurred for maintenance of these lamps.

We have reviewed the material before us, and acknowledge that our draft decision failure rate of 10.88 per cent may be on the high side. Essential accepted that they cannot continue to deploy a luminaire with a high failure rate, and must instead replace it with better performing technology. We understand that Essential plans on replacing a large volume of 70W HPS lamps with LEDs in the coming regulatory period. LEDs have lower maintenance costs, high reliability, low failure rates and efficient performance through the economic life of the lamps. Further, LEDs being energy efficient bring savings to councils choosing to deploy them in their respective areas. The diminishing volumes of the traditional HPS lamps, provides assurance that the application of the disputed failure rate would not be material. Councils will start to see cost savings as the proportion of LEDs grows through Essential’s public lighting network. It is on this basis that our final decision is to maintain our draft decision of a 10.88 per cent failure rate, which Essential accepted in their revised proposal, given a large quantity of 70W HPS lamps will be replaced with LEDs in the coming regulatory period.

Failure rate for 250W, 400W Mercury Vapour lamps and 1000W reactor controlled metal halide lamps

Essential rejected our draft decision to change the failure rate for 250W and 400W mercury vapour lamps and 1000W metal halide lamps to 5.01 per cent, 5.01 per cent and 5.65 per cent respectively. Essential submitted that there is a distinction in failure rates observed between high and low wattage lamps and reverted the failure rates to those proposed in their initial proposal (see Table 15.5).

**Table 15.5 250W, 400W and 1000 W failure rates**

Lamp type	Initial Proposal	Draft decision	Revised Proposal & AER final decision
250W Mercury Vapour	10.37%	5.01%	10.37%
400W Mercury Vapour	12.55%	5.01%	12.55%
1000W reactor controlled Metal Halide	28.89%	5.65%	28.89%

We acknowledge that larger lights with high wattage would observe a higher failure rate when compared to lower wattage street lamps. However, we do not consider it prudent or efficient to install or replace luminaires with technology that carry failure rates as high as those proposed by Essential. The lamp types in issue<sup>30</sup> should be replaced by more efficient performing luminaires, so that consumers are not being charged high maintenance costs for inefficient technology.

We note that the stock levels for mercury vapour lamps is reducing due to the Minamata Convention.<sup>31</sup> With advances in technology, Essential has already projected a reduction in the volumes of these lamps in their revised proposal. This can be seen in Table 15.6, extracted from Essential’s revised public lighting model.<sup>32</sup>

**Table 15-6 250W, 400W and 1000 W - Diminishing volumes**

Lamp type	Cumulative Population – Revised Proposal				
	FY 20	FY 21	FY22	FY23	FY24
250W Mercury Vapour	351	218	102	92	76
400W Mercury Vapour	410	254	118	107	89
1000W reactor controlled Metal Halide	31	29	27	22	16

It can be seen that these are larger lights fitted in low volumes on Essential’s network. The impact on public lighting charges is lessened given the diminishing volumes of these lamps. In our consultation with Essential, we stated that clear plans to replace poor performing technology must occur in the coming regulatory period. Following assurances from Essential, that it will replace 70W HPS lights with better performing technology during the 2019–24 regulatory control period, we have accepted their revised proposed failure rates for the coming regulatory period as detailed in Table 15.5 above.

**Other maintenance costs – non-PE cell and non-lamp related labour costs**

Essential proposed applying an ‘other maintenance’ failure rate of 4.77 per cent per annum across all luminaire types. These costs relate to service wires, fuses, visors, brackets and other luminaire mechanical issues. OROC and REROC disagreed with Essential’s proposal to average the other maintenance costs across all luminaire types. Table 15.7 below summarises key arguments from both parties.

<sup>30</sup> 250W, 400W Mercury Vapour lamps and 1000W reactor controlled metal halide lamps.  
<sup>31</sup> International treaty to reduce effect of mercury and protect human health, environment which calls for banning production of new mercury vapour lamps from 2020.  
<sup>32</sup> Attachment 13.2, Essential revised proposal, Public lighting model, Sheet “opex tariff and Revenue summary”

**Table 15.7 Key points regarding derivation of other maintenance costs**

EMS's submission <sup>33</sup>	Essential's response <sup>34</sup>
<p>The 'other maintenance' failure rate being applied across modern LED technology as well as that of a traditional luminaire is not appropriate. LEDs have a different economic life and averaging other maintenance costs across all luminaire types is not a cost reflective approach. This discourages the uptake of LEDs. EMS recommended that we apply a 2 per cent failure rate instead of 4.77 per cent.</p>	<p>Other maintenance costs is related to materials, and is not technology specific, so changing the rate or how it is applied would not result in a more cost reflective approach. The sources of faults are underground cable supply failures, damage to visors, supply issues due to fuse failures, which are common to all assets. Decreasing charges for LED and increasing for traditional luminaires can cause cost recovery issues with higher uptake of LEDs over time.</p>

We have considered the parties' submissions and understand that appropriate data on failure rates driving these other maintenance costs for LEDs versus traditional luminaires is currently not available. We also note Essential's concerns that disparity in the charging mechanism may lead to cost recovery issues. It is important to determine whether the source of faults driving these costs are technology dependent or not. Historic data series are required to support this theory. We also note that while EMS has proposed a 2 per cent failure rate for LED luminaires, they have not substantiated why they consider this is a reasonable failure rate. For these reasons, we accept Essential's revised proposal with respect to 'other maintenance' with a common failure rate of 4.77 per cent for all luminaire types for the 2019–24 regulatory control period. Further, we recommend Essential record other maintenance costs split by technology type over the coming period.

### **Safety Programs – Removal of stranded assets**

Essential's revised proposal included costs to remove a small proportion of their dedicated public lighting control wires and choke boxes, which are no longer in use, and pose a safety hazard. EMS agreed that these stranded assets pose a safety risk, however they do not support Essential's proposal to charge public lighting customers for removal of these assets. Instead, EMS argued that as these assets have been included in the standard control RAB, the cost of removing these assets should be borne by the broader customer base.

We consulted with Essential to understand the impact on public lighting customers financing the removal of high risk control wires and choke boxes. During our discussion, Essential advised that they would forego the cost of removing choke boxes as the amount is immaterial. However, the cost of removing control wires is approximately \$300,000 over 5 years. Essential stated that though the control wires have not been part of the public lighting RAB, their function was directly related to

<sup>33</sup> Energy and Management Services, *Submission on behalf of OROC, Issue 4.8*, p. 11 and REROC *Submission on AER draft decision and Essential Energy revised proposal, issue 2*, p. 3

<sup>34</sup> Essential response to REROC and OROC submission, email received on 21 February 2019, p. 4.

controlling public lights until the introduction of extensive PE cell use. Consequently, Essential considered control wires to be dedicated public lighting assets, and proposed recovering the cost of removal through SLUOS charges.

We consider, based on the function of control wires, that they were used exclusively as controls in the public lighting network. We consider that the benefits of removing this safety risk outweigh the additional cost impact when spread across the five year regulatory control period.

REROC noted that Ausgrid proposed a similar program to remove obsolete control wires as part of their standard control network distribution costs for the 2019–24 regulatory control period. However, there are significant differences in the programs and associated costs proposed by Essential and Ausgrid. While Essential proposed their removal program to cost \$300,000 over a five year period, Ausgrid's proposed costs are significantly higher.

Further, the cost recovery approach differs, as Ausgrid's program forms part of capex costs with a 40 year recovery period under a revenue cap. Essential's program is relatively small scale, with a price cap and forms part of opex charges. Our final decision on Ausgrid's proposal notes concerns over Ausgrid recovering the costs of control wire removal as part of capital costs. While our final decision approved Ausgrid's total revised repex forecast, we have not specified approval on their low voltage circuit reconfiguration program that involves removal of control wires.

Essential further submitted that they have undertaken a risk based approach to remove all control wires identified as high risk from their public lighting network. They added that currently, they do not anticipate additional costs for removing the remaining control wires in future regulatory periods. Moreover, Essential plans to conduct the control wire removal in conjunction with bulk lamp replacement in a cost effective manner. While we approve the current program for the above reasons, it does not set a precedent for approving similar programs in future regulatory periods.

### **Pole Design Costs**

Essential revised their pole design costs from \$518.88 to \$448.56 per pole in their revised proposal, stating that pole design requires significant work, often involving negotiations with councils, hence they require a cost recovery mechanism. Further, Essential removed the pole design charge for Category P steel columns in their revised proposal.

EMS's submission cited two examples where pole design has been provided by Essential, while making the following points:

- The cost of deemed non-contestable work, such as pole design, should be recovered by the proponent that has necessitated the need for works.
- Recovery of pole design costs, if incurred by Essential, should be made through ancillary charges, similar to when councils fund the new installations.

While we agree with EMS that there are alternative approaches available to recover the cost of pole designs, we consider these are genuine costs incurred by Essential.

We consider Essential should explore alternative ways of recovering pole design costs by assessing bill impacts on councils. To understand the impact of total pole design costs recovered by Essential annually, we requested Essential provide us with number of poles that attract design costs. According to Essential's data, Category V poles, decorative poles and few Category P timber poles attract pole design costs. The total revenue impact from pole design costs is \$27,792.70 per annum. Table 15.8 provides volumes of timber and steel poles that attract pole design costs.

**Table 15.8 Volumes of poles that attract pole design costs<sup>35</sup>**

Poles	Volumes contributing to pole design	Total volume of poles	Percentage	Annual pole design charge
<b>Timber Poles</b>				
9.5m_Timber_Pole	283	3674	8%	
11m_Timber_Pole	313	4261	7%	
12.5m_Timber_Pole	79	1142	7%	
14m_Timber_Pole	13	189	7%	
15.5m_Timber_Pole	2	196	1%	
Total (A)				<b>\$16,061.11</b>
<b>Steel Poles</b>				
Cat V (B)	504	13039	4%	<b>\$11,731.59</b>
Cat P <sup>36</sup>	1847	44140	4%	<b>\$42,992.56</b>
Total (A+ B)	3041	66641		<b>\$27,792.70</b>

We consider that the overall impact of pole design costs (\$27,792) is not significant when compared to overall public lighting revenues. While there are alternative approaches for recovery of design works for new pole installations, our assessment, based on the material before us, leads us to accept the revised pole design fees Essential proposed.

#### **Inclusion of non-system overheads**

Essential proposed a cap of 42.05 per cent for corporate overheads and 50.36 per cent for opex overheads in their initial proposal. These overheads are high when compared to other distributors. However, considering Essential's proposed price reduction in public lighting charges, we accepted Essential's proposed overhead rates in our draft decision. In their revised proposal, Essential increased the proposed opex overheads

<sup>35</sup> Data received from Essential, 19<sup>th</sup> March 2019 via email.

<sup>36</sup> Category P steel column costs were removed by Essential on their revised proposal, so this amount is not being added to the total of annual charge being passed on to the customers.

to 65.77 per cent to account for non-system overheads missed in their initial proposal due to a modelling error.

In our 2014–19 draft decision, we revised Essential’s corporate overhead rate to be in line with the Victorian distributors by reducing the proposed 41 per cent cap to 25 per cent. In our 2014–19 final determination, we accepted Essential’s proposed corporate overheads of 35 per cent. While benchmarking overheads is a complex exercise, with differences in direct and indirect cost splits, Essential’s proposed opex overhead rate of 65 per cent is not reasonable. Stakeholders (OROC, EMS and REROC) have raised concerns about the increase in opex overheads, stating that the overhead rate applied by Essential compares poorly with other distributors. EMS noted that significant increases in overheads above the already high starting point of 50.36 per cent has reduced the savings on the current inventory basis to approximately 13.4 per cent. EMS calculated that this means on every \$1000 spent on direct costs, Essential is proposing that they have \$657.70 of indirect costs. Essential responded that their network varies in geographical and density terms, when compared to other networks.

We have considered Essential’s response to stakeholder concerns with regards to the proposed opex overhead rate. We understand that overhead composition may be different for each network business. We consider that 50.36 per cent overhead rate approved on our draft decision, although high when compared to other distributors, allows Essential a reasonable opportunity to recover their efficient costs of providing public lighting services. While Essential is seeking an additional 15 per cent increase due to modelling error, we do not consider Essential has provided a sufficient basis for the increase.

The overhead rate of 50.36 per cent still offers price reductions to customers, while providing Essential with scope to improve performance to achieve a lower overhead rate in future regulatory periods. Accordingly, we have maintained our draft decision with the opex overhead rate set at 50.36 per cent for the 2019–24 regulatory control period. The 50.36 per cent overhead rate lowers forecast revenue by approximately \$1 million per annum across the period. Overall, this reduces Essential’s total public lighting revenue from around \$52 million to \$47 million for the 2019–24 regulatory period.

### **Additional Issues**

In addition to the above, REROC and EMS (representing OROC) raised concerns about:

- benchmarking of LED prices
- pricing for smart controls
- high bracket costs
- review of contracts for bulk lamp replacement
- LED maintenance only tariff rates.



Some of these issues draw comparisons on LED prices, LED maintenance tariffs and bracket prices with other distributors. In terms of LED lamps, we consider that the cost structure is likely to improve with time. As distributors gain more knowledge on actual operational behaviour, including an LED failure profile, it will likely put downward pressure on SLUOS charges. Overhead rates are also a contributing factor that significantly influence Essential's public lighting charges in comparison to other distributors.

With regards to smart controls and review of bulk lamp replacement contracts, we understand that stakeholders have shown interest in gaining a better understanding on pricing and working with Essential to evolve mutually beneficial solutions. These initiatives can be progressed beyond the reset framework. We support and encourage Essential to collaborate with interested councils on developing an offer for smart controls. We consider customer engagement needs to be an ongoing process, and not limited to regulatory determination.

We have largely accepted Essential's revised proposal, except for the opex overhead rate. With updated WACC, CPI and labour escalation rates, the final decision reduces public lighting revenue for 2019–24 when compared to the revised proposal by \$4.9 million.

Our final decision prices<sup>37</sup> for each light type are set out in Appendix B.

## 15.6 Metering services

Metering assets are used to measure electrical energy flows at a point in the network to record consumption data for billing purposes. We are responsible for the economic regulation of type 5 to 7 metering services provided by Essential. Essential's type 5 and 6 metering services are classified as alternative control services, while type 7 metering services are classified as standard control services.<sup>38</sup>

Since the introduction of the Power of Choice reforms on 1 December 2017, Essential is no longer permitted to install or replace type 5 and 6 meters. Therefore, our final decision settles the prices for type 5 and 6 metering services Essential provides to support the continued operation of existing type 5 and 6 meters.

### 15.6.1 Metering—Final decision

Essential accepted our draft decision,<sup>39</sup> including our reduction of proposed metering operating expenditure by \$2.8 million. Therefore, our final decision only updates the inputs in Essential's metering model to reflect actual metering expenditure in 2017–18,

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<sup>37</sup> The Appendix B has 2019-20 prices, we have set X factors to zero for our final decision, hence the prices shall increase only by CPI in the subsequent years.

<sup>38</sup> AER, *Draft decision – Essential Energy distribution determination 2019 to 2024 – Attachment 12 classification of services*, November 2018, p. 6.

<sup>39</sup> Essential Energy, *Revised regulatory proposal 2019-24*, January 2019, p. 39.

our final decision weighted average cost of capital, and the most recent CPI escalation. The final decision metering prices, effective for the first year of the 2019–24 regulatory period, resulting from these input updates, are set out in Appendix C.

# A Ancillary network services prices

**Table 15.9 Fee based ancillary network service prices for 2019–20, AER final decision (\$2019–20)**

	Fee Category	Fee Type	AER Final Decision 2019–20
<b>ANCILLARY NETWORK SERVICES FEES</b>			
<b>1. Design Related Service</b>			
<b>1.1 Design Information</b>			
Underground Urban Residential Subdivision (Vacant Lots) - Up to 5 Lots	Per Job	Fee	\$471.33
Underground Urban Residential Subdivision (Vacant Lots) - 6 to 10 Lots	Per Job	Fee	\$628.44
Underground Urban Residential Subdivision (Vacant Lots) - 11 to 40 Lots	Per Job	Fee	\$1,099.77
Underground Urban Residential Subdivision (Vacant Lots) - Over 40 Lots	Per Job	Fee	\$1,413.99
Rural Overhead Subdivisions and Rural Extensions - All	Per Job	Hourly Rate	\$157.11
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All	Per Lot	Hourly Rate	\$157.11
Commercial / Industrial Developments and Sub Transmission - All	Per Job	Hourly Rate	\$157.11
Asset Relocations or Street lighting (Not forming part of other categories) - All	Per Job	Hourly Rate	\$157.11
<b>1.2 Design Certification</b>			
Underground Urban Residential Subdivision (Vacant Lots) - Up to 5 Lots	Per Job	Fee	\$314.22
Underground Urban Residential Subdivision (Vacant Lots) - 6 to 10 Lots	Per Job	Fee	\$471.33
Underground Urban Residential Subdivision (Vacant Lots) - 11 to 40 Lots	Per Job	Fee	\$785.55
Underground Urban Residential Subdivision (Vacant Lots) - Over 40 Lots	Per Job	Fee	\$942.66
Rural Overhead Subdivisions and Rural Extensions - Up to 5 Poles	Per Job	Fee	\$314.22
Rural Overhead Subdivisions and Rural Extensions - 6 to 10 Poles	Per Job	Fee	\$471.33
Rural Overhead Subdivisions and Rural Extensions - 11 or More Poles	Per Job	Fee	\$785.55
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Up to 10 Lots	Per Job	Fee	\$471.33
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - 11 to 40 Lots	Per Job	Fee	\$628.44
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Over 40 Lots	Per Job	Fee	\$942.66
Commercial / Industrial Developments and Sub Transmission - All	Per Job	Hourly	\$157.11

	Fee Category	Fee Type	AER Final Decision 2019–20
		Rate	
Asset Relocations or Street lighting (Not forming part of other categories) - All	Per Job	Hourly Rate	\$157.11
<b>1.3 Design Re-checking</b>			
Underground Urban Residential Subdivision (Vacant Lots) - All	Per Job	Hourly Rate	\$157.11
Rural Overhead Subdivisions and Rural Extensions - All	Per Job	Hourly Rate	\$157.11
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All	Per Job	Hourly Rate	\$157.11
Commercial / Industrial Developments and Sub Transmission - All	Per Job	Hourly Rate	\$157.11
Asset Relocations or Street lighting (Not forming part of other categories) - All	Per Job	Hourly Rate	\$157.11
<b>1.4 Design Re-certification (NEW)</b>			
Underground Urban Residential Subdivision (Vacant Lots) - All	Per Job	Hourly Rate	\$157.11
Rural Overhead Subdivisions and Rural Extensions - All	Per Job	Hourly Rate	\$157.11
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All	Per Job	Hourly Rate	\$157.11
Commercial / Industrial Developments and Sub Transmission - All	Per Job	Hourly Rate	\$157.11
Asset Relocations or Street lighting (Not forming part of other categories) - All	Per Job	Hourly Rate	\$157.11
<b>1.5 Administration</b>			
Underground Urban Residential Subdivision (Vacant Lots) - Up to 5 Lots	Per Job	Fee	\$418.96
Underground Urban Residential Subdivision (Vacant Lots) - 6 to 10 Lots	Per Job	Fee	\$523.70
Underground Urban Residential Subdivision (Vacant Lots) - 11 to 40 Lots	Per Job	Fee	\$733.18
Underground Urban Residential Subdivision (Vacant Lots) - Over 40 Lots	Per Job	Fee	\$837.92
Rural Overhead Subdivisions and Rural Extensions - Up to 5 Poles	Per Job	Fee	\$418.96
Rural Overhead Subdivisions and Rural Extensions - 6 to 10 Poles	Per Job	Fee	\$523.70
Rural Overhead Subdivisions and Rural Extensions - 11 or More Poles	Per Job	Fee	\$942.66
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All	Per Job	Hourly Rate	\$104.74
Commercial / Industrial Developments and Sub Transmission - All	Per Job	Hourly Rate	\$104.74

	Fee Category	Fee Type	AER Final Decision 2019–20
Asset Relocations or Street lighting (Not forming part of other categories) - All	Per Job	Hourly Rate	\$104.74
<b>1.6 Non - Standard Design Approval (NEW)</b>			
Underground Urban Residential Subdivision (Vacant Lots) - All	Per Job	Hourly rate	\$196.39
Rural Overhead Subdivisions and Rural Extensions - All	Per Job	Hourly Rate	\$196.39
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All	Per Job	Hourly Rate	\$196.39
Commercial / Industrial Developments and Sub Transmission - All	Per Job	Hourly Rate	\$196.39
Asset Relocations or Street lighting (Not forming part of other categories) - All	Per Job	Hourly Rate	\$196.39
<b>2. Connection Application Related Services</b>			
<b>2.1 Connections Customer Interface co-ordination</b>			
Customer Interface co-ordination for contestable works - Basic	Per Job	Hourly Rate	\$177.59
Customer Interface co-ordination for contestable works - Complex	Per Job	Hourly Rate	\$196.39
<b>2.2 Preliminary Enquiry Service</b>			
Preliminary Enquiry Service - Basic	Per Enquiry	Hourly Rate	\$177.59
Preliminary Enquiry Service - Complex	Per Enquiry	Hourly Rate	\$196.39
<b>2.3 Connection / relocation process facilitation</b>			
Connection / relocation process facilitation - All	Per Hour	Hourly Rate	\$157.11
<b>2.4 Connection Offer Service</b>			
Connection Offer Service - Basic	Per Offer	Fee	\$26.18
Connection Offer Service - Basic - Technical Review	Per Offer	Fee	\$117.83
Connection Offer Service - Standard	Per Offer	Fee	\$157.11
<b>2.5 Planning, Protection and Power Quality Studies</b>			
Planning / Protection Studies and Analysis	Per Job	Hourly Rate	\$196.39
Power quality studies	Per Job	Hourly Rate	\$177.59
<b>2.6 Additional Services Requested by ASP / Connection Applicant (NEW)</b>			

	Fee Category	Fee Type	AER Final Decision 2019–20
Additional Services Requested by ASP / Connection Applicant	Per Hour	Hourly Rate	\$177.59
<b>2.7 Data Gathering Fee - Failure to Provide Documentation (NEW)</b>			
Data Gathering Fee - Failure to Provide Documentation	Per Job	Hourly Rate	\$177.59
<b>2.8 Pioneer Scheme Administration (NEW)</b>			
Pioneer Scheme Establishment	Per Job	Fee	\$104.74
Pioneer Scheme - New Connection	Per Job	Fee	\$104.74
<b>3. Contestable Network Commissioning &amp; Decommissioning</b>			
<b>3.1 Substation Commissioning</b>			
Underground Urban Residential Subdivision (Vacant Lots) - All (NT)	Per Substation	Fee	\$1,525.54
Underground Urban Residential Subdivision (Vacant Lots) - All (OT)	Per Substation	Fee	\$2,385.57
Rural Overhead Subdivisions and Rural Extensions - All (NT)	Per Substation	Fee	\$1,525.54
Rural Overhead Subdivisions and Rural Extensions - All (OT)	Per Substation	Fee	\$2,385.57
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All (NT)	Per Substation	Fee	\$1,525.54
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All (OT)	Per Substation	Fee	\$2,385.57
Commercial / Industrial Developments and Sub Transmission - All (NT)	Per Substation	Fee	\$1,525.54
Commercial / Industrial Developments and Sub Transmission - All (OT)	Per Substation	Fee	\$2,385.57
Asset Relocations or Street lighting (Not forming part of other categories) - All (NT)	Per Substation	Fee	\$1,525.54
Asset Relocations or Street lighting (Not forming part of other categories) - All (OT)	Per Substation	Fee	\$2,385.57
<b>3.2 Testing &amp; Commissioning of Streetlights / Mains / Cables / UG Pillars (NEW)</b>			
Underground / Overhead Streetlights (NT)	Per S/L	Fee	\$75.71
Underground / Overhead Streetlights (OT)	Per S/L	Fee	\$129.46
Underground / Overhead Distribution Mains (NT)	Per Job	Fee	\$1,847.15
Underground / Overhead Distribution Mains (OT)	Per Job	Fee	\$2,814.69
Underground Pillar / Pits (NT)	Per Pit / Pillar	Fee	\$75.71
Underground Pillar / Pits (OT)	Per Pit / Pillar	Fee	\$129.46
Underground Cable Test (NT)	Per Job	Fee	\$658.65

	Fee Category	Fee Type	AER Final Decision 2019–20
Underground Cable Test (OT)	Per Job	Fee	\$1,126.30
<b>3.3 Redundant Material Coordination (NEW)</b>			
Redundant Material Co-ordination	Per Occasion	Fee	\$52.37
<b>3.4 Commissioning - Other Network Equipment (NEW)</b>			
Recloser (NT)	Per Recloser	Fee	\$2,322.44
Recloser (OT)	Per Recloser	Fee	\$2,952.90
Regulator (NT)	Per Regulator Site	Fee	\$2,657.15
Regulator (OT)	Per Regulator Site	Fee	\$3,413.70
Smart Switch (NT)	Per Switch	Fee	\$855.20
Smart Switch (OT)	Per Switch	Fee	\$1,220.86
Other - Specialised equipment (NT)	Per Job	Hourly Rate	\$177.59
Other - Specialised equipment (OT)	Per Job	Hourly Rate	\$303.69
<b>4. Access Permits, Oversight &amp; Facilitation</b>			
<b>4.1 Access Permits</b>			
Underground Urban Residential Subdivision (Vacant Lots) - All (NT)	Per Job	Fee	\$2,531.37
Underground Urban Residential Subdivision (Vacant Lots) - All (OT)	Per Job	Fee	\$3,606.41
Rural Overhead Subdivisions and Rural Extensions - All (NT)	Per Job	Fee	\$2,531.37
Rural Overhead Subdivisions and Rural Extensions - All (OT)	Per Job	Fee	\$3,606.41
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All (NT)	Per Job	Fee	\$2,531.37
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - All (OT)	Per Job	Fee	\$3,606.41
Commercial / Industrial Developments and Sub Transmission - All (NT)	Per Job	Fee	\$2,531.37
Commercial / Industrial Developments and Sub Transmission - All (OT)	Per Job	Fee	\$3,606.41
Asset Relocations or Street lighting (Not forming part of other categories) - All (NT)	Per Job	Fee	\$2,531.37
Asset Relocations or Street lighting (Not forming part of other categories) - All (OT)	Per Job	Fee	\$3,606.41
Access Permit Rescheduled (Outage Cancellation) - All	Per Job	Fee	\$624.45
<b>4.2 Access to Network Assets (Standby)</b>			
Access to Network Assets (Standby)	Per Job	Hourly	\$177.59

	Fee Category	Fee Type	AER Final Decision 2019–20 Rate
<b>4.3 Sale of Approved Materials / Equipment to ASPs (NEW) (re-classified to alternative control)</b>			
Sale of Approved Materials / Equipment to ASP For these jobs, materials & other costs are charged at purchase price + %	Per Order	Fee	26.86%
<b>4.4 Services to supply and connect temporary supply to one or more customers</b>			
Connect & disconnect MG to OH/UG mains, switchboard or kiosk (NT)	Per Job	Fee	\$2,058.34
Connect & disconnect MG to OH/UG mains, switchboard or kiosk (OT)	Per Job	Fee	\$2,810.87
Install & remove HV LL Links or bonds (NT)	Per Job	Fee	\$3,115.39
Install & remove HV LL Links or bonds (OT)	Per Job	Fee	\$4,781.71
Break & remake LV bonds (NT)	Per Job	Fee	\$2,585.44
Break & remake LV bonds (OT)	Per Job	Fee	\$3,983.00
Generator Hire - Invoice cost + %	Per Job	Fee	55.89%
<b>4.5 Rectification of contestable work (ASP Installed) (NEW)</b>			
Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Item	Hourly rate	\$196.39
Materials	Per Job	Fee	71.96%
Contractor	Per Job	Fee	55.89%
For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %			
<b>5. Notices of arrangement and completion notices</b>			
<b>5.1 Notice of Arrangement</b>			
Notice of Arrangement	Per Job	Fee	\$340.40
<b>5.2 Request for Early Notice of Arrangement (NEW)</b>			
Request for Early Notice of Arrangement	Per Job	Hourly Rate	\$157.11



	Fee Category	Fee Type	AER Final Decision 2019–20
<b>5.3 Completion Notice - Other than Notice of Arrangement (NEW)</b>			
Completion Notice - Other than Notice of Arrangement	Per Job	Hourly Rate	\$157.11
<b>6. Network Related Property</b>			
<b>6.1 Conveyancing Information</b>			
Supply of conveyancing information - Per Desk Inquiry	Per Enquiry	Fee	\$52.37
<b>6.2 Easement Processing - Conveyancing Review (NEW)</b>			
Easement Processing - Conveyancing Services	Per Job	Hourly Rate	\$104.74
Easement Processing - Contract Legal Services	Per Job	Fee	55.89%
For these jobs, legal contractor costs are charged at invoice cost + %			
<b>6.3 Services Involved in Obtaining Deeds of Agreement (DOA)</b>			
Services Involved in Obtaining Deeds of Agreement (DOA)	Per DOA	Hourly Rate	\$196.39
<b>6.4 Development Applications and Encroachment Processing (NEW)</b>			
Development Applications and Encroachment Processing	Per Application	Hourly Rate	\$104.74
<b>6.5 Crown Land Acquisition (NEW)</b>			
Crown Land Acquisition - Legal Services	Per Job	Hourly Rate	\$196.39
Crown Land Acquisition - Contract Legal Services	Per Job	Fee	55.89%
For these jobs, legal contractor costs are charged at invoice cost + %			
<b>6.6 Legal Review Services - customer funded works (NEW)</b>			
Legal Review Services - Customer Funder Works	Per Job	Hourly Rate	\$196.39
Legal Review Services - Customer Funder Works - Contract Legal Services	Per Job	Fee	55.89%
For these jobs, legal contractor costs are charged at invoice cost + %			
<b>7. Site Establishment Services</b>			
<b>7.1 Site Establishment</b>			
Site Establishment - Per NMI	Per NMI	Fee	\$78.55
<b>8. Network Safety Services</b>			
<b>8.1 Work near electrical assets - De energisation of Mains (NEW)</b>			
Safe Approach Clearances - De energisation of Mains (NT)	Per Job	Fee	\$1,933.11

	Fee Category	Fee Type	AER Final Decision 2019–20
Safe Approach Clearances - De energisation of Mains (OT)	Per Job	Fee	\$2,793.14
<b>8.2 Work near electrical assets - Disable Auto Reclose (NEW)</b>			
Safe Approach Clearances - Disable Auto Reclose (NT)	Per Job	Fee	\$673.06
Safe Approach Clearances - Disable Auto Reclose (OT)	Per Job	Fee	\$824.37
<b>8.3 Provision of Traffic Control by the DSNP (NEW)</b>			
Provision of Traffic Control by the DSNP	Per Job	Fee	55.89%
For these jobs, contractor costs are charged at price + %			
<b>8.4 Site Safety Supervision (NEW)</b>			
Site Safety Supervision	Per Job	Hourly Rate	\$151.41
<b>8.5 Provision of construction work by DSNP (NEW)</b>			
Provision of construction work by DSNP	Per Job	Hourly Rate	\$151.41
Materials (Cost + %)	Per Job	Fee	71.96%
<b>8.6 Warning Markers (NEW)</b>			
Design	Per Job	Hourly Rate	\$157.11
Installation	Per Job	Hourly Rate	\$151.41
Hire - Tiger Tails	Per Tiger Tail	Fee	\$2.42
Hire - Warning Markers	Per Marker	Fee	\$2.85
Purchase - Warning Markers	Per Marker	Fee	\$180.11
Materials	Per Item	Fee	71.96%
Contractor	Per Job	Fee	55.89%
For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %			
<b>8.7 High load escorts</b>			
High load escorts	Per Job	Hourly Rate	\$177.59
<b>9. Rectification Works to Maintain Network Safety</b>			
<b>9.1 Vegetation Clearing of Private Trees Encroaching DNSP Assets (NEW)</b>			
Vegetation Clearing of Private Trees Encroaching DNSP Assets	Per Job	Fee	55.89%

	Fee Category	Fee Type	AER Final Decision 2019–20
For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %			
<b>9.2 Inspection of Private Trees Encroaching DSNP Assets (NEW)</b>			
Inspection of Private Trees Encroaching DSNP Assets	Per Job	Hourly Rate	\$177.59
<b>9.3 Vegetation Clearing of Private Trees Encroaching Private Assets (NEW)</b>			
Vegetation Clearing of Private Trees Encroaching Private Assets	Per Job	Fee	55.89%
For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %			
<b>9.4 Rectification works by Essential Energy of Private Asset aerial mains defects (NEW)</b>			
Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Item	Hourly rate	\$196.39
Materials	Per Job	Fee	71.96%
Contractor	Per Job	Fee	55.89%
For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %			
<b>9.5 Rectification works by Essential Energy of DSNP's assets due to landowner encroachment issues (NEW)</b>			
Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59

	Fee Category	Fee Type	AER Final Decision 2019–20
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Materials	Per Item	Fee	71.96%
Contractor	Per Job	Fee	55.89%

For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %

## 10. Retailer of Last Resort

### 10.1 Retailer of Last Resort (ROLR)

Retailer of Last Resort	Per Event	Cost	Cost per event
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## 11. Planned Interruption - Customer Requested

### 11.1 Planned Interruption - Customer Requested (NEW)

Admin	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Contractor (contractor costs + %)	Per Job	Fee	55.89%

## 12. Attendance at customers' premises - Statutory Right

### 12.1 Attendance at customers' premises - Statutory Right

Attendance at customers' premises - Statutory Right	Per Event	Hourly Rate	\$151.41
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## 13. Inspection Services - Private electrical Installations and ASP's

### 13.1 Inspection of Construction Work (by Level 1 ASP's)

Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - First 10 Lots - Grade A	Per Lot	Fee	\$88.80
Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - Next 30 Lots - Grade A	Per Lot	Fee	\$88.80
Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - Remainder - Grade A	Per Lot	Fee	\$17.76
Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - First 10 Lots	Per Lot	Fee	\$213.11

	Fee Category	Fee Type	AER Final Decision 2019–20
- Grade B			
Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - Next 30 Lots - Grade B	Per Lot	Fee	\$124.32
Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - Remainder - Grade B	Per Lot	Fee	\$71.04
Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - First 10 Lots - Grade C	Per Lot	Fee	\$443.99
Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - Next 30 Lots - Grade C	Per Lot	Fee	\$248.63
Underground Urban Residential Subdivision (Vacant Lots) - Per Lot - Remainder - Grade C	Per Lot	Fee	\$118.99
Rural Overhead Subdivisions and Rural Extensions - Per Pole - First 5 Poles - Grade A	Per Pole	Fee	\$106.56
Rural Overhead Subdivisions and Rural Extensions - Per Pole - Next 5 Poles - Grade A	Per Pole	Fee	\$88.80
Rural Overhead Subdivisions and Rural Extensions - Per Pole - Remaining Poles - Grade A	Per Pole	Fee	\$71.04
Rural Overhead Subdivisions and Rural Extensions - Per Pole - First 5 Poles - Grade B	Per Pole	Fee	\$213.11
Rural Overhead Subdivisions and Rural Extensions - Per Pole - Next 5 Poles - Grade B	Per Pole	Fee	\$177.59
Rural Overhead Subdivisions and Rural Extensions - Per Pole - Remaining Poles - Grade B	Per Pole	Fee	\$124.32
Rural Overhead Subdivisions and Rural Extensions - Per Pole - First 5 Poles - Grade C	Per Pole	Fee	\$355.19
Rural Overhead Subdivisions and Rural Extensions - Per Pole - Next 5 Poles - Grade C	Per Pole	Fee	\$328.55
Rural Overhead Subdivisions and Rural Extensions - Per Pole - Remaining Poles - Grade C	Per Pole	Fee	\$266.39
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - First 10 Lots - Grade A	Per Lot	Fee	\$88.80
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - Next 30 Lots - Grade A	Per Lot	Fee	\$88.80
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - Remaining Lots - Grade A	Per Lot	Fee	\$88.80
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - First 10 Lots - Grade B	Per Lot	Fee	\$213.11
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - Next 30 Lots - Grade B	Per Lot	Fee	\$213.11

	Fee Category	Fee Type	AER Final Decision 2019–20
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - Remaining Lots - Grade B	Per Lot	Fee	\$213.11
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - First 10 Lots - Grade C	Per Lot	Fee	\$443.99
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - Next 30 Lots - Grade C	Per Lot	Fee	\$443.99
Underground Commercial and Industrial or Rural Subdivisions (Vacant Lots) - Per Lot - Remaining Lots - Grade C	Per Lot	Fee	\$443.99
Commercial / Industrial Developments and Sub Transmission - All Grades	Per Lot / Pole	Hourly Rate	\$177.59
Asset Relocations or Street lighting (Not forming part of other categories) - All Grades	Per Lot / Pole	Hourly Rate	\$177.59
<b>13.2 Inspection of service work (Level 2 ASP's)</b>			
Per NOSW - A Grade	Per NOSW	Fee	\$44.40
Per NOSW - B Grade	Per NOSW	Fee	\$74.59
Per NOSW - C Grade	Per NOSW	Fee	\$213.11
<b>13.3 Re-inspection of work of a service provider (Level 1 &amp; Level 2 ASP's work)</b>			
Reinspection (Level 1 & Level 2 work)	Per Job	Hourly Rate	\$177.59
<b>13.4 Re-inspection Customer Installation</b>			
Reinspection Customer Installation (per re-inspection CCEW)	Per Job	Hourly Rate	\$177.59
<b>13.5 Investigation, review &amp; implementation of remedial actions associated with work performed by ASP's</b>			
Investigation, review & implementation separated by Incident Category			
Incident Category 1-2 classification	Per Job	Hourly Rate	\$157.11
Incident Category 3-5 classification	Per Job	Fee	\$2,356.64
<b>13.6 Substation Inspection (NEW)</b>			
Substation Inspection - A Grade	Per Substation	Fee	\$355.19
Substation Inspection - B Grade	Per Substation	Fee	\$621.58
Substation Inspection - C Grade	Per Substation	Fee	\$799.18
<b>13.7 Inspection Services of Privately Owned Electrical Infrastructure Assets (NEW)</b>			
Admin	Per Job	Hourly Rate	\$104.74

	Fee Category	Fee Type	AER Final Decision 2019–20
Field Worker	Per Job	Hourly Rate	\$151.41
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer	Per Job	Hourly Rate	\$196.39
Materials	Per Job	Fee	71.96%
Contractor (contractor costs + %)	Per Job	Fee	55.89%
<b>13.8 Inspection Customer Installation (NEW)</b>			
Inspect Installation (customers) per CCEW	Per CCEW	Fee	\$53.18
<b>14. Provision of Training to 3rd parties for Network Related Access</b>			
<b>14.1 Provision of Training to ASP's for Network Access</b>			
Access Permit Recipient Training to ASPs (scheduled course)	Per Student	Fee	\$234.06
Access Permit Recipient Training to ASPs (requested out of schedule course)	Per Class	Fee	\$2,267.76
Access Permit Recipient Training to ASPs (requested out of schedule course) - Travel	Per Occasion	Hourly Rate	\$177.59
Access Permit Recipient Training to ASPs (requested out of schedule course) - Accommodation & Incidentals	Per Occasion	Fee	55.89%
<b>14.2. ASP Compliance Related Training Services</b>			
ASP Compliance Related Training Services (scheduled course)	Per Occasion	Hourly Rate	\$177.59
ASP Compliance Related Training Services (requested out of schedule course) - Travel	Per Occasion	Hourly Rate	\$177.59
ASP Compliance Related Training Services (requested out of schedule course) - Accommodation & Incidentals	Per Occasion	Fee	55.89%
Materials	Per Occasion	Fee	71.96%
<b>14.3 Provision of Training - Entry into Electrical Stations</b>			
Provision of training - Entry Electrical Stations	Per Student	Fee	\$296.91
<b>15. Customer Requested Lighting Services (NEW)</b>			
<b>15.1 Provision of Security Lighting (NEW)</b>			
Nightwatch 250W	Per Light	Fee / Month	\$73.30
Nightwatch 400W	Per Light	Fee / Month	\$97.77
Nightwatch 1000W	Per Light	Fee /	\$156.08

	Fee Category	Fee Type	AER Final Decision 2019–20
		Month	
Installation Fee (may be waived if customer is willing to enter contract longer than capital recovery period)*		Fee	\$200
<b>15.2 Provision of Luminaire Glare Shield</b>			
Provision of Luminaire Glare Shield (customer requested)	Per Light	Fee	\$506.56
<b>16. Off - Peak Conversion</b>			
<b>16.1 Off - Peak Conversion</b>			
Off - Peak Conversion	Per Job	Fee	\$93.88
<b>17. Authorisation of ASPs</b>			
<b>17.1 Authorisation of ASPs</b>			
Authorisation - Initial	Per Authorisation	Fee	\$527.33
Authorisation - Renewal	Per Authorisation	Fee	\$125.69
<b>17.2 ASP Authorisation Agreement</b>			
Authorisation Agreement - Initial	Per Authorisation	Fee	\$379.68
Authorisation Agreement - Renewal	Per Authorisation	Fee	\$52.37
<b>18. Customer Initiated Asset Relocations (NEW)</b>			
<b>18.1 Design and construction of asset relocations - customer funded</b>			
Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Item	Hourly Rate	\$196.39
Materials	Per Job	Fee	71.96%
Contractor	Per Job	Fee	55.89%
For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %			



	Fee Category	Fee Type	AER Final Decision 2019–20
<b>19. Terminations of Cable at electrical station - Distributer Required Performance (NEW)</b>			
<b>19.1 DSNP Provided cable jointing &amp; termination services for contestable works</b>			
Indoor Technician	Per Job	Hourly Rate	\$157.11
Field Worker	Per Job	Hourly Rate	\$151.41
Outdoor Technician	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Materials	Per Item	Fee	71.96%
Contractor	Per Job	Fee	55.89%
For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %			
<b>METERING SERVICES FEES</b>			
<b>1. Special Meter Reading and Testing (legacy meters)</b>			
<b>1.1 Move In / Move Out Read</b>			
Move In / Move Out Read	Per Job	Fee	\$17.54
<b>1.2 Special Meter Read (incl wasted visit)</b>			
Special Meter Read (incl. wasted visit)	Per Job	Fee	\$17.54
<b>1.3 Special Meter Test – 1<sup>st</sup></b>			
Special Meter Test – 1 <sup>st</sup>	Per Meter	Fee	\$603.82
<b>1.4 Special Meter Tests - Additional</b>			
Special Meter Tests – Additional	Per Meter	Fee	\$390.71
<b>1.5 Special Meter Tests - CT Meter (NEW)</b>			
Special Meter Tests – CT Meter (NEW)	Per Meter	Fee	\$728.14
<b>2. Emergency maintenance of failed metering equipment not owned by the distributor (contestable meters) (NEW)</b>			
<b>2.1 Unplanned Outage - Meter Fault (Site attendance)</b>			
Unplanned Outage – Meter Fault (Site attendance) (NT)	Per Job	Fee	\$369.20
Unplanned Outage – Meter Fault (Site attendance) (OT)	Per Job	Fee	\$616.46
<b>2.2 Unplanned Outage - Meter HW Fault (Site attendance)</b>			
Unplanned Outage – Meter HW Fault (Site attendance) (NT)	Per Job	Fee	\$369.20
Unplanned Outage – Meter HW Fault (Site attendance) (OT)	Per Job	Fee	\$616.46

	Fee Category	Fee Type	AER Final Decision 2019–20
<b>2.3 Unplanned Outage - Retailer outage impacting non retailer customer (Site attendance)</b>			
Unplanned Outage – Retailer outage impacting non retailer customer (Site attendance) (NT)	Per Job	Fee	\$293.49
Unplanned Outage – Retailer outage impacting non retailer customer (Site attendance) (OT)	Per Job	Fee	\$487.00
<b>2.4 Unplanned Outage - Remote De-Energisation - EE not notified (Site attendance)</b>			
Unplanned Outage – Remote De-Energisation – EE not notified (Site attendance) (NT)	Per Job	Fee	\$293.49
Unplanned Outage – Remote De-Energisation – EE not notified (Site attendance) (OT)	Per Job	Fee	\$487.00
<b>3. Meter recovery and disposal – type 5 and 6 (legacy meters) (NEW)</b>			
<b>3.1 Redundant Meter Disposal</b>			
Redundant Meter Disposal	Per Occasion	Fee	\$26.18
<b>4. Distributor arranged outage for purposes of replacing meter (NEW)</b>			
<b>4.1 Retailer Requested Distributer Planned Interruption - Cancellation after notification</b>			
Retailer Requested Distributer Planned Interruption – Cancellation after notification	Per Job	Fee	\$457.09
<b>4.2 Retailer Requested Distributer Planned Interruption - Initial Visit</b>			
Retailer Requested Distributer Planned Interruption – Initial Visit (NT)	Per Job	Fee	\$402.96
Retailer Requested Distributer Planned Interruption – Initial Visit (OT)	Per Job	Fee	\$655.59
<b>4.3 Retailer Requested Distributer Planned Interruption - Isolation Completed</b>			
Retailer Requested Distributer Planned Interruption – Isolation Completed (NT)	Per Job	Fee	\$343.59
Retailer Requested Distributer Planned Interruption – Isolation Completed (OT)	Per Job	Fee	\$580.10
Retailer Requested Distributer Planned Interruption – Isolation Completed – Additional Labour Required NT	Per Job	Hourly Rate	\$151.41
Retailer Requested Distributer Planned Interruption – Isolation Completed – Additional Labour Required OT	Per Job	Hourly Rate	\$258.92
<b>4.4 Retailer Requested Distributer Planned Interruption - Early Cancellation</b>			
Retailer Requested Distributer Planned Interruption – Early Cancellation	Per Job	Fee	\$40.76
<b>4.5 Retailer Requested Distributer Planned Interruption - MC No Attendance</b>			
Retailer Requested Distributer Planned Interruption – MC No Attendance (NT)	Per Job	Fee	\$305.73
Retailer Requested Distributer Planned Interruption – MC No Attendance (OT)	Per Job	Fee	\$397.11
<b>5. Customer requested provision of additional metering/consumption data (NEW)</b>			

	Fee Category	Fee Type	AER Final Decision 2019–20
<b>5.1 Provision of metering consumption data</b>			
Provision of metering consumption data	Per Occasion	Fee	\$26.18
<b>CONNECTION FEES</b>			
<b>1. Premises Connection Assets (NEW)</b>			
<b>1.1 Part A. Design and construction of premise connection assets which are undertaken by a customer (where these services are provided contestably).</b>			
Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Materials	Per Item	Fee	71.96%
Contractor	Per Job	Fee	55.89%
For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %			
<b>1.2 Part C. Part design and construction of connection assets where a customer requests that connection assets are designed and constructed to an increased standard (beyond that required by the distributors' standards and policies), and where those works are designed and constructed by the distributor (as a result of safety, reliability or security reasons).</b>			
Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Materials	Per Item	Fee	71.96%

	Fee Category	Fee Type	AER Final Decision 2019–20
Contractor	Per Job	Fee	55.89%

For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %

## 2. Extensions (NEW)

### 2.1 Part A. Design and construction of extensions assets which are undertaken by a customer (where these services are provided contestably).

Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Materials	Per Item	Fee	71.96%
Contractor	Per Job	Fee	55.89%

For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %

## 3. Augmentations (NEW)

### 3.1 Part C. Design and construction of augmentation assets which are undertaken by a customer (where these services are provided contestably).

Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Materials	Per Item	Fee	71.96%

	Fee Category	Fee Type	AER Final Decision 2019–20
Contractor	Per Job	Fee	55.89%

For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %

**3.2 Part D. Any shared network enlargement/enhancement undertaken by a distributor where a customer requests that assets are designed and constructed to an increased standard (beyond that required by the distributors' standards and policies).**

Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Materials	Per Item	Fee	71.96%
Contractor	Per Job	Fee	55.89%

For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %

**4. Reconnections / Disconnections**

**4.1 Disconnect / Reconnect - Vacant Premise**

Disconnect - Vacant Premise	Per Job	Fee	\$40.06
Reconnect - Vacant Premise	Per Job	Fee	\$48.41

**4.2 Disconnect / Reconnect - Site visit only**

Disconnect / Reconnect - Site visit only	Per Job	Fee	\$37.37
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**4.3 Disconnect / Reconnect - Pole Top / Pillar**

Disconnect - Pole Top / Pillar Box	Per Job	Fee	\$264.98
Reconnect - Pole Top / Pillar Box	Per Job	Fee	\$264.98

**4.4 Disconnect / Reconnect - Complete**

Disconnection - Complete	Per Job	Fee	\$54.62
Reconnection - Complete	Per Job	Fee	\$48.41

**4.5 Disconnect / Reconnect - Technical Disconnection**

Disconnection - Technical Disconnection	Per Job	Fee	\$54.62
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	Fee Category	Fee Type	AER Final Decision 2019–20
Reconnect - Technical Reconnection	Per Job	Fee	\$48.41

**4.6 Reconnect - Outside of Normal Business Hours**

Reconnect - Outside of Normal Business Hours	Per Job	Fee	\$136.27
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**4.7 Illegal Connections**

Illegal Connections	Per Job	Hourly Rate	\$177.59
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**5. Non-Standard Connection Services (NEW)**

**5.1 Non - Standard Connection Services**

Admin	Per Job	Hourly Rate	\$104.74
Para Legal	Per Job	Hourly Rate	\$104.74
Field Worker	Per Job	Hourly Rate	\$151.41
Indoor Technical Officer	Per Job	Hourly Rate	\$157.11
Outdoor Technical Officer	Per Job	Hourly Rate	\$177.59
Engineer / Professional	Per Job	Hourly Rate	\$196.39
Materials	Per Item	Fee	71.96%
Contractor	Per Job	Fee	55.89%

For these jobs, materials & other contractor costs are charged at purchase price / contractor costs + %

Source: Essential Energy, *Revised proposal - 13.3 ANS Model - 20190108 - Public*; AER analysis.

Note: \* Security lighting installation fee added based on Essential Energy, *Revised Proposal – 13.4 -15.1\_Security lights – 20190108 – Public*.

**Table 15.10 Quoted service ancillary network services hourly labour rates for 2019–20, final decision (\$2019–20)**

Essential labour category	AER labour category <sup>1</sup>	AER final decision – maximum total hourly rate (base plus on-costs plus overheads)
Admin (NH)	Admin (NH)	104.74
Admin (AH)	Admin (AH)	179.10
Paralegal (NH)	Admin (NH)	104.74
Paralegal (AH)	Admin (AH)	179.10
Indoor technical officer (NH)	Technical specialist (NH)	157.11
Indoor technical officer (AH)	Technical specialist (AH)	268.66
Outdoor technical officer (NH)	Technical specialist outdoor (NH)	177.59
Outdoor technical officer (AH)	Technical specialist outdoor (AH)	303.69
Engineer/Professional (NH)	Engineer (NH)*	196.39
Engineer/Professional (AH)	Engineer (AH)*	335.83
Field worker (NH)	Field Worker (NH)	151.41
Field worker (AH)	Field Worker (AH)	258.92

Source: AER analysis.

Note: NH = Normal Hours; AH = After Hours.

\* This labour category was incorrectly identified as ‘Senior Engineer’ in our draft decision.

**Table 15.11 AER final decision on X factors for each year of the 2020–24 regulatory control period for ancillary network services (per cent)**

	2020–21	2021–22	2022–23	2023–24
X factor	-0.7768%	-1.1492%	-1.2093%	-1.0087%

Source: AER analysis.

Note: To be clear, labour escalators themselves are positive for each year of the regulatory control period. However, the labour escalators in this table are operating as defacto X factors. Therefore, they are negative. These X-factors do not apply to fees that are percentage based.

## B Public lighting prices

**Table 15.12 Public Lighting charges for 2019–20, AER final decision (\$2019–20)**

Support Type	Revised Proposal	Final Decision	Revised Proposal	Final Decision
	Capex - \$2019–20	Capex - \$2019–20	Opex - \$2019–20	Opex – 2019–20
7.5m Steel Column Single Outreach	\$154.86	\$148.61	\$14.39	\$13.05
7.5m Steel Column Double Outreach	\$161.73	\$155.20	\$14.39	\$13.05
9.0m Steel Column Single Outreach	\$221.96	\$212.99	\$14.39	\$13.05
9.0m Steel Column Double Outreach	\$255.46	\$245.14	\$14.39	\$13.05
10.5m Steel Column Single Outreach	\$306.84	\$294.44	\$14.39	\$13.05
10.5m Steel Column Double Outreach	\$355.44	\$341.08	\$14.39	\$13.05
12.0m Steel Column Single Outreach	\$349.97	\$335.83	\$14.39	\$13.05
12.0m Steel Column Double Outreach	\$357.66	\$343.21	\$14.39	\$13.05
12m Roundabout Column	\$476.27	\$457.03	\$14.39	\$13.05
15m Roundabout Column	\$408.97	\$392.45	\$14.39	\$13.05
18m Roundabout Column	\$708.68	\$680.05	\$14.39	\$13.05
9.5m Timber Pole	\$97.35	\$93.42	\$16.69	\$15.14
11m Timber Pole	\$138.86	\$133.25	\$16.69	\$15.14
12.5m Timber Pole	\$153.20	\$147.01	\$16.69	\$15.14
14m Timber Pole	\$162.91	\$156.33	\$16.69	\$15.14
15.5m Timber Pole	\$173.31	\$166.31	\$16.69	\$15.14
Decorative Category P Column	\$213.66	\$205.03	\$14.39	\$13.05
Suspended			\$33.38	\$30.27

Night Patrol - Opex charges - \$2019–20	Revised Proposal	Final Decision
Night Patrol Per Asset Inspection	\$ 8.98	\$ 8.15

Bracket Type - Capex charges - \$2019–20	Revised Proposal	Final Decision
Streetlight Bracket Category P	\$16.82	\$16.14



Bracket Type - Capex charges - \$2019–20	Revised Proposal	Final Decision
Streetlight Bracket Category V	\$30.55	\$29.31

Traditional Luminaire Type	Revised Proposal	Final Decision	Revised Proposal	Final Decision
	Capex \$2019–20	Capex \$2019–20	Opex \$2019–20	Opex 2019–20
Tubular Fluorescent <40W	\$0.00	\$0.00	\$50.39	\$45.67
Tubular Fluorescent >40W	\$23.26	\$22.65	\$50.12	\$45.42
42W CFL Standard	\$30.83	\$30.02	\$57.50	\$52.11
42W CFL Decorative	\$86.48	\$84.21	\$57.50	\$52.11
32W Compact Fluorescent	\$83.16	\$80.98	\$60.07	\$54.45
2x14W T5 Fluoro	\$0.00	\$0.00	\$61.69	\$55.91
50W High Pressure Sodium	\$0.00	\$0.00	\$79.06	\$71.67
50W High Pressure Sodium – Twin Arc	\$29.30	\$28.53	\$60.08	\$54.45
70W High Pressure Sodium	\$28.70	\$27.95	\$79.16	\$71.76
70W High Pressure Sodium – Twin Arc	\$29.30	\$28.53	\$54.83	\$49.70
100W High Pressure Sodium	\$0.00	\$0.00	\$79.16	\$71.76
120W High Pressure Sodium	\$0.00	\$0.00	\$82.18	\$74.50
150W High Pressure Sodium	\$63.42	\$61.76	\$82.18	\$74.50
150W High Pressure Sodium – Twin Arc	\$65.07	\$63.37	\$69.09	\$62.63
220W High Pressure Sodium	\$0.00	\$0.00	\$82.98	\$75.22
250W High Pressure Sodium	\$63.42	\$61.76	\$82.98	\$75.22
250W High Pressure Sodium – Twin Arc	\$70.75	\$68.90	\$80.54	\$73.01
2x250W High Pressure Sodium	\$0.00	\$0.00	\$82.98	\$75.22
310W High Pressure Sodium	\$0.00	\$0.00	\$82.98	\$75.22
360W High Pressure Sodium	\$73.29	\$71.37	\$91.75	\$83.18
400W High Pressure Sodium	\$73.29	\$71.37	\$91.75	\$83.18
400W High Pressure Sodium – Twin Arc	\$76.31	\$74.31	\$70.98	\$64.34
2x400W High Pressure Sodium	\$0.00	\$0.00	\$91.75	\$83.18
3x400W High Pressure	\$0.00	\$0.00	\$91.75	\$83.18

Traditional Luminaire Type	Revised Proposal	Final Decision	Revised Proposal	Final Decision
Sodium				
1000W High Pressure Sodium	\$0.00	\$0.00	\$287.10	\$260.37
Incandescent 60	\$0.00	\$0.00	\$51.37	\$46.55
Incandescent 75	\$0.00	\$0.00	\$51.37	\$46.55
Incandescent 100	\$0.00	\$0.00	\$51.37	\$46.55
Incandescent 150	\$0.00	\$0.00	\$51.37	\$46.55
Incandescent 200	\$0.00	\$0.00	\$51.37	\$46.55
Incandescent 300	\$0.00	\$0.00	\$51.37	\$46.55
Incandescent 500	\$0.00	\$0.00	\$51.37	\$46.55
Incandescent 1500	\$0.00	\$0.00	\$51.37	\$46.55
55W Low Pressure Sodium	\$63.42	\$61.76	\$124.60	\$112.98
100W Low Pressure Sodium	\$63.42	\$61.76	\$125.14	\$113.46
135W Low Pressure Sodium	\$0.00	\$0.00	\$162.93	\$147.75
150W Low Pressure Sodium	\$0.00	\$0.00	\$162.93	\$147.75
310W Low Pressure Sodium	\$0.00	\$0.00	\$162.93	\$147.75
70W Metal Halide	\$0.00	\$0.00	\$135.22	\$122.61
150W Metal Halide	\$0.00	\$0.00	\$135.22	\$122.61
250W Metal Halide	\$63.42	\$61.76	\$135.22	\$122.61
400W Metal Halide	\$63.42	\$61.76	\$142.49	\$129.20
1000W Metal Halide	\$140.98	\$137.28	\$287.10	\$260.37
50W Mercury Vapour	\$23.26	\$22.65	\$71.72	\$65.01
80W Mercury Vapour	\$23.26	\$22.65	\$60.97	\$55.26
125W Mercury Vapour	\$0.00	\$0.00	\$68.20	\$61.82
250W Mercury Vapour	\$63.42	\$61.76	\$126.36	\$114.57
400W Mercury Vapour	\$63.42	\$61.76	\$143.53	\$130.15
250W HPS Asymmetric Floodlight	\$81.94	\$79.78	\$82.98	\$75.22
400W HPS Asymmetric Floodlight	\$83.82	\$81.62	\$91.75	\$83.18
250W MH Asymmetric Floodlight	\$79.50	\$77.41	\$135.22	\$122.61
400W MH Asymmetric Floodlight	\$81.94	\$79.79	\$142.49	\$129.20

LED Luminaire Type	Revised Proposal	Final Decision	Revised Proposal	Final Decision
	Capex - \$2019–20	Capex - \$2019–20	Opex - \$2019–20	Opex – 2019–20
23W LED Gerard Street LED	\$70.79	\$69.75	\$38.21	\$34.63
17W LED Gerard Street LED	\$72.66	\$71.59	\$38.21	\$34.63
17W LED Gerard Street LED Aero screen	\$74.61	\$73.51	\$38.21	\$34.63
17W LED Gerard Street LED Louvered	\$74.61	\$73.51	\$38.21	\$34.63
22W LED Gerard Street LED	\$72.66	\$71.59	\$38.21	\$34.63
25W LED GE Evolve	\$54.04	\$53.25	\$44.18	\$40.07
35W LED Pecan Luminaire	\$87.27	\$85.98	\$37.71	\$34.17
29W LED Pecan Luminaire – Aero screen	\$87.27	\$85.98	\$37.48	\$33.96
42W LED Gerard Street LED	\$138.92	\$136.88	\$38.21	\$34.63
42W LED Pecan Luminaire	\$138.92	\$136.88	\$43.43	\$39.36
36W LED Pecan Luminaire – Aero screen	\$138.92	\$136.88	\$43.43	\$39.36
105W LED Aldridge Luminaire	\$219.43	\$216.19	\$43.43	\$39.36
198W LED Aldridge Standard Distribution	\$231.99	\$228.57	\$46.09	\$41.77
198W LED Aldridge Forward Distribution	\$229.61	\$226.22	\$46.09	\$41.77
298W LED Aldridge Luminaire	\$257.95	\$254.15	\$46.09	\$41.77
100W LED Aldridge Luminaire	\$231.02	\$227.62	\$46.09	\$41.77
200W LED Aldridge Luminaire	\$231.02	\$227.62	\$46.09	\$41.77
300W LED Aldridge Luminaire	\$256.84	\$253.05	\$46.09	\$41.77

## C Metering service prices

**Table 15.13 Metering X factors for 2019–24**

Period		2020-21	2021-22	2022-23	2023-24
Metering X factor	Capital	-0.4879%	1.0596%	0.7449%	0.6868%
	Non-capital	-1.4867%	-3.6705%	-8.6849%	-7.8615%

Note: We do not apply an X factor for 2019–20 because we set the 2019–20 metering charges in this decision.

**Table 15.14 Annual Metering Charges for 2019–20**

		2019-20
Residential Anytime	Capital	9.84
	Non-capital	22.20
Residential TOU	Capital	14.32
	Non-capital	33.30
Small Business Anytime	Capital	9.84
	Non-capital	22.20
Small Business TOU	Capital	14.32
	Non-capital	33.30
Controlled Load	Capital	4.48
	Non-capital	5.55

Source: AER analysis.

Note: Prices for the remaining years of the period will be adjusted for actual CPI during the AER's annual pricing approval process.