



**Draft Decision**

**ActewAGL distribution determination**

**2015–16 to 2018–19**

**Attachment 16: Alternative control services**

November 2014

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## Note

This attachment forms part of the AER's draft decision on ActewAGL's 2015–19 distribution determination. It should be read with other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Value of imputation credits

Attachment 5 – Regulatory depreciation

Attachment 6 – Capital expenditure

Attachment 7 – Operating expenditure

Attachment 8 – Corporate income tax

Attachment 9 – Efficiency benefit sharing scheme

Attachment 10 – Capital expenditure sharing scheme

Attachment 11 – Service target performance incentive scheme

Attachment 12 – Demand management incentive scheme

Attachment 13 – Classification of services

Attachment 14 – Control mechanism

Attachment 15 – Pass through events

Attachment 16 – Alternative control services

Attachment 17 – Negotiated services framework and criteria

Attachment 18 – Connection methodology

Attachment 19 – Pricing methodology

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## Shortened forms

Shortened form	Extended form
AARR	aggregate annual revenue requirement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASRR	aggregate service revenue requirement
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
CPI-X	consumer price index minus X
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
expenditure assessment guideline	expenditure forecast assessment guideline for electricity distribution
F&A	framework and approach
MRP	market risk premium

Shortened form	Extended form
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue pricing principles
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital

## 16 Alternative control services

This attachment sets out the Australian Energy Regulator's draft decision on ActewAGL's metering and ancillary network services. We have classified these as alternative control services.

As discussed in our Stage 1 Framework and Approach for the 2014–15 and 2015–19 regulatory control periods, alternative control services are customer specific or customer requested services and so the full cost of the service is attributed to that particular customer.<sup>1</sup> This is in contrast to standard control services where costs are spread across the general network customer base.

Alternative control services represent about seven per cent of ActewAGL's total regulated revenue.

### 16.1 Draft decision

Our draft decision is to classify ancillary network services as alternative control services, as proposed in our Stage 1 Framework and Approach, with one exception. In our metering decision, we reclassify the residual metering capital costs as a standard control service. This means that when customers exit regulated metering, the residual capital costs (the capital costs the customer would have paid through annual metering charges had they remained a regulated metering customer) will be recovered from the general customer base through network tariffs.

Our draft decision also maintains our Stage 1 Framework and Approach position to apply caps on the prices of individual services in the next regulatory control period to all alternative control services. We consider the benefit of capping individual services prices is that it promotes cost reflective pricing which outweighs any detriment from increased administration costs.

Our draft decision is to not approve some elements of ActewAGL's proposed fees for ancillary network services and metering where the proposed fees exceed the efficient cost of providing the services. Our substitute price caps are set in appendix A.1.

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

- Section 16.4 – Ancillary Network Services
- Section 16.5 – Metering

### 16.2 ActewAGL's proposal

We received separate proposals from ActewAGL in relation to metering and ancillary network services.

ActewAGL adopted our classification of metering services and of ancillary network services as per the Stage 1 Framework and Approach paper.<sup>2</sup> It also accepted our price caps on individual services as the alternative control services' control mechanism from the same paper.<sup>3</sup>

ActewAGL proposes the following basis for the control mechanisms:

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<sup>1</sup> AER, *Stage 1 Framework and Approach paper ActewAGL*, p. 8.

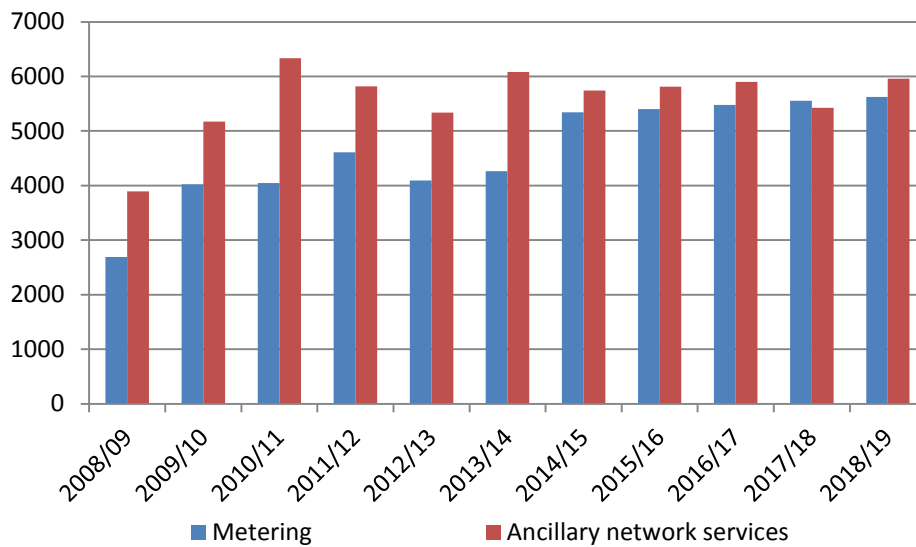
<sup>2</sup> ActewAGL, *Regulatory Proposal*, p. 329.

<sup>3</sup> ActewAGL, *Regulatory Proposal*, p. 330.

- for metering services, a limited building block approach, consistent with the approach adopted in the 2009–14 regulatory period
- for ancillary services, a cost-build-up approach. Ancillary services related to metering (special meter reads, meter tests, install interval meter at customer request and install meter to facilitate micro renewable energy installation) are included in this group.

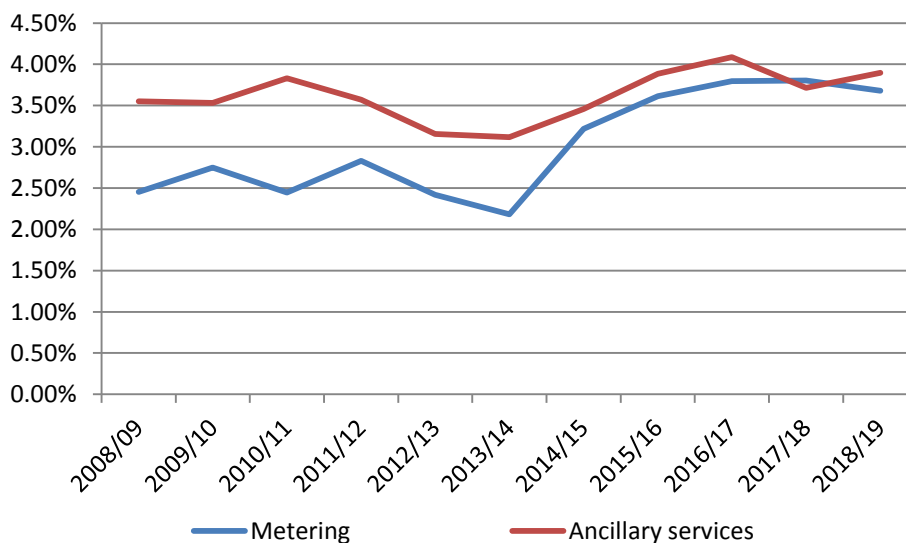
Figure 16.1 shows ActewAGL's historical (2008–09 to 2012–13), estimated (2013–14) and proposed annual expenditure (2014–15 to 2018–19). This is for each category of alternative control services. Figure 16.2 compares that expenditure as a percentage of ActewAGL's total expenditure for all direct control services.

**Figure 16.1 ActewAGL's alternative control services expenditure (\$'000, 2014–15)**



Source: AER analysis; ActewAGL, *Response to reset regulatory information notice (consolidated)*, May 2014.

**Figure 16.2 ActewAGL's alternative control expenditure as a percentage of total direct control expenditure (standard and alternative control)**



Source: AER analysis; ActewAGL, *Response to reset regulatory information notice (consolidated)*, May 2014.



## 16.3 AER's assessment approach

The rules are less prescriptive and afford more discretion for determining the control mechanism for alternative control services than those set out for standard control services. For example, there is no requirement to establish a full building block model to set the revenue to be earned from the services as there is for standard control services. The control mechanism may be either a control on the price of the service, or the revenue to be earned from the service, or both. As a general principle we attempt to regulate alternative control services in a lighter handed manner than standard control services.

Our distribution determination must state the basis of the control mechanism to apply to alternative control services.<sup>4</sup> Our decision on the form of control mechanism for alternative control services must be in accordance with our framework and approach paper.<sup>5</sup> The formulae that give effect to the form of control must be as set out in the framework and approach paper unless we consider that unforeseen circumstances justify a departure.<sup>6</sup>

In deciding on a control mechanism for alternative control services, we must have regard to potential competition in the relevant market, administrative costs, applicable regulatory arrangements, consistency between regulatory arrangements, and any other relevant factor.<sup>7</sup> The control mechanism for alternative control services may use elements of the building block model for standard control services but there is no requirement to apply the building block model exactly as it is set out in Part C of the rules.

The different regulatory requirements for alternative control services compared to standard control services recognise their different characteristics. Standard control services are central to electricity supply and are relied on by all customers. In contrast, alternative control services are customer specific. Accordingly our approach to assessing alternative control services is different to that of standard control services.

For ancillary network services we undertook a bottom up cost assessment. For metering and public lighting we used a limited building block analysis for our cost assessment.

Details of our assessment approach are set out in the relevant sections:

Section 16.4 – Ancillary network services

Section 16.5 – Metering

## 16.4 Ancillary Network Services

Ancillary network services are non-routine services provided to individual customers on an 'as needs' basis and comprise less than four per cent of ActewAGL's total revenue requirement.

In the 2009–14 regulatory control period ancillary network services were classified by us as standard control services and were given the name 'miscellaneous' services and 'monopoly' services by ActewAGL. The fees and labour rates for these services were originally set by the jurisdictional

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<sup>4</sup> National Electricity Rules, cl. 6.2.6 (b).

<sup>5</sup> National Electricity Rules, cl. 6.12.1 (12).

<sup>6</sup> National Electricity Rules, cl. 6.12.3 (c1).

<sup>7</sup> National Electricity Rules, cl. 6.12.3 (c1).

regulator and the fees have only been indexed by inflation. This is the first time these fees have been reviewed in detail.

For the avoidance of doubt, this draft decision considers ancillary network services (current miscellaneous and monopoly services) to be fee based services. That is a fee has been determined based on the cost of providing the service (labour rates) and the average time taken to perform the service. For these services the fee is fixed and applies irrespective of the actual time taken on site to perform it varies from the benchmark set in this decision.

By contrast, quoted services are those which are once off and specific to a particular customer's request. The cost of this service will depend on the actual (rather than benchmark draft decision) time taken to perform the service.

## 16.4.1 Draft decision

### Fee based services

We approve ActewAGL's proposed 2015–16 fee based ancillary network services. We consider the proposed prices reflect efficient costs.

We do not approve any proposed fees for the remaining years of the regulatory control period because we do not approve ActewAGL's proposed escalation rate of 1.5 per cent.<sup>8</sup> Instead we approve the labour escalation factor in Table 16.1 below. (Refer to the operating expenditure attachment 7).

**Table 16.1 AER labour escalation factor (percentage)**

	2015–16	2016–17	2017–18	2018–19
Labour escalation factor	0.54	0.87	1.00	0.89

Source: Opex Attachment.

We apply a price cap for the form of control to fee based services. Under this form of control a schedule of prices is set for the first year. For the following years the previous year's prices are adjusted by CPI and an X factor. Our draft decision X factors are set out in appendix A.1.

Mathematically, the form of control for fee based ancillary network services set is:

$$\bar{p}_i^t \geq p_i^t \quad i=1,\dots,n \text{ and } t=1,\dots,4,$$

$$\bar{p}_i^t = \bar{p}_i^{t-1}(1 + CPI_t)(1 - X_i^t)$$

Where:

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

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

<sup>8</sup> ActewAGL, *Regulatory proposal*, 2015–19, p. 345.

$CPI_t$  is the percentage increase in the consumer price index, calculated as follows

The Consumer Price Index, All Groups Index Number (weighted average of eight capital cities) published by the Australia Bureau of Statistics for the December Quarter immediately preceding the start of regulatory year t;

divided by

The Consumer Price Index, All Groups Index Number (weighted average of eight capital cities) published by the Australia Bureau of Statistics for the December Quarter immediately preceding the start of regulatory year t-1;

minus one.

$X_i^t$  is the X-factor for service i in year t.

$\bar{P}_i^1$  is the cap on the price of service i in the first year of the subsequent regulatory control period. To be decided in the final decision.

Table 16.2 below sets out our draft decision for maximum prices for some frequently requested fee based ancillary network services. Appendix A.1.1 sets a full list of our decision on maximum prices for ancillary network services.

**Table 16.2 ActewAGL proposed fees and draft decision fees, (\$2014–15)**

Service	Current fees (\$)	ActewAGL proposed (\$)	(proposed cf current, per cent)	AER draft decision (\$)	(draft cf proposed, per cent)
Special meter read	35.55	35.94	1.1	35.94	0.0
Meter test (whole current) - business hours	69.23	103.85	50.0	103.85	0.0
De-energies premise - business hours	49.59	54.55	10.0	54.55	0.0
De-energise premise for debt non-payment	93.55	105.24	12.5	105.24	0.0
Re-energise premise - business hours	56.14	61.75	10.0	61.75	0.0
Re-energise premise - after hours	120.73	108.66	-10.0	108.66	0.0
install interval meter	66.55	83.19	25.0	83.19	0.0
New underground service connection – greenfield cable only	446.00	490.60	10.0	490.60	0.0

New overhead service connection - brownfield (business hours)	288.18	403.45	40.0	403.45	0.0
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Source: ActewAGL regulatory proposal and AER analysis.

### Quoted services

We do not approve ActewAGL's labour rates for quoted services. Our draft decision for maximum labour rates is set out in Table 16.3.

**Table 16.3 Draft decision 2014–15 labour rates (including on-costs) for quoted services, (\$2014–15)**

Classification	Draft Decision maximum labour rate - includes overhead
Electrical Worker	130.98
Electrical Worker - labourer	106.99
Electrical apprentice	98.31
Office support Service Delivery	87.59
Project Officer Design section	154.24
Senior Technical Officer / Engineer Design section	184.17

Source: Marsden Jacob analysis.

Our draft decision form of control for quoted services is:

$$Price = labour + contractor services + materials + other costs$$

Where:

Contractor services—reflects all costs associated with the use of external labour in the provision of the services, including overhead and any direct costs incurred with performing this service.

Materials—reflects the cost of material and any overhead.

Other costs—consists of costs that arise due to special requirements of the job or services provided at above the least cost technically acceptable standard.

## 16.4.2 Proposal

### Fee based services

ActewAGL proposes a cost build up approach for ancillary network services, taking account of the time spent in delivering the service, the required technicians or back office staff and their attendant hourly labour rates and any other input costs, including materials and contractor costs that is

appropriate for ancillary services. The approach taken depends on whether the service is fee based or quoted.<sup>9</sup>

To determine charges for its fee based ancillary network services ActewAGL used a standardised set of base labour rates. These labour rates were escalated by 3.06 per cent from the \$2013–14 rate to bring into \$2014–15. The composition of work crews were established (for example one electrical worker and one non-electrical worker) in order to derive the labour rates to be applied for specific services.

To develop charges, the derived labour rate was multiplied by the estimated time taken to perform the service. Direct overheads of 30 per cent and corporate overheads of 15 per cent were also added.

ActewAGL proposes to move prices to fully recover costs by 2018–19. This means that in the first year of the regulatory period the proposed fees do not fully recover the costs calculated by ActewAGL for performing the service.

Given the significant gap between prices and costs in 2014–15, for some services, a phased approach to full cost recovery is proposed, to avoid significant price shocks for customers.<sup>10</sup>

To minimise price shock ActewAGL has proposed X factors to be applied to fee based ancillary services over the remaining four years of the regulatory period.<sup>11</sup> This means that by the end of the regulatory period the fees for ancillary network services will reflect the cost of providing the service.

Therefore, ActewAGL is assuming that the cost of these fee based ancillary services will rise by 1.5 per cent (in real terms) each year.<sup>12</sup> Calculating its X factors ActewAGL has incorporated this uplift. Where costs equalled prices, the X factors proposed are equal to the cost rises, i.e. 1.5 per cent per annum.

Where costs are greater than initial prices ActewAGL proposes increases greater than 1.5 per cent per annum. If the costs are greater than 10 per cent higher than the initial prices ActewAGL proposes that prices are raised to achieve the cost for the service by the final year of the regulatory period (2018–19). The proposed price increases are determined by the X factors.

ActewAGL's proposed X factors for each ancillary network service are set out in appendix A.1.

## Quoted Services

ActewAGL sought to set prices on a quoted basis for those ancillary services where the service is not typical or standard, or the scope of the service is specific to particular customer needs.

ActewAGL proposes to set prices for quoted services using the following formula:

$$\text{Price} = \text{labour} + \text{contractor services} + \text{materials} + \text{other costs}^{13} + \text{risk margin}^{14,15}$$

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<sup>9</sup> ActewAGL, *Regulatory proposal*, p. 342.

<sup>10</sup> ActewAGL, *Regulatory Proposal*, p. 345.

<sup>11</sup> ActewAGL, *Regulatory Proposal*, pp. 345–348.

<sup>12</sup> ActewAGL, *Regulatory Proposal*, p. 345.

<sup>13</sup> 'Other' consists of costs that arise due to special requirements of the job or services provided at above the least cost technically acceptable standard. This term is consistent with ActewAGL Distribution's approved connection policy, under which the customer pays the full costs of special requirements or above standard services (ActewAGL proposal p. 349).

<sup>14</sup> Risk margin - margin agreed with the customer to reflect the risks associated with the project. This will generally only apply to large scale projects, such as relocation or removal of major network assets at the request of a customer. The application of this margin reflects the continuation of the approach that has applied under the ACT Capital Contributions

It submits that price caps will apply to the labour rates used in the form of control for quoted services and that compliance with the formula will be demonstrated through annual calculation of labour rates in its annual pricing proposal.

Furthermore, ActewAGL has not identified any materials and associated contractor service or input costs that would also contribute to fee calculation for quoted services.

### 16.4.3 Assessment approach

For ancillary network services we consider it is important to review each of the services with specific focus on the key inputs in determining the price for the service.

In assessing ancillary network services we focused on labour rates and the overhead. We consider these are the two key inputs in determining an efficient level of fees for ancillary network services. In doing so regard was had to efficient benchmarks for such services developed by our consultant, Marsden Jacobs Associates (Marsden Jacob).

Given the large number of services proposed by ActewAGL we focused our review on the services most frequently requested services by consumers. In considering the fees for these frequently requested services we also took into account the times taken to perform the service, as this is another key input into the final fee. The services we focused on for ActewAGL include:

- special meter read
- meter test
- supply of conveyancing information (desk inquiry)
- disconnection site visit
- disconnection at meter box
- disconnection at pole top / pillar box
- reconnections.

For the remaining services we accepted the times taken as proposed but compared the labour rates and overhead against the maximum benchmark rates established by Marsden Jacob.

As an additional test, we also benchmarked the proposed fees against similar services in Victoria where applicable.

### 16.4.4 Reasons for draft decision

#### Fee based services

We approve ActewAGL's proposed fees for ancillary network services as set out in appendix A.1 for the year 2015–16. This is because we consider the underlying labour rates and overhead fall within the benchmark rates developed by our consultant.

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<sup>15</sup> Code, whereby a 'reasonable profit margin' can be charged for relocations, removals and redevelopments (ActewAGL proposal, p. 349).  
ActewAGL, *Regulatory Proposal*, p. 348.

We do not approve ActewAGL's proposed fees for ancillary networks services for the years 2016–17 to 2018–19 on account of not approving the proposed 1.5 per cent escalation.<sup>16</sup> By adopting our proposed labour escalation rates from Table 16.1, we have made associated changes to the X factors.

Table 16.4 and Table 16.5 set out the benchmark labour rates calculated by Marsden Jacob. ActewAGL's proposed labour rates for Office support delivery and Senior technical officer / Engineer design section are higher than Marsden Jacob proposed maximums for these labour categories. However these labour categories are not used in the cost build-up of the fee based ancillary network services proposed by ActewAGL.

ActewAGL uses the following labour categories to build up prices for its ancillary network services;

- electrical worker
- project officer design section
- electrical worker labourer and
- electrical apprentice.

These all fell within the total labour rate benchmarks (including on-costs and overhead) developed by Marsden Jacob. See Table 16.5.

Time taken to perform the seven most frequently requested ancillary network services, as listed below, were also reviewed by Marsden Jacob and were found to lie within benchmark times for these services. For the detailed review refer to the Marsden Jacob report.

- special meter read
- meter test
- supply of conveyancing information (desk inquiry)
- disconnection site visit
- disconnection at meter box
- disconnection at pole top / pillar box
- reconnections.

Marsden Jacob found that although the businesses used different category names and descriptions, the types of labour used to deliver ancillary network services broadly fell into one of five categories:

- administration
- technical services
- engineers
- field workers

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<sup>16</sup> ActewAGL, *Regulatory proposal*, p. 345.

- senior engineers.

Using these categories Marsden Jacob developed benchmark labour rates based on Hays 2014 energy sector salary data against which the efficiency of the proposed labour rates could be assessed.

To undertake relevant comparisons Marsden Jacob ‘normalised’ the rates provided by each business. The total labour rates are shown in Table 16.5.

Our position is to accept the Marsden Jacob recommended efficient benchmark labour rates, overhead and times taken to perform frequently requested services. In assessing ancillary network services we referred to the total labour rates (Table 16.5) as proposed by Marsden Jacob as benchmark rates. We used these rates to determine whether the proposed fees for fee based ancillary network services reflect the underlying cost of an efficient labour rate (being the benchmarks established by Marsden Jacob). To do this we used Marsden Jacob maximum labour rates including on-costs and overhead. While it may be appropriate for ActewAGL to charge lower than the maximum labour rates for fee based ancillary network services, by adopting the maximum amount we consider we are providing the distributor with a reasonable opportunity to recover efficient costs at least its efficient costs. This allows for some potential differences between the services provided and costs faced by ActewAGL.

All of ActewAGL's proposed raw labour rates fell within the benchmark maximum recommended by our consultant except for Office support service delivery and senior technical officer / Engineer design section.

**Table 16.4      Benchmarked raw labour rates (excluding basic leave entitlements, on-costs and overhead,\$2014–15)**

Category	Description	Hays benchmark	Marsden Jacob
	Office Support service delivery		
Admin	Administration Support	18.27 to 38.46	Max. 39.00
	Administration Support		
	Administration		
	Electrical worker		
	Technical Specialist		
Technical	Technical Specialist	31.25 to 57.69	Max. 59.00
	Indoor technical officer		
	Outdoor technical officer		
	Project Officer Design Section		
Engineer	EO 7/Engineer	36.06 to 72.12	Max. 69.00
	Engineer		
	Engineering Officer		



	Electrical worker - labourer		
	Electrical Apprentice		
Field Worker	Field Worker	31.25 to 48.08	Max. 47.00
	Field Worker		
	Line Worker 9		
	Field Worker		
	Senior Engineer		
Senior Engineer	Senior Technical officer / Engineer Design section	48.08 to 81.73	Max. 82.00
	Senior Engineer		

Source: Marsden Jacob Associates' analysis of labour rates and on-costs.

Marsden Jacob recommended a maximum on-cost for ancillary network services of 52.23 per cent. ActewAGL's were below this recommended maximum and therefore was accepted by us.

Marsden Jacob found that ActewAGL's overhead rate fell within the maximum average overhead rate it recommended for ancillary network services.

Table 16.5 summarises the total labour rates (including all on-costs and overheads) Marsden Jacob recommended.

For fee based ancillary network services, we have adopted Marsden Jacob's maximum rate to determine whether the fee is efficient.

For quoted services we consider the appropriate rate is the Marsden Jacob rate determined for the individual business. As noted above by adopting the maximum amount for fee based services we are allowing for some potential differences between the services provided and costs faced by ActewAGL. For quoted services it is more appropriate to use the individual business as by adopting this rate we are using the businesses proposed rates where appropriate (i.e. fall within the maximum efficient rates established by Marsden Jacob) or Marsden Jacob's recommended rates (as applicable) for each of raw labour rates, on-costs and overheads. We consider this is a more efficient pricing outcome for quoted services.

**Table 16.5 Benchmarked total labour rates—including on-costs and overheads (\$2014–15)**

Category	Description	Marsden Jacob
	Office Support service delivery	
Admin	Administration Support	Max. 89.06
	Administration Support	
	Administration	
Technical	Electrical worker	Max.

	Technical Specialist	142.81
	Technical Specialist	
	Indoor technical officer	
	Outdoor technical officer	
	Project Officer Design Section	
Engineer	EO 7/Engineer	Max. 177.52
	Engineer	
	Engineering Officer	
	Electrical worker - labourer	
	Electrical Apprentice	
Field Worker	Field Worker	Max. 133.80
	Field Worker	
	Field Worker	
	Line Worker 9	
Senior Engineer	Senior Technical officer / Engineer Design section	Max. 210.96
	Senior Engineer	
	Senior Engineer	

Source: Marsden Jacob analysis of labour rates and on-costs.

## Quoted services

We approve ActewAGL's proposed form of control for quoted services:

$$Price = labour + contractor services + materials + other costs + risk margin$$

Where:

Contractor services—reflects all costs associated with the use of external labour in the provision of the services, including overhead and any direct costs incurred with performing this service.

Materials—reflects the cost of material and any overhead Other costs—consists of costs that arise due to special requirements of the job or services provided at above the least cost technically acceptable standard.

ActewAGL did not propose rates for materials, contractor services or other costs. We do not approve ActewAGL's proposed labour rates for quoted services for Office support delivery and senior technical officer because they exceed efficient levels. Table 16.6 below sets out our draft decision labour rates for ActewAGL's quoted services for labour rate plus on-costs and the total labour maximum labour rate (including overheads) for ActewAGL quoted services.

**Table 16.6 labour rates (including on-costs) for quoted services, (\$2014–15)**

Classification	Draft Decision maximum labour rate - includes overhead (\$)
Electrical Worker	130.98
Electrical Worker – labourer	106.99
Electrical apprentice	98.31
Office support Service Delivery	87.59
Project Officer Design section	154.24
Senior Technical Officer / Engineer Design section	184.17

Source: Marsden Jacob and AER analysis.

## De-energisation for debt non-payment

Under the Retail Law, each authorised retailer must develop, maintain and implement a customer hardship policy for their residential customers.<sup>17</sup> The purpose of a retailer’s customer hardship policy is prescribed in the Retail Law—to identify customers experiencing payment difficulties due to hardship and to assist those customers to better manage their energy bills on an ongoing basis.<sup>18</sup>

Further, the Retail Law requires us, when considering whether to approve a retailer’s customer hardship policy (or variation), to have regard to the following principles:

- that the supply of energy is an essential service for residential customers
- that retailers should assist hardship customers by means of programs and strategies to avoid disconnection solely due to an inability to pay energy bills
- that disconnection of premises of a hardship customer due to inability to pay energy bills should be a last resort option, and
- that residential customers should have equitable access to customer hardship policies, and that those policies should be transparent and applied consistently.<sup>19</sup>

We consider that the disconnection for debt non-payment service fee is reasonable because there is a cost to a network operator to disconnect supply. It would only be imposed in a “last resort option” scenario. Retailers’ customer hardship policies exist to help customers manage their ongoing electricity bills.

## 16.5 Metering

Our draft decision on ActewAGL’s metering proposal is made in the context of ongoing policy reform. We have based our assessment on the rules in place at the time of this draft decision, but have had regard to the likelihood of policy reform in the future.

<sup>17</sup> AER, Energy retailers’ customer hardship policies, <http://www.aer.gov.au/retail-markets/energy-retailers-customer-hardship-policies> accessed: 20 October 2014.

<sup>18</sup> AER, Energy retailers’ customer hardship policies, <http://www.aer.gov.au/retail-markets/energy-retailers-customer-hardship-policies> accessed: 20 October 2014.

<sup>19</sup> AER, Energy retailers’ customer hardship policies, <http://www.aer.gov.au/retail-markets/energy-retailers-customer-hardship-policies> accessed: 20 October 2014.

Currently, competition in metering is limited to large customers in the national electricity market while regulated distribution network service providers have the sole responsibility to provide small customers with metering services.<sup>20</sup>

The Australian Energy Market Commission is presently in the process of making a rule change that would expand competition in metering and related services to help facilitate a market led roll out of advanced metering technology. This in turn would enable the uptake of demand side participation products and services.<sup>21</sup>

Our distribution determination should be robust enough to handle the transition to competition as soon as the rule change takes effect, rather than requiring amendments once the regulatory period has commenced. As such, we do not consider ActewAGL's metering proposal adequately prepares for competition in metering by only applying an annual charge and considering the introduction of an exit fee during the regulatory control period.

### 16.5.1 Draft Decision

We maintain our alternative service classification for type 5 and 6 meter services which covered metering installation services, metering provision, maintenance, reading and data services.<sup>22</sup> However, our draft decision is to classify residual metering costs as a standard control service. This is a category of cost that was not explicitly considered in our framework and approach.

We maintain our framework and approach decision that the control mechanism for alternative control metering services should be price caps on individual services.<sup>23</sup>

However, we reject ActewAGL's proposed structure of metering services that would see it have only one schedule of annual charges. We consider there should be two categories of individual alternative control metering services:

- upfront capital charges
- annual metering charges

We generally accept ActewAGL's limited building block approach as the basis for establishing annual metering charges but not the proposed values of particular building blocks:

- We do not accept ActewAGL's proposed capital expenditure building block. Our draft decision allows \$8.3 million in capital expenditure for annual metering charges instead of the proposed \$33.3 million (\$2014-15). This is a result of our cost assessment and also our decision that customers should pay for new/upgraded meter capital costs upfront and therefore does not need to be part of the capital expenditure building block of annual charges.
- Our cost assessment led us to approve \$14.3 million in operating expenditure<sup>24</sup> for annual metering charges and substitute that amount for the proposed \$19.5 million (\$2014-15).

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<sup>20</sup> NER cl. 7.2.3(a). Small customers refers to any customer with less than 160MWh annual consumption (effectively all residential and small business customers fall into this category).

<sup>21</sup> AEMC, *Expanding competition in metering and related services in the National Electricity Market, Consultation Paper*, 17 April 2014.

<sup>22</sup> AER, *Stage 1 Framework & Approach Paper: ActewAGL*, March 2013, p. 22.

<sup>23</sup> AER, *Stage 1 Framework & Approach Paper: ActewAGL*, March 2013, p. 28.

<sup>24</sup> Exclusive of debt raising costs.

For the purposes of the draft decision we have approved one schedule of annual charges; however, we consider it is more appropriate to have a separate schedule of annual charges for new and existing customers. The annual charge for existing customers should include capital cost recovery, but new customers (who have made an upfront capital contribution) should not have to make such a payment as part of their annual charge.

We do not accept ActewAGL's proposal to consider introducing an exit fee part way through the 2015-19 regulatory period once the metering rule changes comes into effect. Our alternative is to classify residual capital costs (the capital costs the customer would have paid through annual charges had they remained a regulated metering customer) as a standard control service and recover these through network tariffs.

As a result of changing the number of individual services and based on our cost assessment, we reject ActewAGL's proposed schedule of annual charges. Our substitute annual charges and upfront charges are set out in appendix 16.5.5A.1.3.

## 16.5.2 Proposal

### Structure of metering services

ActewAGL maintained our framework and approach decision to classify type 5 and 6 metering services as alternative control services and to apply price caps on individual services.

ActewAGL proposed one type of metering service, the cost of which would be recovered via a schedule of annual charges. The proposed charges vary according to a customer's network tariff.

Unlike the NSW distribution businesses, ActewAGL did not propose a separate upfront charge for new and upgraded connections. Instead it proposed that the capital costs of such installations would be recovered as part of the annual metering services charge.

ActewAGL did not propose a method to recover residual capital costs if a customer were to leave regulated metering during the regulatory period. However, ActewAGL did state it "will consider the introduction of an exit fee during the regulatory period, to manage the risk associated with customers switching [from regulated to unregulated meter providers]."<sup>25</sup>

### Cost assessment

ActewAGL built up the costs for its proposed annual charges by applying a limited 'building block' approach. This involved forecasting the revenue requirement for each of ActewAGL's metering related costs. More specifically, it used a 'bottom up' approach to forecast its capital expenditure requirement for the 2014–19 regulatory control period, but a 'base, step, trend' approach for forecasting operating expenditure.

ActewAGL's proposed operating expenditure is much higher than actual expenditure in the 2009–14 regulatory control period. ActewAGL explained that this is because it has proposed three step changes to recover the cost of activities not captured in the base year (2012–13).<sup>26</sup> The step changes relate to:

- changes to ActewAGL's cost allocation method

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<sup>25</sup> ActewAGL, *Regulatory proposal*, June 2014, p. 335.

<sup>26</sup> ActewAGL, Response to information request, AER ActewAGL 032, 11 September 2014, p. 10.

- the commencement of TNSP metering from 2014–15
- the requirement to conduct visual inspection program for low voltage current transformer (CT) meters.

Table 16.7 sets out ActewAGL's proposed metering building block requirement.

**Table 16.7 ActewAGL's proposed metering building block revenue requirement (\$m, 2014–15)**

	2014–15	2015–16	2016–17	2017–18	2018–19
New and replacement capital expenditure	6.64	6.55	6.56	6.70	6.86
Opening RAB	0.46	1.33	2.07	2.64	3.19
Total capital expenditure	7.10	7.89	8.63	9.35	10.05
Total operating expenditure	3.32	3.70	3.74	3.86	4.82
Total proposed revenue	<b>10.42</b>	<b>11.59</b>	<b>12.37</b>	<b>13.21</b>	<b>14.88</b>

Source: ActewAGL, *Attachment B8, Post tax revenue model–Metering*, May 2014. Converted to \$2014-15.

Table 16.8 converts the proposed building block requirements into the price caps that would apply for annual metering services.

**Table 16.8 ActewAGL's proposed metering building block revenue requirement (\$m, 2014–15)**

Quarterly basic	17.87
Accumulation and time-of-use	
Monthly basis	31.25
Accumulation and time-of-use	
Time-of-use metering rate	31.25
Time-of-use meters read monthly	

Monthly manually read interval metering rate	2.52
Interval meters recording at either 15- or 30-minute intervals, read manually and processed monthly	

Internal metering rate	0.00
Sites entitled to the Internal Network charge	

Quarterly manually-read interval metering rate	71.97
Interval meters recording at either 15- or 30-minute intervals, read manually and processed quarterly	

Source: ActewAGL, *Regulatory proposal, A2 – Appendix 5, Alternative control charges unit rates and revenues*, May 2014. Converted to \$2014-15.

### 16.5.3 Assessment approach

#### Structure of metering services

We largely maintained the classification decision for metering costs to be alternative control services.

ActewAGL did not propose how it would recover residual metering costs for customers who take up metering services from alternative providers and instead indicated they would consider introducing an exit fee during the 2015–19 regulatory period once the rule change for metering competition takes effect. We do not consider this is appropriate as our classification decisions apply for the duration of the entire regulatory period covered by our distribution determination.<sup>27</sup>

As such, we have considered residual metering cost recovery as part of our draft decision. We did so because it is now a foreseeable category of cost likely to arise in the regulatory period that was not explicitly considered in our framework and approach paper.<sup>28</sup>

Our classification decision is made with regard to the factors set out in clauses 6.2.2(c) of the rules.

We had particular regard to:

- How the classification may influence the potential for competition in unregulated metering. Stakeholders raised concern that recovering residual capital costs through exit fees will inhibit competitive entry into an unregulated metering market<sup>29</sup>

<sup>27</sup> NER, cl. 6.2.3.

<sup>28</sup> NER, cl. 6.12.3 (b) (cl). We may depart from the classification and control mechanism decisions made in our framework and approach paper if we consider there have been unforeseen circumstances. The unforeseen circumstance in this case was that there previously was no stranding risk because customers had no choice to exit regulated metering. As such, we did not consider residual metering costs in our framework and approach paper (March 2013) which was released prior to SCER metering rule change request (October 2013).

<sup>29</sup> Consumer Challenge Panel, *Updated submission on NSW DNSPs regulatory proposals 2014-19*, 15 August 2014, pp. 36-37.

Vector Limited, *Submission on AER Issues paper on NSW electricity distribution regulatory proposals*, 8 August 2014, p. 4.

ERAA, *Submission on Issues paper NSW electricity distribution regulatory proposals*, 8 August 2014, p. 2.

Origin Energy, *Submission on NSW electricity distributors regulatory proposal (attachment 1)* - 8 August 2014, p. 33.

AGL, *Submission on NSW electricity distribution networks regulatory proposals*, 8 August 2014, p. 21.

PIAC, *Submission on NSW electricity distribution network price determination*, 8 August 2014, p. 105.

- A method that provides administrative simplicity for customers, ActewAGL and the AER where possible
- The extent to which costs can be directly attributable to individual customers in order to minimise cross subsidies

In addition to the classification factors, we had regard to the revenue and pricing principles in the national electricity law which include providing a distributor with a reasonable opportunity to recover at least its efficient costs.<sup>30</sup>

We maintain our overall control mechanism decision to apply caps on the prices of individual services to alternative control service metering charges. However, as part of our draft decision we consider it necessary to more closely assess whether the individual services proposed by ActewAGL meet the control mechanism factors set out in clause 6.2.5 (d) of the NER. That is, whether it was more appropriate to allocate metering services costs through annual charges, upfront fees or network charges recovered from all customers. We had particular regard to:

- How the control mechanism may influence the potential for competition in unregulated metering
- The regulatory arrangements that applied in the most recent distribution determination
- The desirability for consistency of regulatory arrangements for similar services between relevant jurisdictions.

## Cost assessment

### *Annual charges*

We assessed ActewAGL's proposed capital and operating expenditure building blocks and the roll forward of the metering regulatory asset base.

In assessing the proposed capital expenditure, we reviewed ActewAGL's 'unit costs' and 'volume forecasts' capital expenditure. More specifically, we assessed proposed 'material' and 'non-material' unit costs and the forecast volume of 'reactive' and 'proactive' meter replacements. Material costs relate to the hardware used to provide metering services. Non-material costs relate to the activities (labour) which ActewAGL must perform to install a new or replaced meter.

We took a different approach to assessing ActewAGL's proposed operating expenditure. Such expenditure refers to the operating, maintenance and other non-capital costs, including labour, incurred in the provision of metering services. As the expenditure associated with these types of activities is largely recurrent in nature, we considered ActewAGL's historical costs as an appropriate base to forecast future costs. We also used benchmarking to assess the relative efficiency of the base year compared with comparable network businesses in the national electricity market.

While not required under the rules, we chose to use benchmarking to keep a consistent approach with how we assessed standard control services operating expenditure. The benchmarking approach we used to assess base operating expenditure for metering is a simpler version than what we used to assess standard control operating expenditure. This reflects the generally lighter handed regulatory approach to alternative control services compared with standard control services and the fact that we had less tools available. For example, our econometric modelling results we used to assess standard control operating expenditure were based on data for network services and therefore do not strictly

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<sup>30</sup> NEL, Revenue and Pricing Principles, 7A (2).



apply to metering services. We used a partial performance indicator for our benchmarking method, comparing annual metering operating expenditure per customer across non-Victorian network businesses<sup>31</sup> in the national electricity market. We adjusted the benchmarking results for customer density which is a network characteristic that is an exogenous influence on operating expenditure requirements.

After making any efficiency adjustments to ActewAGL's base annual operating expenditure and accounting for any (positive or negative) step changes, we trended forward that amount over the 2014–15 and 2015–19 regulatory control periods. This is known as the 'base, step and trend' approach.

For our draft decision, we accepted the proposed metering customer numbers.<sup>32</sup> This is because we expect the AEMC's draft rule change on competition in metering (to be released March 2015) will influence forecasts of metering customers, such as the rate of take-up of new contestable meters. As such, we will assess whether metering customer forecasts are reasonable in our final decision which may in turn affect the capital and operating expenditure building blocks.

For both capital and operating expenditure, we had regard to factors in chapter 6 of the rules. Namely the capital and operating expenditure objectives and criteria.<sup>33</sup> Though these considerations relate to standard, as opposed to alternative, control services, they are helpful and relevant in providing a general framework for assessing a building block expenditure forecast. Among other things, when considering a distribution business' forecast, the capital and operating expenditure objectives and criteria state we should consider:

- the efficient costs required
- the costs a prudent operator would incur
- whether the proposed cost inputs are reasonable.<sup>34</sup>

### ***New or upgraded connections***

ActewAGL did not propose upfront charges for new or upgraded connections and therefore did not propose a forecast of these charges.

Notwithstanding this, we consider the recovery of the capital costs relating to new or upgraded connections as an upfront payment important in the context of the AEMC's ongoing policy considerations. Our draft decision, therefore, determines separate charges for new and upgraded connections. We determined these by considering ActewAGL's material and non-material costs associated with installing new or upgraded meters.

### ***Residual metering costs***

We assessed the metering RAB amount as a building block component that makes up the annual charges. We then considered how to recover any residual capital costs (which is the portion of the metering RAB that risks becoming stranded if a customer leaves) which we dealt with through our

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<sup>31</sup> Victorian distributors rolled out advanced metering technology in the last regulatory period. These costs are not comparable to other distributors which have type 5 and 6 meters.

<sup>32</sup> To be consistent in our analysis, the customer numbers we used for benchmarking and trending forward was the sum of residential and non-residential customers not on a demand tariff (provided in the economic benchmarking and regulatory RIN responses) as a proxy for type 5 and 6 metering customers.

<sup>33</sup> NER, cl. 6.5.7.

<sup>34</sup> NER, cl. 6.5.7(c).

classification decision. We therefore did not separately assess the quantum of residual capital costs as it is a consequence of our assessment of the metering RAB value.

#### **16.5.4 Reasons for draft decision**

##### **Structure of metering services**

We accept ActewAGL's proposal to include metering RAB recovery in the annual charge for existing customers as this supports the transition to competition. It gives customers and potential entrants a transparent signal of the avoidable cost if they were to switch to unregulated metering.

However, having metering RAB recovery in the annual charge means there is a risk of stranded metering costs if customers leave (because they will stop paying the annual charge). We consider that ActewAGL should be able to recover residual capital costs to avoid them becoming stranded.

We consider the economically efficient investment signal to switch to unregulated metering would be to set individual exit fees based on the remaining economic value of the meter. The remaining economic value would vary with the capability of the meter (the meter type) and remaining life (the age) of the meter. This would ensure that an existing meter would only be replaced if the new meter delivers sufficient additional economic value to cover its own cost and cover any remaining economic value of the existing regulated meter.

While at a theoretical level this option has merit, at a practical level it is infeasible for a range of reasons. Firstly there are information constraints. Most distributors do not record information about meter asset type or age at the customer level. Secondly, we are not satisfied that the amount distributors are entitled to recover (based on actual costs) corresponds to the remaining economic value of a meter. This is because regulated metering costs may not be efficient because the network operators have not faced competitive pressures.

Searching for alternative approaches, we tested various options with stakeholders at our metering workshop on 11 September 2014. We explored the possibility of having more granular exit fees based on meter type, the impact of accelerated depreciation and classifying some metering costs as standard control services. There was consensus that residual capital costs that arise when a customer leaves should be classified as a standard control service. In this way, annual charges still reflect actual metering costs to the greatest extent possible.

Our draft decision is for ActewAGL to recover residual metering capital costs through general network tariffs i.e. smeared across the general customer base. In practice, regulated metering customers will pay for metering assets as part of their annual charges. This will ensure that the annual charges are transparent and cost reflective to the greatest extent possible. If a customer chooses to switch to an unregulated metering provider, the remaining portion of residual capital costs attributable to that customer is moved back into the standard control services RAB. Due to information constraints, this portion will be an average amount each customer owes, rather than varying by the particular meter assets at the customer's premise which will vary with meter type and age.

The adjustment of moving residual capital costs back into standard control services RAB would happen on an annual basis through a b-factor adjustment (see attachment 14 for how it would work).

There is a risk that if many customers churn in the same year, the impact on DUoS tariffs may be large. To mitigate this possible price volatility we propose to introduce a tolerance limit which would cap how much extra revenue may be added to DUoS tariffs on an annual basis (any amount above

the annual tolerance level would be recovered in subsequent years). See control mechanisms attachment 14 for the mechanics of how this tolerance level would work.

We consider our approach better meets the criteria outlined in 16.5.3 of this attachment:

- Impact on competition—our approach does not involve directly charging leaving customers for residual capital costs through a lump sum exit fee which stakeholders identified as a significant barrier to competitive entry.
- Administrative simplicity—
  - Simple for switching customers because they do not incur exit fees based on decisions regarding cost and meter type that they did not have any choice in originally
  - Makes use of existing information that ActewAGL has, rather than requesting further calculations on the remaining economic or technical life of individual metering assets which would be burdensome to determine
  - Requires limited additional work for ActewAGL and the AER in making B-factor adjustments and managing the tolerance levels on an annual basis
- Minimise cross subsidies—our approach does involve some cross subsidies because when a customer leaves, the proportion of the metering RAB they would have paid through their annual charges is put back into standard control RAB and recovered through the general network customer base.

We are satisfied that this is appropriate overall, as future metering costs are signalled directly to specific customers through having a reasonably cost reflective annual charge and charging for the capital costs of new/upgraded connections upfront. Limited cross subsidies to recover just the residual capital costs is an appropriate exemption as these relate to existing meters which are sunk costs that customers did not originally have choice in incurring.

This is analogous to the approach taken by the AEMC on the distribution pricing rule change where future costs are signalled to customers, but residual network costs are to be recovered in a way that minimises distortions to the forward looking price signal<sup>35</sup> which will also likely lead to some cross subsidies.

Our concern with creating some cross subsidies is mitigated by the fact that there are likely to be collective benefits from switching to advanced metering technologies such as better demand side participation which may help lower overall network costs for all customers.

In regard to our obligation to ensure reasonable opportunity to recover at least efficient costs, our alternative approach is revenue neutral for ActewAGL.

We acknowledge that our decision to classify residual capital costs as a standard control service does risk increased meter switching. We do not know what the actual efficient exit fee should be for each customer because we do not know the type and age of every meter, but given that these are all functioning meters, it is likely that there is some remaining economic life and therefore the efficient fee would be a positive amount. Our alternative approach therefore risks faster entry than otherwise i.e.

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<sup>35</sup> AEMC, Draft National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014, 6.18.5 (f) and 6.18.5 (g)(3).

some meters being replaced even though they have significant remaining economic value, because our alternative exit fee (based on the incremental administration cost alone) is below the efficient exit fee.

However, on balance, we prefer to err on the side of faster entry rather than too low entry (the risk if we allowed ActewAGL to recover residual metering costs through an exit fee). We make this decision on the basis that it is the clear intent of policy makers to see a competitive metering market develop in the national electricity market. We also consider that it will help further the national electricity objective because advanced metering solutions facilitate the move towards cost reflective tariffs which are fundamental to achieve efficient use of and investment in distribution networks.

Our draft decision establishes two categories of alternative control metering services. We consider our alternative structure better meets the control mechanism factors<sup>36</sup> than ActewAGL's proposal:

- How the control mechanism may influence the potential for competition in unregulated metering

We consider that ActewAGL's proposal to bundle new/upgraded connection capital costs into the annual charge would inhibit the potential for competition in metering services from third party suppliers because customers would not face a price signal when they are deciding to get a new or upgraded meter.

The upfront charges should commence from 1 July 2015 and be recoverable from customers when they have a new or upgraded meter installed. We require this change to facilitate competition. When implemented, it should help level the competitive playing field for new and upgraded meters. This is by shifting how the capital costs for new and upgraded meters are recovered, from the annual metering services charge, where costs are smeared across all customers, to an upfront payment which new entrants to the market may compete with.

For the purposes of the draft decision we have only modelled one schedule of annual charges. However, the flow on impact from charging new/upgraded capital costs upfront is that we consider that it may be more appropriate to have separate annual charges for new customers that only recover metering operating expenditure. If new customers are paying for capital costs upfront, they should not have to contribute toward metering RAB recovery (which includes capital costs of existing and replacement meters) through their annual charges. This structure to charge capital costs upfront and to recover ongoing operating expenditure (which are avoidable costs) through annual charges would also mean that there will be no residual capital costs associated with new meter customer should they choose to switch to unregulated metering.

In contrast, existing customers who have not yet fully paid for the capital costs of their meters will have annual charges that recover both operating expenditure, capital expenditure and metering RAB recovery components.

- The regulatory arrangements that applied in the most recent distribution determination

We consider the policy reform in the metering space justifies departing from the control mechanism arrangements that applied in the most recent regulatory period. Our alternative structure of individual services will be able to better deal with the transition to competition in metering

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<sup>36</sup> NER, cl. 6.2.5 (d)

- The desirability for consistency of regulatory arrangements for similar services between relevant jurisdictions.

Our alternative structure of services for ActewAGL is consistent with the NSW distribution businesses proposal which we have accepted.

## Cost assessment

### Annual metering services

Our draft decision is to not accept ActewAGL's total proposed building block requirement for annual metering services. More specifically, we accept a building block approach to setting charges but do not accept ActewAGL's proposed capital and operating expenditure as components of that building block approach. We do not accept ActewAGL's proposed opening metering RAB as well.

### Capital expenditure building block

We reject ActewAGL's proposed \$33.20 million for the 2014–15 and 2015–19 regulatory control period and substitute it with \$8.27 million in capital expenditure. Table 16.9 sets out ActewAGL's proposed capital expenditure and our substitute, for each cost category.

**Table 16.9 Proposed and substitute capital expenditure for metering annual services (\$ m, 2014–15)**

	Proposed	Adjustment (unit costs)	Adjustment (volume forecast)	Draft decision
New meters	24.50	2.64	19.76	2.10
Replacements	8.69	2.46	0.00	6.17
Total	33.20	5.10	19.76	8.27

Source: ActewAGL, *Attachment B8, Post tax revenue model–Metering*, May 2014. Converted to \$2014-15.

### Unit costs

We engaged Marsden Jacob to assist us in our assessment of ActewAGL's forecast material unit costs. This involved the consultant considering the 'maximum rate that should be applied for each meter hardware category based on consideration of the rates applied across the business and a comparison against current market rates'.<sup>37</sup> These rates were sourced from online advertised prices and through direct engagement with major suppliers.<sup>38</sup>

Based on Marsden Jacobs' analysis we accept a weighted average for a type 6 single and three phase accumulation meter is reasonable. We substitute that in place of ActewAGL's proposed amount. More specifically, our substitute is an average of Marsden Jacobs' advice of the maximum price of a single phase type 6 meter (\$23.50) and a three phase type 6 meter (\$100). We have accepted all of ActewAGL's other material unit costs. Because the proposed unit prices for ActewAGL's metering hardware was provided to us in confidence, our draft decision does not list those proposed prices.

Marsden Jacob also reviewed ActewAGL's proposed non-material unit costs. It observed that ActewAGL's non-material costs for new type 6 meters was higher than the NSW businesses, but that

<sup>37</sup> Marsden Jacobs Associates, Consultant report to the AER on Alternative Control Services, October 2014, section 2.1.1.

<sup>38</sup> Marsden Jacobs Associates, Consultant report to the AER on Alternative Control Services, October 2014, section 2.1.1.

the hourly labour rate (including all on-costs and overhead charges) were reasonable. We have not made any adjustments to ActewAGL’s proposed capital expenditure building block for non-material costs.

### Forecast volumes

We do not accept ActewAGL’s forecast volumes of new meters and replacements. Table 16.10 sets out the substitute volume forecasts per meter we accept.

**Table 16.10 Approved volumes of meters for new and upgraded connections, reactive replacements, and proactive replacements (per meter)**

	Proposed	Approved
New meters	40 750	8 150
New photovoltaic meters	2 750	550
Replacements	18 250	18 250

Source: ActewAGL, *Regulatory proposal*, May 2014, p. 334.

ActewAGL’s forecast for new meters is disaggregated according to whether an installation is associated with a photovoltaic system.

For new meters not associated with a photovoltaic system, ActewAGL forecasts 8 150 installations in each year of the 2014–15 and 2015–19 regulatory control period, totalling 40 750 meters. Fewer new meters are forecast for photovoltaic systems. The forecast 2 750 meters is made up of 550 installations each year. We do not accept either of these forecasts for the reasons discussed next.

With respect to new meters, our draft decision is that ActewAGL should change its capital contribution policy. This is so that from 1 July 2015 the capital costs of both photovoltaic and non-photovoltaic new meters are recovered from customers as an upfront payment, made at the time of installation. The NSW distribution businesses proposed this change to their capital contribution policies, and we consider it will further the objectives of the reforms the AEMC is considering. When implemented, it should help level the competitive playing field for new meters. This is by shifting how the capital costs for such meters are recovered, from the annual metering services charge, where costs are smeared across all customers receiving regulated metering services, to an upfront payment which new entrants to the market are able to compete with in terms of price.

To facilitate this change in capital contribution policy from 1 July 2015, we accept forecasts for new meters in the 2014–15 placeholder year only. ActewAGL forecast 8 150 new meters in that year. It also forecast a further 550 new photovoltaic meters. We accept both volume forecasts. They are based on historical trends and take several other factors into account, such as land releases and building approvals in the Australian Capital Territory.<sup>39</sup>

With respect to replacement volumes, ActewAGL forecast 3 650 meters per year in the 2014–15 and 2015–19 regulatory control periods. We observed that this forecast is historically high compared to

<sup>39</sup> ActewAGL, *Response to AER information request, ActewAGL AER 017*, 6 August 2014, p. 5.

the 2 722 meters ActewAGL replaced, on average, per year from 2008–09 to 2012–13.<sup>40</sup> The reason for the increase, according to ActewAGL, is adoption of a strategy to replace all meters exceeding their life expectancy of 40 years.<sup>41</sup>

We accept that it is prudent to replace meters which have exceeded their technical life. For that reason, we approve the forecast volume of replacements (18 250 meters).

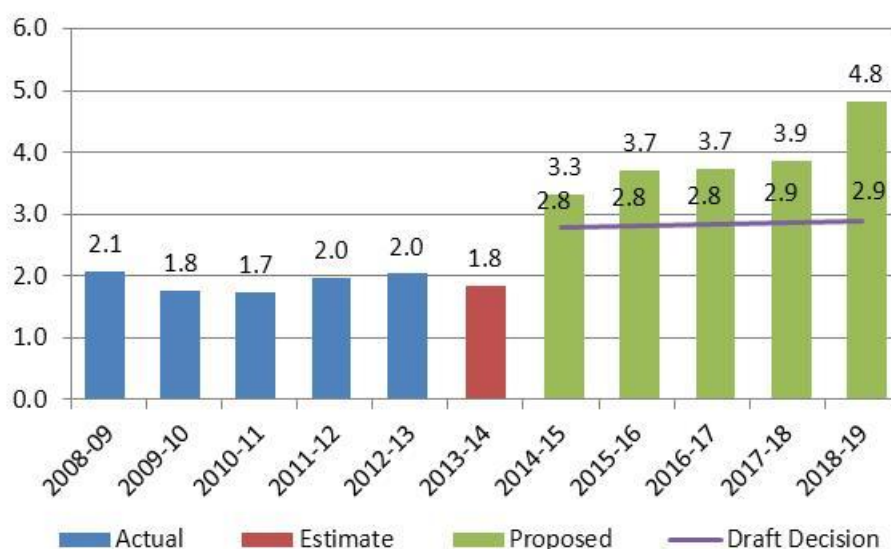
Our decision on ActewAGL’s forecast volumes has had a significant impact on its capital expenditure building block component of annual metering service charges. Notwithstanding this, ActewAGL will still be able to recover its costs. The only difference between our draft decision and ActewAGL’s proposal is that the cost of new or upgraded connections will be recovered via upfront capital contributions, rather than as part of annual metering charges.

### Operating expenditure building block

We approve \$14.3 million in operating expenditure for annual metering services and substitute that amount for ActewAGL’s proposed \$19.5 million (\$2014–15). This is a 27 per cent reduction from the proposed amount.

Figure 16.3 shows ActewAGL’s actual, estimate and proposed operating expenditure compared to our substitute. We consider our substitute forecast to reasonably reflect the operating expenditure ActewAGL requires in the 2014–15 and 2015–19 regulatory control periods.

**Figure 16.3 ActewAGL’s proposed operating expenditure for Type 5 and 6 metering services, and our draft decision (\$ million, 2014–15)**



Source: AER analysis; ActewAGL, *Regulatory proposal, Attachment B14, Opex model*, May 2014.

<sup>40</sup> ActewAGL, *Response to AER information request, ActewAGL AER 007*, 17 July 2014, p. 5.

<sup>41</sup> ActewAGL, *Regulatory proposal, Attachment D6: meter asset management plan, Version 2.5*, 27 May 2014, p. 14.

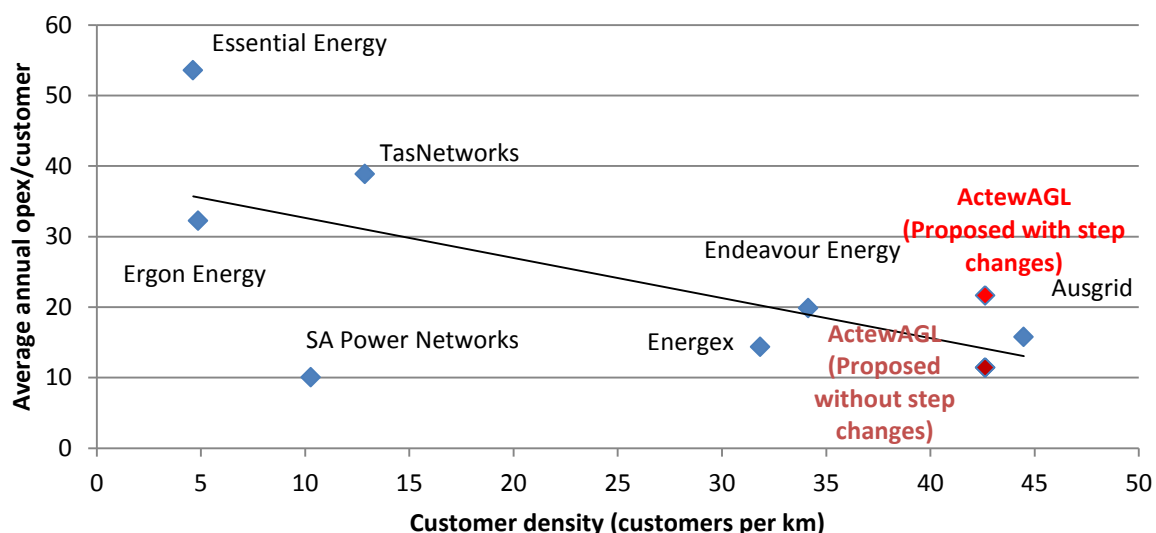
## Base expenditure

We found that the proposed base operating expenditure to be higher than what ActewAGL reasonably requires. We arrived at this conclusion by looking at the base from two different perspectives. These were ActewAGL's performance against benchmarking results and its revealed costs.

Consistent with our approach for standard control services, we examined the proposed base from another perspective by applying benchmarking. To do this we used a partial performance indicator which compared ActewAGL's proposed operating expenditure per customer against other non-Victorian distribution businesses in the national electricity market.

Figure 16.4 shows the results of our economic benchmarking. To normalise our comparison of ActewAGL's historical and proposed operating expenditure per customer, we accounted for customer density. We calculated this as the number of customers a distribution business has per kilometre of line length. We took customer density into account because businesses with a low customer density are likely to require higher operating expenditures. For example, this could be because of longer travel times to service customers.

**Figure 16.4 Benchmarking of operating expenditure per customer (\$ 2014–15)**



Source: AER analysis based on data from Economic Benchmarking regulatory information notices.

The results of our economic benchmarking show that ActewAGL's historical operating expenditure per customer is relatively efficient. Excluding SA Power Networks, ActewAGL has the lowest operating expenditure per customer in the national electricity market. We therefore consider ActewAGL's historic operating expenditure to be relatively efficient compared to other network businesses in the national electricity market. Therefore, we did not make any benchmarking adjustments to ActewAGL's base operating expenditure.

However we do consider ActewAGL's base should be at least as efficient as its costs in previous years. To assess this, we observed ActewAGL's operating expenditure in the last four years for which we have actual data (2009–10 to 2012–13). This is different to what ActewAGL did, in that it selected a single year (2012–13) as its base. We considered this approach but given that we did not apply an efficiency benefit sharing scheme to alternative control services, we consider an average of multiple years to be a better measure of a business' efficient base; it avoids any incentive to 'load' a single base year with expenditure going forward.



We therefore substitute ActewAGL proposed \$2.0 million, based on 2012-13 revealed costs, with a base annual operating expenditure of \$1.9 million which is its historical average (\$2014–15).

### Step changes

We observed that ActewAGL's proposed operating expenditure is much higher than its historical costs. For the 2014–15 and 2015–19 regulatory control periods, ActewAGL proposes to spend, on average, \$22 per customer (\$2014–15). This is double its historical expenditure from 2009–10 to 2012–13, which averaged \$11 per customer (\$2014–15). The significant difference is primarily due to proposed step changes.

We considered whether we should apply any step changes to the base operating expenditure we have determined as efficient for ActewAGL.

Step changes may be positive or negative. Positive step changes are applied when costs are likely to be incurred in the forecast period, but are not captured in the base. Negative step changes are the opposite. They are applied because costs in the base will not, or are unlikely to, be incurred in the forecast period.

ActewAGL proposed three step changes:

- changes to ActewAGL's cost allocation method
- the commencement of transmission metering from 2014–15
- the requirement to conduct visual inspection program for low voltage current transformer (CT) meters.

Our draft decision is to accept the proposed step change relating to the changes to ActewAGL's costs allocation method, but not the other two proposed step changes.

We accept \$0.8 million (\$2014–15) for the proposed step change relating to ActewAGL's cost allocation method. The step change is required because ActewAGL will begin allocating overheads directly to projects, in accordance with the cost allocation method we approved for the 2014–15 and 2015–19 regulatory control periods.

We do not accept the proposed \$0.5 million (\$2014–15) step change for the commencement of transmission metering in 2014–15. The proposed expenditure does not relate to types 5 and 6 metering services and therefore cannot be accepted as part of ActewAGL's cost recovery for annual metering services. This is in accordance with our classification of services in this draft decision.

We do not accept the proposed \$0.9 million (\$2014–15) step change for ActewAGL's visual inspect program for low voltage CT meters because the costs are recurrent in nature. ActewAGL's metering asset management plan states that the distribution business conducted inspections of all CT meters in 2008 and was due to conduct them in 2013.<sup>42</sup> We therefore do not accept the step change because the costs are already captured in the base operating expenditure.

We consider that ActewAGL should apply a negative step change to account for ancillary metering services from 1 July 2015 will be reclassified to ancillary network services and so should, therefore,

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<sup>42</sup> ActewAGL, Meter Asset Management Plan, Version 2.5. 27 May 2014, p. 14.

be excluded from metering operating expenditure allowance. We have not quantified the amount of this negative step change in our draft decision, but will apply it in our final decision.

We should note that ActewAGL will still recover its costs for ancillary metering services. But as with all ancillary network services, this will occur as an upfront payment from a customer to Ausgrid, rather than via the annual metering services charge.

### **Trend (2014–15 and 2015–19)**

We trended forward our base, plus \$4.0 million (\$2014–15) for positive CAM step change, to derive our substitute operating expenditure forecast. In the 2014–15 and 2015–19 regulatory control periods, this arrives at a substitute forecast of \$14.3 million (\$2014–15).

### **Metering regulatory asset base**

We accept the opening metering RAB as at 1 July 2014 of \$50.4 million as rolled forward by ActewAGL over the 2009–14 regulatory control period.

We accept the remaining and standard asset lives proposed by ActewAGL:

- The remaining asset lives for the existing metering assets are largely consistent with the remaining asset life derived from rolling it forward as at 1 July 2009 to 1 July 2014 using our preferred weighted average approach (see regulatory depreciation attachment 5 for more detail on ActewAGL's approach to determining remaining asset lives for all asset classes).
- The standard asset life proposed for replacement metering assets is reasonable. At the 2009 determination the standard asset life for meters was 40 years. However, in our more recent decisions the technical life of meters has been assessed to be between 15–25 years depending on the mix of meter types expected to be installed. Newer electronic meters can have a technical life of between 10–20 years, and are the most readily available and therefore the most likely to be installed by ActewAGL. Accordingly, a technical life of 15 years is reasonable given it is the mid-point of the range for these types of meters.

With the opening of competition in metering services, we have determined that where a customer switches service providers during the 2014–19 period, we will allow the DNSP to continue to recover the return on, and return of, capital on the existing and replacement assets through an annual addition to DUoS charges. Thus, the service provider does not under recover metering costs (the operation of this adjustment mechanism is discussed further in control mechanisms, attachment 14). At the end of the 2014-19 period, the amount of residual metering assets (due to customers switching) will be known. We may then consider accelerating the depreciation of these assets. Reporting requirements will be developed for the final decision so such assets can be identified and the residual value of the metering RAB determined.

We accept that all new meters for growth or replacement initiated by a customer be recovered upfront from customers.

### **New or upgraded connections**

We do not accept any of ActewAGL's proposed price caps for new and upgraded connections, which from 1 July 2015 will be recovered as an upfront charge to customers. ActewAGL did not include a forecast volume of new and upgraded connections for the 2015–19 regulatory control period. Because the charge will be recovered as a 'capital contribution' from 1 July 2015, we consider this to

be appropriate. We have therefore based our assessment of ActewAGL’s proposed price caps on ‘unit costs’ only.

Our reasons for not accepting ActewAGL’s proposed material unit costs are the same as those set out in our assessment of ActewAGL’s capital expenditure building block for the annual metering service charge. On the advice of Marsden Jacob, we consider the non-material unit costs to be reasonable and have accepted them.

Appendix 16.5.5A.1.3 contains our substitute prices for new or upgraded connections.

### 16.5.5 Control mechanism for metering

Our draft decision is to apply a price cap for the form of control to metering services. Under this form of control a schedule of prices is set for the first year. For the following year's the previous year’s prices are adjusted by CPI and an X factor. The form of control for metering services is set out below.

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

$$\bar{p}_i^t = \bar{p}_i^{t-1}(1 + CPI_t)(1 - X_i^t)$$

Where:

$\bar{p}_i^t$  is the cap on the price of service i in year t. However, for 2015–16 this is the price as determined in appendix A.1.

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

$CPI_t$  is the percentage increase in the consumer price index. It is calculated as follows:

The Consumer Price Index, All Groups Index Number (weighted average of eight capital cities) published by the Australia Bureau of Statistics for the December Quarter immediately preceding the start of regulatory year t;

divided by

The Consumer Price Index, All Groups Index Number (weighted average of eight capital cities) published by the Australia Bureau of Statistics for the December Quarter immediately preceding the start of regulatory year t–1;

minus one.

$X_i^t$  is zero

# A Appendix

## A.1 Draft Decision charges for alternative control services

### A.1.1 Ancillary network service charges

**Table 16.11 Ancillary network service charges, ActewAGL**

Service Name	Current price (in \$2014–15)	Price in final year of regulatory period
Premise re-energisation - existing network connection		
501 Re-energise premise – business hours	56.14	65.49
Re-energise premise – after hours	120.73	83.01
Premise de-energisation - existing network connection		
De-energise premise – business hours	49.59	65.49
De-energise premise for debt non-payment	93.55	130.98
Meter reconfiguration		
install interval meter	66.55	130.98
install/replace meter – micro renewable energy installation	66.55	261.96
Meter investigations		
Meter test (whole current) – business hours	69.23	261.96
Meter test (CV/VT) – business hours	350	261.96
Special / Additional meter reads		

Special meter read	35.55	35.41
Temporary network connections		
Temporary builders supply – overhead (business hours)	398.64	588.08
Temporary builders supply – underground (business hours)	703.64	1,284.48
New network connections		
New underground service connection – greenfield	0	553.42
New underground service connection – greenfield cable only	446	588.08
New underground service connection – greenfield metering only	0	368.95
New overhead service connection – brownfield (business hours)	288.18	772.56
New underground service connection – brownfield from front	691.82	1,284.48
New underground service connection – brownfield from rear	691.82	1,284.48
Network connection alterations & additions		
Overhead service relocation – single visit (business hours)	288.18	737.89
Overhead service relocation – two visits (business hours)	576.36	1,475.78
Overhead service upgrade – service cable replacement not required	371.45	737.89
Overhead service upgrade – service cable replacement required	691.82	772.56

Underground service upgrade – service cable replacement not required	371.45	1,249.82
Underground service upgrade – service cable replacement required	691.82	1,284.48
Underground service relocation – single visit (business hours)	691.82	1,284.48
Install surface mounted point of entry (POE) box	456	592.81
Temporary de-energisation		
Temporary de-energisation – LV (business hours)	462.27	392.94
Temporary de-energisation – HV (business hours)	462.27	392.94
Supply abolishment / removal		
Supply abolishment / removal – overhead (business hours)	288.18	553.42
Supply abolishment / removal – underground (business hours)	288.18	999.85
Miscellaneous customer initiated services		
Install & remove tiger tails – per installation (business hours)	1085	1,296.59
Install & remove tiger tails – per span (business hours)	560	644
Install & remove warning flags – per installation (business hours)	745	1,106.84
Install & remove warning flags – per span (business hours)	480	552

Embedded generation – operation & maintenance fees		
small embedded generation opex fees – connection assets (per cent)	2	2
small embedded generation opex fees – shared network asset (per cent)	2	2
Connection enquiry processing – PV installations		
PV connection enquiry – LV class 1 (<= 10kW single phase / 30kW three phase)	0	0
PV connection enquiry – LV class 2 to 5 (> 30kW <= 1500kW three phase)	514.55	514.55
PV connection enquiry – HV	1029.09	1,029.09
Provision of information for Network technical study for large scale installations	11580	11,580.00
Network design & investigation / analysis services – PV installations		
Design & investigation – LV connection class 1 PV (<= 10kW single phase / 30kW three phase)	0	0
Design & investigation – LV connection class 2 PV (> 30kW and <= 60kW three phase)	3705.45	3705.45
Design & investigation – LV connection class 3 PV (> 60kW and <= 120kW three phase)	4837.27	4837.27
Design & investigation – LV connection class 4 PV (> 120kW and <= 200kW three phase)	7925.45	7925.45
Design & investigation – LV connection class 5 PV (> 200kW and <= 1500kW three phase)	10732.73	10732.73
Design & investigation – HV connection class 5 PV (> 200kW and <= 1500kW three phase) - customer network study	11560	11560

Residential estate subdivision services (per block)

Subdivision electricity distribution network reticulation – multi-unit blocks	0	0
Subdivision electricity distribution network reticulation – blocks <= 650m <sup>2</sup>	600	600
Subdivision electricity distribution network reticulation – blocks 650 - 1100m <sup>2</sup> with average linear frontage of 22-25 meters	1100	1100
Upstream augmentation (per kVA of capacity)		
HV feeder	34.2	34.2
Distribution substation	19.82	19.82
Rescheduled site visits		
Rescheduled site visit – one person	125	130.98
Rescheduled site visit – service team	375	553.42
Trenching charges		
Trenching – first 2 meters	n/a	494.50
Trenching – subsequent meters	n/a	115.00
Boring charges		
Under footpath	n/a	897.00
Under driveway	n/a	1,069.50

Source: AER analysis.

Note: final prices will differ once actual CPI is known.



**Table 16.12 Ancillary network services, ActewAGL for first year of regulatory control period (\$2014–15)**

Service Name	Current price (\$2014–15)	Proposed price (\$2014–15)	AER draft decision (\$2014–15)
<i>Premise re-energisation - existing network connection</i>			
Re-energise premise – business hours	56.14	61.75	61.75
Re-energise premise – after hours	120.73	108.66	108.66
<i>Premise de-energisation - existing network connection</i>			
De-energise premise – business hours	49.59	54.55	54.55
De-energise premise for debt non-payment	93.55	105.24	105.24
<i>Meter reconfiguration</i>			
install interval meter	66.55	83.19	83.19
install/replace meter – micro renewable energy installation	66.55	99.83	99.83
<i>Meter investigations</i>			
Meter test (whole current) – business hours	69.23	103.85	103.85
Meter test (CV/VT) – business hours	350	315	315
<i>Special / Additional meter reads</i>			
Special meter read	35.55	35.94	35.94
<i>Temporary network connections</i>			
Temporary builders supply – overhead (business hours)	398.64	448.47	448.47

Temporary builders supply – underground (business hours)	703.64	844.37	844.37
<i>New network connections</i>			
New underground service connection – greenfield	0	0	0
New underground service connection – greenfield cable only	446	490.6	490.6
New underground service connection – greenfield metering only	0	0	0
New overhead service connection – brownfield (business hours)	288.18	403.45	403.45
New underground service connection – brownfield from front	691.82	830.18	830.18
New underground service connection – brownfield from rear	691.82	830.18	830.18
<i>Network connection alterations &amp; additions</i>			
Overhead service relocation – single visit (business hours)	288.18	374.63	374.63
Overhead service relocation – two visits (business hours)	576.36	749.27	749.27
Overhead service upgrade – service cable replacement not required	371.45	464.31	464.31
Overhead service upgrade – service cable replacement required	691.82	761	761
Underground service upgrade – service cable replacement not required	371.45	520.03	520.03
Underground service upgrade – service cable replacement required	691.82	899.37	899.37

Underground service relocation – single visit (business hours)	691.82	899.37	899.37
Install surface mounted point of entry (POE) box	456	501.6	501.6
<i>Temporary de-energisation</i>			
Temporary de-energisation – LV (business hours)	462.27	416.04	416.04
Temporary de-energisation – HV (business hours)	462.27	416.04	416.04
<i>Supply abolishment / removal</i>			
Supply abolishment / removal – overhead (business hours)	288.18	345.82	345.82
Supply abolishment / removal – underground (business hours)	288.18	403.45	403.45
<i>Miscellaneous customer initiated services</i>			
Install & remove tiger tails – per installation (business hours)	1085	1193.5	1193.5
Install & remove tiger tails – per span (business hours)	560	616	616
Install & remove warning flags – per installation (business hours)	745	838.13	838.13
Install & remove warning flags – per span (business hours)	480	528	528
<i>Embedded generation – operation &amp; maintenance fees</i>			
small embedded generation opex fees – connection assets	2%	2%	0.02
small embedded generation opex fees – shared network asset	2%	2%	0.02

<i>Connection enquiry processing – PV installations</i>			
PV connection enquiry – LV class 1 (<= 10kW single phase / 30kW three phase)	0	0	0
PV connection enquiry – LV class 2 to 5 (> 30kW <= 1500kW three phase)	514.55	522.27	522.27
PV connection enquiry – HV	1029.09	1044.53	1044.53
Provision of information for Network technical study for large scale installations	11580	11753.7	11753.7
<i>Network design &amp; investigation / analysis services – PV installations</i>			
Design & investigation – LV connection class 1 PV (<= 10kW single phase / 30kW three phase)	0	0	0
Design & investigation – LV connection class 2 PV (> 30kW and <= 60kW three phase)	3705.45	3761.03	3761.03
Design & investigation – LV connection class 3 PV (> 60kW and <= 120kW three phase)	4837.27	4909.83	4909.83
Design & investigation – LV connection class 4 PV (> 120kW and <= 200kW three phase)	7925.45	8044.33	8044.33
Design & investigation – LV connection class 5 PV (> 200kW and <= 1500kW three phase)	10732.73	10893.72	10893.72
Design & investigation – HV connection class 5 PV (> 200kW and <= 1500kW three phase) - customer network study	11560	11733.4	11733.4
<i>Residential estate subdivision services (per block)</i>			
Subdivision electricity distribution network reticulation – multi-unit blocks	0	0	0
Subdivision electricity distribution network reticulation – blocks <= 650m <sup>2</sup>	600	609	609

Subdivision electricity distribution network reticulation – blocks 650 - 1100m <sup>2</sup> with average linear frontage of 22-25 meters	1100	1116.5	1116.5
<i>Upstream augmentation (per kVA of capacity)</i>			
HV feeder	34.2	34.71	34.71
Distribution substation	19.82	20.12	20.12
<i>Rescheduled site visits</i>			
Rescheduled site visit – one person	125	132.95	132.95
Rescheduled site visit – service team	375	421.88	421.88
<i>Trenching charges</i>			
Trenching – first 2 meters	n/a	501.92	501.92
Trenching – subsequent meters	n/a	116.73	116.73
<i>Boring charges</i>			
Under footpath	n/a	910.46	910.46
Under driveway	n/a	1085.54	1085.54

Source: AER analysis.

**Table 16.13 draft decision X-factors to apply to ancillary network services**

Service		AER Draft Decision X factors (per cent)			
		2015-16	2016-17	2017-18	2018-19
Premise Re-energisation – Existing Network Connection					
501	Re-energise premise – Business Hours	-9.04	-8.67	-1.00	1.2
502	Re-energise premise – After Hours	10.96	10.63	10.50	2.2
Premise De-energisation – Existing Network Connection					
503	De-energise premise – Business Hours	-9.04	-9.37	-9.50	-2.5
505	De-energise premise for debt non-payment	-11.54	-11.87	-12.00	-1.4
Meter Reconfiguration					
507	Install Interval Meter	-24.04	-24.37	-24.50	-3.8
509	Install / Replace Meter – Micro Renewable Energy Installation	-49.04	-49.37	-49.50	-19.8
Meter Investigations					
504	Meter Test (Whole Current) – Business Hours	-49.04	-49.37	-49.50	-15.2
510	Meter Test (CT/VT) – Business Hours	10.96	10.63	3.90	1.3
Special / Additional Meter Reads					
506	Special Meter Read	-0.14	-0.87	-1.00	-0.89

Temporary Network Connections					
520	Temporary Builders' Supply – Overhead (Business Hours)	-11.54	-11.87	-12.00	-7.1
522	Temporary Builders' Supply – Underground (Business Hours)	-19.04	-19.37	-19.50	-9.0
New Network Connections					
523	New Underground Service Connection – Greenfield				
524	New Underground Service Connection – Greenfield Cable Only	-9.04	-9.37	-9.50	-2.0
525	New Underground Service Connection – Greenfield Metering Only				
526	New Overhead Service Connection – Brownfield (Business Hours)	-39.04	-39.37	-39.50	-0.6
527	New Underground Service Connection – Brownfield from Front	-19.04	-19.37	-19.50	-10.9
528	New Underground Service Connection – Brownfield from Rear	-19.04	-19.37	-19.50	-10.9
Network Connection Alterations and Additions					
541	Overhead Service Relocation – Single Visit (Business Hours)	-29.04	-29.37	-29.50	-20.0
542	Overhead Service Relocation – Two Visits (Business Hours)	-29.04	-29.37	-29.50	-20.0
543	Overhead Service Upgrade – Service Cable Replacement Not Required	-24.04	-24.37	-24.50	-4.8

544	Overhead Service Upgrade – Service Cable Replacement Required	-9.04	-3.97	-1.00	1.0
545	Underground Service Upgrade – Service Cable Replacement Not Required	-39.04	-39.37	-39.50	-26.1
546	Underground Service Upgrade – Service Cable Replacement Required	-29.04	-29.37	-14.40	1.4
547	Underground Service Relocation – Single Visit (Business Hours)	-29.04	-29.37	-14.40	1.4
548	Install surface mounted point of entry (POE) box	-9.04	-9.37	-9.50	-0.8
Temporary De-energisation					
560	Temporary de-energisation – LV (Business Hours)	10.96	3.33	-1.00	0.9
561	Temporary de-energisation – HV (Business Hours)	10.96	3.33	-1.00	0.9
Supply Abolishment / Removal					
562	Supply Abolishment / Removal – Overhead (Business Hours)	-19.04	-19.37	-19.50	-14.6
563	Supply Abolishment / Removal - Underground (Business Hours)	-39.04	-39.37	-39.50	-30.0
Miscellaneous Customer Initiated Services					
564	Install & Remove Tiger Tails – Establishment (Business Hours)	-9.04	-9.37	-2.80	1.4
565	Install & Remove Tiger Tails - Per Span (Business Hours)	-9.04	-7.07	-1.00	-0.8



566	Install & Remove Warning Flags – Installation (Business Hours)	-11.54	-11.87	-12.00	-7.2
567	Install & Remove Tiger Tails - Per Span (Business Hours)	-9.04	-7.07	-1.00	-0.8
Embedded Generation - Operational & Maintenance Fees					
568	Small Embedded Generation OPEX Fees - Connection Assets				
569	Small Embedded Generation OPEX Fees - Shared Network Asset				
Connection Enquiry Processing - PV Installations*					
570	PV Connection Enquiry – LV Class 1 (<= 10kW Single Phase / 30kW Three Phase)				
571	PV Connection Enquiry – LV Class 2 to 5 (> 30kW <= 1500kW Three Phase)	-0.54	-0.87	-1.00	-0.89
572	PV Connection Enquiry – HV	-0.54	-0.87	-1.00	-0.89
573	Provision of Data for Network technical study for large scale installations	-0.54	-0.87	-1.00	-0.89
Network Design & Investigation / Analysis Services - PV Installations†					
574	Design & Investigation - LV Connection Class 1 PV (<= 10kW Single Phase / 30kW Three Phase)				
575	Design & Investigation - LV Connection Class 2 PV (> 30kW and	-0.54	-0.87	-1.00	-0.89

<= 60kW Three Phase)					
576	Design & Investigation - LV Connection Class 3 PV (> 60 kW and <= 120kW Three Phase)	-0.54	-0.87	-1.00	-0.89
577	Design & Investigation - LV Connection Class 4 PV (> 120 kW and <= 200kW Three Phase )	-0.54	-0.87	-1.00	-0.89
578	Design & Investigation - LV Connection Class 5 PV (> 200kW and <= 1500kW Three Phase) – ActewAGL Network Study	-0.54	-0.87	-1.00	-0.89
579	Design & Investigation - HV Connection Class 5 PV (> 200kW and <= 1500kW Three Phase) – Customer Network Study	-0.54	-0.87	-1.00	-0.89
Residential Estate Subdivision Services (per block)					
580	Subdivision Electricity Distribution Network Reticulation – multi unit blocks	-0.54	-0.87	-1.00	-0.89
581	Subdivision Electricity Distribution Network Reticulation – blocks <= 650m2	-0.54	-0.87	-1.00	-0.89
582	Subdivision Electricity Distribution Network Reticulation – blocks <= 650m2–1100m2 with average linear frontage of 22–25 meters	-0.54	-0.87	-1.00	-0.89
Upstream Augmentation (per kVA of capacity)					

585	HV Feeder	-0.54	-0.87	-1.00	-0.89
586	Distribution substation	-0.54	-0.87	-1.00	-0.89
Rescheduled Site Visits		0.96	0.63	0.50	
590	Rescheduled Site Visit – One Person	-5.44	-0.87	-1.00	1.6
591	Rescheduled Site Visit – Service Team	-11.54	-11.87	-12.00	-6.5
Rescheduled Site Visits					
592	Trenching - first 2 meters	-0.54	-0.87	-1.00	-0.89
593	Trenching - subsequent meters	-0.54	-0.87	-1.00	-0.89
Rescheduled Site Visits		0.96	0.63	0.50	-0.89
594	Under footpath	-0.54	-0.87	-1.00	-0.89
595	Under driveway	-0.54	-0.87	-1.00	-0.89

Source: AER analysis.

## A.1.2 Quoted services

**Table 16.14 draft decision, maximum labour rates for quoted services**

Classification	Maximum labour rate - includes overhead (\$)
Electrical Worker	130.98
Electrical Worker - labourer	106.99**
Electrical apprentice	98.31**
Office support Service Delivery	87.59
Project Officer Design section	154.24
Senior Technical Officer / Engineer Design section	184.17

Source: AER analysis.

## A.1.3 Metering services

**Table 16.15 ActewAGL's approved annual metering charges (\$ 2014–15)**

	2014–15	2015–16	2016–17	2017–18	2018–19
Quarterly basic					
Accumulation and time-of-use	13.34	12.34	12.35	12.34	12.34
Monthly basis					
Accumulation and time-of-use	23.33	21.58	21.58	21.58	21.58
Time-of-use metering rate					
Time-of-use meters read monthly	23.33	21.58	21.58	21.58	21.58
Monthly manually read interval metering rate					
Interval meters recording at either 15- or 30-minute intervals, read manually and processed monthly	1.88	1.74	1.73	1.74	1.74
Internal metering rate					
Sites entitled to the Internal Network charge	0.00	0.00	0.00	0.00	0.00
Quarterly manually-read	53.73	49.70	49.69	49.70	49.70

interval metering rate  
 Interval meters recording at either 15- or 30-minute intervals, read manually and processed quarterly

Source: AER analysis.

**Table 16.16 Draft decision prices for new or upgraded connections (\$2014–15)**

New type 6 meter (single and three phase meters)	86.75
Single phase, single element, type 5, direct connected	93.67
Single phase, twin element, type 5, direct connected	151
Three phase, single element, type 5	214.27
New type 6 meter (single and three phase meters)	86.75
Single phase, single element, type 5, direct connected	93.67

Source: AER analysis.