ACTEWAGL DISTRIBUTION 2017/18 STATEMENT OF TARIFF CLASSES AND TARIFFS

Effective date: May 2017

ActewAGL for you

List of tables

Overview

- Electricity bills are made up of distribution costs (covering the poles and wires), transmission costs, ACT jurisdictional schemes,[1] metering and meter reading costs, and the retailer's costs and margins (covering wholesale energy costs) as well as GST. This report covers only the network components of an average electricity bill.
- ActewAGL Distribution offers customers a range of network tariff options across three tariff classes—residential, commercial low voltage and high voltage. Customers are able to choose the tariff that best suits their needs, subject to some eligibility requirements as set out in this document.
- In 2017/18, the first Tariff Structure Statement will be implemented[2]. This includes the introduction of new residential and LV commercial demand tariffs from 1 December 2017[3], as approved by the AER[4].
- The 2017/18 tariffs and charges shown in this document have been set as per the Enforceable Undertaking ("Undertaking") given by ActewAGL Distribution and accepted by the Australian Energy Regulator (AER) on 17 May 2017.[5]
- The proposed network use of system (NUOS) charges (comprising distribution, transmission, jurisdictional schemes and the capital component of metering) plus the non-capital component of metering for 2017/18 are, on average, 2.6 per cent higher in nominal terms than in 2016/17.
- 2017/18 network and metering charges will increase the electricity network bill for a typical ACT residential customer, consuming 7000 kWh on the Residential Basic Network tariff, by about $0.42 a week (including GST).
- 2017/18 network and metering charges will increase the electricity network bill for a typical ACT commercial customer, consuming 30 MWh on the General Network tariff, by about $1.22 a week (including GST).
- ActewAGL Distribution's miscellaneous charges (such as meter installations) will rise by between 2.0 per cent and 2.5 per cent in nominal terms in 2017/18 compared to 2016/17.

[1] For example, the Energy Industry Levy, the Utilities Network Facilities Tax and the feed-in tariffs under the *Electricity Feed-in (Large-scale Renewable Energy Generation) Act 2011 (ACT)*.
[2] http://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/pricing-proposals-tariffs/actewagl-tariff-structure-statement-2017
[3] This follows the commencement of the Metering Rule changes as a result of the Australian Energy Market Commission's (AEMC's) *Power of Choice* reforms. See http://www.aemc.gov.au/Rule-Changes/Expanding-competition-in-metering-and-related-serv
[4] http://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/pricing-proposals-tariffs/actewagl-tariff-structure-statement-2017/final-decision
[5] The Undertaking was supplied by ActewAGL Distribution because in February 2016 the Australian Competition Tribunal set aside the AER's 2015 distribution determination decision for ActewAGL Distribution. See http://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/pricing-proposals-tariffs/actewagl-annual-pricing-2016/17

1. Introduction

1.1 Purpose and scope of the document

ActewAGL Distribution has prepared this Statement of Tariff Classes and Tariffs in accordance with the requirements in chapter 6 of the National Electricity Rules (the Rules).[6] Clause 6.18.9(a)(3) requires ActewAGL Distribution to maintain on its website: a statement of tariff classes[7] and tariffs that are applicable to each class.

This document contains the required information. The statement covers the regulatory period (1 July 2015 to 30 June 2019). The prices for 1 July 2017 to 30 June 2018 are as published by the AER on 17 May 2017. The 2018/19 prices (presented in Section 4) are indicative prices based on CPI assumptions approved by the AER in its Final Decision[8].

1.2 Background

The AER is responsible for the economic regulation of distribution services provided by ActewAGL Distribution.

Following the release of the AER's Final Decision on 30 April 2015, ActewAGL Distribution applied to the Australian Competition Tribunal for merits review and the Federal Court for judicial review of the AER's final 2014–19 distribution determination. In February 2016, the Tribunal decided to set aside the AER's Final Decision. On 24 March 2016 the AER applied to the Federal Court for judicial review of the Australian Competition Tribunal decision to set aside the Final Decision[9].

ActewAGL Distribution acknowledged that having regard to the judicial review proceeding before the Federal Court and remittal process before the AER may cause significant delay in the AER remaking its decision with respect to ActewAGL Distribution's distribution determination. The effect of this delay is likely to create uncertainty for users about applicable prices and the legal effect of the non-price provisions of the Final Determination. To ameliorate this uncertainty, ActewAGL Distribution agreed to proffer an Undertaking to the AER[10].

On 17 May 2017, the AER formally accepted ActewAGL Distribution's Undertaking. The Undertaking will expire, at the latest, on 30 June 2018. This document should be read in conjunction with the following documents.

- the AER's Final Decision
- ActewAGL Distribution's Subsequent Regulatory Proposal
- ActewAGL Distribution's Revised Regulatory Proposal

[6] Under rule 11.73.1(b), the new chapter 6 pricing rules do not apply to ActewAGL Distribution until 1 July 2017. All references to Chapter 6 refer to the old Chapter 6.
[7] A *tariff class* is defined in Chapter 10 of the *Network Electricity Rules* as "a class of for one or more direct control services who are subject to a particular tariff or particular tariffs.'
[8] AER 2015, *Final Decision, ActewAGL distribution determination 2015/16 to 2018/19*.
[9] http://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/actewagl-determination-2014-19
[10] http://www.aer.gov.au/system/files/ActewAGL%20enforceable%20undertaking%20-%20May%202016.pdf

- ActewAGL Distribution's Annual Pricing Proposal – March 2017
- ActewAGL Distribution's Enforceable Undertaking – May 2017

These documents are published on the AER's website, and set out in detail the basis of the costs that are reflected in ActewAGL Distribution's prices for 2017/18.

1.3 Structure of the document

ActewAGL Distribution's tariff structure and 2017/18 charges for network services are set out in chapter 2. The chapter includes details of the components and rationale for each tariff, as well as a discussion of the changes relative to 2016/17.

The structure and basis of ActewAGL Distribution's charges for ancillary network services and metering services, are presented and explained in chapter 3.

Expected prices for 2018/19 are provided in chapter 4.

2. Network tariffs

The Rules (clause 6.18.9) require a description of the *tariff classes*[11] and the tariffs that apply to each class in 2017/18, to be published on ActewAGL Distribution's website.

2.1 Network tariff structure

ActewAGL Distribution offers network tariffs in three tariff classes:

- Residential;
- Commercial low voltage (LV); and
- High voltage (HV).

The Rules stipulate that tariff classes must be constituted with regard to the need to group customers together on an economically efficient basis and the need to avoid unnecessary transactions costs (clause 6.18.3(d)). ActewAGL Distribution meets this requirement by grouping customers according to type of connection (residential or commercial), and connection voltage (LV or HV). Customers within each class have similar load and connection characteristics. The relevant costs for each class can then be identified and reflected in the tariffs for each class.

Within each of these three tariff classes, ActewAGL Distribution has developed a suite of network tariffs that effectively meet the diverse needs of its customer base, encourage efficient use of the network and signal the costs of future network expansion. Residential customers are offered a choice of network tariff options plus controlled load off-peak options and an embedded renewable generation tariff. Commercial LV customers are also offered a choice of tariff options. Some commercial customers also have access to the controlled load off-peak tariff options and the embedded renewable generation tariff on a similar basis to customers in the residential class. Commercial HV customers are offered three tariff options. Customers are able to choose the option which best suits their needs, subject to the eligibility criteria set out in Tables 2.1 to 2.3 below.

The network tariffs comprise different combinations of the following *charging parameters*:

- Network access charges—these apply per customer for residential customers and per connection point for commercial customers. They involve a fixed daily charge and do not vary with electricity consumption or capacity.
- Energy charges—these apply to each unit of electricity consumed. The cents per kilowatt hour (c/kWh) rate may vary with the level of consumption (with higher rates applying above certain thresholds) or with the time-of-use (with lower rates applying at off-peak periods).
- Maximum demand charges—these apply for some residential and commercial tariffs. They involve a charge per unit of maximum demand (in c/kVA/day[12] or

[11] A tariff class is defined in chapter 10 of the *National Electricity Rules* as "a class of customers for one or more direct control services who are subject to a particular tariff or particular tariffs".

c/kW/day[13]). The maximum demand is the highest demand recorded over a 30-minute interval during the billing period.

- Capacity charges—these apply on the same basis as maximum demand charges (in c/kVA/day), but are for the maximum demand calculated over a 30-minute interval during the previous 13 months.

The tariffs and charging parameters for each tariff class are shown in the following tables (2-1 to 2-3). The tables include an explanation of the purpose of each tariff and the customers to which each tariff may apply.

2.1.1 Network tariffs for residential customers

ActewAGL Distribution's residential network tariff structure is shown in Table 2-1. Residential customers are currently offered a choice of four network tariff options plus two controlled load off-peak options and an embedded renewable generation tariff option.

- Residential Basic Network
- Residential TOU Network
- Residential 5000 Network
- Residential with Heat Pump Network

The *Residential time-of-use (TOU), Residential 5000* and *Residential with heat pump* tariffs are refinements of the *Residential basic* tariff to reflect customer load profiles. The *Residential TOU* tariff provides an opportunity and an incentive for customers with the necessary metering capability to respond to price signals at different times of the day, where reflected in the final price of their retailer, and manage their electricity bill in line with the costs they impose on the network. Until 1 December 2017, the Residential TOU tariff will be the default tariff for all new residential connections. The *Residential 5000* and *Residential with heat pump* tariffs involve a higher connection charge and an inclining block structure with a higher energy charge (cents per kWh) applying above certain thresholds. These tariffs more accurately tailor costs to the load profile of these customers. The off-peak tariff options can be used in conjunction with the *Residential basic* and the *Residential TOU* network tariffs.

From 1 December 2017, a new residential demand tariff will be introduced. The new demand tariff will offer residential customers a more cost reflective option than existing residential tariffs. The new demand tariff will enable residential customers to more actively manage and control the size of their electricity bills by considering when and how they use electricity. The new demand tariff will include a fixed component, an anytime energy consumption component, and a demand component. The demand component will apply a demand charge to a customers' maximum half hourly demand (measured in kilowatts) during the hours of 5-8pm daily during a billing period.

[12] c/kVA/day refers to cents per kilo-volt-ampere per day
[13] c/kW/day refers to cents per kilo-watts per day

The introduction of the new residential demand tariff has been established to coincide with the expected introduction of remotely read interval meters (type 4 meters) from 1 December 2017[14]. Only customers who have a type 4 meter installed from 1 December 2017 will be assigned, by default, to the new demand tariff in one of two ways.

1. Residential customers who move into **new premises** and are connected with a remotely read interval meter, will default to the new demand tariff with an opt-out provision to the residential time-of-use tariff. This is a change from the existing policy which assigns new customers to the time-of-use tariff by default with an opt-out provision to the Residential Basic tariff.
2. When an existing residential customers' meter is **replaced** with a remotely read meter, they will also be assigned to the new demand tariff by default. This is also a change from our existing policy in which customers who have a replacement meter installed remain on their existing tariff. Customers who are assigned to the new demand tariff (by default) will be able to opt out of the demand tariff to the time-of-use tariff.

This assignment policy means that, as customers with type 4 meters are assigned to the demand tariff, the following residential tariffs will eventually become obsolete.

- Residential Basic Network (code 010 and 011)
- Residential 5000 Network (code 020 and 021)
- Residential with Heat Pump Network (code 030 and 031)

[14] This follows the commencement of the Metering Rule changes as a result of the Australian Energy Market Commission's (AEMC's) *Power of Choice* reforms.

Table 2-1 Network tariff structure – residential

Tariff	*Charging parameters*	*Explanation*
Residential basic network	Network access charge (c/day/customer) Energy charge (c/kWh)	The residential basic network tariff is available to installations at private dwellings, excluding serviced apartments, but including: • Living quarters for members and staff of religious orders; • Living quarters on farms; • Charitable homes; • Retirement villages; • Residential sections of nursing homes and hospitals; • Churches, buildings or premises which are primarily used for public worship; and • Approved caravan sites. The energy charge varies neither with the level of consumption nor the time of day. However, customers on this tariff are also eligible for the off-peak tariffs. This tariff is closed to new customers from 1 December 2017 and will become obsolete over time.
Residential time-of-use (TOU) network[15]	Network access charge (c/day/customer) Energy at max times, ie 7am to 9am and 5pm to 8pm every day (c/kWh) Energy at mid times, ie 9am to 5pm and 8pm to 10pm every day (c/kWh) Energy at economy times, ie all other times (c/kWh)	This tariff is available to residential customers (as defined above) and to electric vehicle recharge facilities on residential premises with a meter able to be read as a time-of-use meter. The energy charges relate to the supply of network services at various times. Higher rates apply at max or peak times to encourage users to shift their load to off-peak periods. Customers on this tariff are also eligible for the controlled load off-peak tariffs. Residential customers with a meter with two registers capable of providing time-of-use consumption data from each register may have the time-of-use charges applied separately to each register.
Residential 5000 network	Network access charge (c/day/customer) Energy for the first 60 kWh/day (c/kWh) Energy above 60 kWh/day (c/kWh)	This tariff is designed for residential customers who have large continuous (rather than time controlled) loads, such as electric hot water systems, and consume over 5,000 kWh per annum. The energy charges relate to the supply of network services above and below certain volume thresholds. An inclining block structure applies (ie higher energy rates for the second block of energy). The lower energy rate is limited to consumption up to 60 kWh per day, reflecting a typical domestic usage profile. This is sufficient to cover the energy requirements of many residential customers. This tariff is closed to new customers from 1 December 2017 and will become obsolete over time.
Residential with heat pump	Network access charge (c/day/customer) Energy for the first 165 kWh/day (c/kWh) Energy above 165 kWh (c/kWh)	This tariff is only available to residential customers with a reverse cycle air conditioner. An inclining block structure applies (ie higher energy rates for the second block of energy). The lower energy rate is set to recover the incremental cost of energy load on the network as a demand management tool to lower winter peak loads and improve utilisation of the network in summer and so improve overall network utilisation. This tariff is closed to new customers from 1 December

[15] All times for metering are Eastern Standard Time.

Tariff	*Charging parameters*	*Explanation*
		2017 and will become obsolete over time.
Residential Demand	Network access charge (c/kW/day) Energy charge (c/kWh) Maximum demand (in billing period) (c/kW/day)	This tariff is available to residential customers from 1 December 2017 who have a Type 4 (ie, "Smart") meter installed. The energy charge varies neither with the level of consumption nor the time of day. Customers on this tariff are also eligible for the off-peak tariffs. The demand charge is based on a customers' maximum demand in a 30 minute period during the maximum demand window of 5pm – 8pm every day. This tariff will become ActewAGL Distribution's default tariff for residential customers with a type 4 meter from 1 December 2017.
Off-peak (1) night network	Energy at controlled times, ie between 10 pm and 7 am (c/kWh)	The off-peak (1) night charge is available only to consumers utilising a controlled load element, and taking all other energy at residential basic network, residential time-of-use, residential demand, general network, general time-of-use or LV commercial KW demand tariff rates. The off-peak (1) night charge is applicable to permanent heat (or cold) storage; electric vehicle recharge; and CNG vehicle gas compression installations. The design and rating must be acceptable to ActewAGL Distribution. The installation must use most energy during the controlled times but may be boosted at the principal charge, or charges, at other times. The off-peak (1) night network energy charge relates to supply of network services at controlled times, for 6 to 8 hours per day between the hours of 10 pm and 7 am.
Off-peak (3) day and night network	Energy at controlled times, ie between 10 pm and 7 am and 9 am and 5 pm (c/kWh)	Available only to customers utilising a controlled load element, and taking all other energy at residential basic network, residential time-of-use, residential demand, general network, general time-of-use or LV commercial KW demand tariff rates. This charge is applicable to permanent heat (or cold) storage installations. The design and rating must be acceptable to ActewAGL Distribution. The off-peak (3) day and night network energy rate applies to power supplied for up to 13 hours per day between 10 pm and 7 am and again between 9 am and 5 pm.
Renewable generation	Energy charges (c/kWh)	This tariff applies to customers with grid connected solar or wind energy generation systems. Different arrangements apply to customers participating in the ACT feed-in tariff scheme, in accordance with the *Electricity Feed-in (Renewable Energy Premium) Act 2008* (ACT). Net metering applies to new PV customers since July 2013.

For each of the tariffs shown in the table above (other than off-peak and renewable energy) two separate codes will apply – one which includes a meter capital charge and one which excludes the meter capital charge (XMC). The basis for the separate meter capital charges is explained in section 3.2 below.

2.1.2 Network tariffs for low voltage commercial customers

ActewAGL Distribution sets different tariffs for commercial low voltage (LV) and commercial high voltage (HV) customers recognising the different costs associated with supplying each group. Within the commercial LV tariff class a range of tariff

options has been developed to meet the diverse needs of commercial customers and to accommodate their differing load profiles and ability to respond to price signals. ActewAGL Distribution currently offers commercial LV customer four main options. These include:

- General Network
- General Time-of-use
- LV TOU kVA demand network
- LV TOU kVA capacity network

From 1 December 2017, LV commercial customers that have a remotely read (type 4) meter installed (for example, a customer with a new premises or whose meter is replaced with a type 4 meter) will be assigned to a new LV commercial demand tariff by default. This is a change from our existing policy which assigns new customers to the time-of-use tariff (code 090). Customers will have the choice to opt-out of the new demand tariff to the Time-of-Use (code 090 and 091), KVA demand (code 101 and 103) or Capacity (code 103 and 105) tariffs. The new LV commercial demand tariff has the same structure as the new residential demand tariff. That is, the new LV commercial demand tariff will include a fixed component, an anytime energy consumption component, and a demand component. The demand component will apply a demand charge to a customers' maximum half hourly demand (measured in kilowatts) during the hours of 7am-5pm on weekdays during a billing period.

This assignment policy means that the General Network commercial LV tariff (codes 040 and 041) will eventually become obsolete. This is because, over time, all LV commercial customers will have their meter replaced with a type 4 meter which will mean they are assigned to the new LV commercial demand tariff (with an opt-out provision to other cost reflective tariffs).

The exception to the above assignment policy is for small unmetered loads (code 135) and streetlighting (code 080), where usage is not measured using a meter. In the case of small unmetered loads (which applies to eligible installations such as telephone boxes), ActewAGL Distribution has not connected meters to these loads. The streetlight tariff applies only to usage for public lighting loads that operate at night. Most of these loads are also unmetered. These tariffs do not vary with usage, or load profile, and therefore, there is no need for ActewAGL Distribution to transition these loads onto a demand tariff as consumers on these tariffs are unlikely to respond.

Of the five main options offered to LV commercial customers, all but the *General network* and new *LV commercial demand* tariffs involve time-of-use charges. The *General network* tariff does, however, involve an inclining block tariff structure with higher energy charges (c/kWh) applying above certain thresholds. LV commercial customers on the General Network, General TOU and LV commercial demand tariffs also have access to the off-peak (controlled load) tariff options and the embedded renewable generation tariff option on a similar basis to customers in the residential class.

Three of the LV commercial options involve capacity and/or maximum demand charges, in conjunction with consumption charges. Customers able to improve their

load factor[16] have an incentive to choose a tariff with a demand or capacity charge and thereby reduce their electricity bills. In 2017/18, ActewAGL Distribution will offer LV commercial customers a new tariff that measures demand on a kW basis, rather than the kVA basis on which the existing demand tariffs are set. This will enable small LV commercial customers to have access to a demand tariff, given the capability of their meter. Customers on the *General network* and *General time-of-use network* tariffs will move to the new demand tariff when they have a type 4 meter installed. This is designed to lower their network costs if they have a sufficiently large load (for the network cost savings to offset the higher cost of interval metering) and if their load factor is suitable (to ensure that the demand costs do not offset the lower energy charges).

[16] The load factor is the ratio of average load to the maximum demand (peak load).

Table 2-2 Network tariff structure - commercial low voltage

Tariff	*Charging parameters*	*Explanation*
General network	Network access charge (c/day/customer) Energy for the first 330 kWh/day (c/kWh) Energy above 330 kWh/day (c/kWh)	The tariff is most suitable for small commercial customers operating in regular business hours or larger customers with poorer load factors (peaky loads). This tariff may be used in conjunction with the off-peak tariffs. This tariff is closed to new customers from 1 December 2017 and will become obsolete over time.
General TOU network	Network access charge (c/day/customer) Energy at business times* (c/kWh) Energy at evening times (c/kWh) Energy at off-peak times (c/kWh)	This tariff is particularly suitable for small commercial customers with discretionary or relatively large off-peak loads such as bakers, freezer installations, irrigators and to customers operating on weekends. The energy charges relate to supply of network services at different times.
LV TOU kVA demand network	Network access charge (c/day/connection point). Maximum demand (in billing period) (c/kVA/day) Energy at business times* (c/kWh) Energy at evening times (c/kWh) Energy at off-peak times (c/kWh)	This tariff is appropriate for customers with an average or stable commercial load. The maximum demand charge is designed to encourage consumers to manage their demand upon the network. The energy charges relate to supply of energy at different times, with lower rates in off-peak times reflecting the availability of capacity and encouraging consumers to shift their load from peak to off-peak times to utilise the available capacity. It is not available to customers with an embedded generation (other than micro generation) system.
LV TOU capacity network	Network access charge (c/day/connection point) Maximum demand (in billing period) (c/kVA/day) Capacity (max demand in last year) (c/kVA/day) Energy at business times* (c/kWh) Energy at evening times (c/kWh) Energy at off-peak times (c/kWh)	This tariff is open to all low voltage customers and intended to reward those customers with seasonally stable loads. It is prescribed for low voltage customers with embedded generation. The tariff provides an incentive for customers with embedded generation to manage their output and their down-times (eg for servicing) so as to minimise their demand on the network.
LV Demand network	Network access charge (c/day/connection point) Energy charge (c/kWh) Maximum demand (in billing period) (c/kW/day)	This tariff is available to LV commercial customers from 1 December 2017 who have a Type 4 (ie, "Smart") meter installed. The energy charge varies neither with the level of consumption nor the time of day. Customers on this tariff are also eligible for the off-peak tariffs. The demand charge is based on a consumers' maximum demand in a 30 minute period during the maximum demand window of 7am – 5pm week days. This tariff will become the default tariff for LV commercial customers with a type 4 meter from 1 December 2017.
Streetlighting	Network access charge (c/day/customer) Energy at any time (c/kWh)	This tariff applies to the night-time lighting of streets and public ways and places.
Small unmetered loads	Network access charge (c/day/customer) Energy at any time (c/kWh)	This tariff applies to eligible installations as determined by ActewAGL Distribution, including: • telephone boxes • telecommunication devices • other, as determined by the National Metrology Coordinator.

Tariff	*Charging parameters*	*Explanation*
		Energy charges are calculated based on the assessed rating of the load and the charge period.

* Business times are between 7 am and 5 pm Eastern Standard Time on weekdays. Evening times are between 5 pm and 10 pm Eastern Standard Time on weekdays. Off-peak times are all other times.

For each of the tariffs shown in the table above (except small unmetered loads), two separate codes will apply – one which includes a meter capital charge and one which excludes the meter capital charge (XMC). The basis for the separate meter capital charges is explained in section 3.2 below.

2.2 Network tariffs for high voltage customers

To qualify for the high voltage demand network charges, consumers must take their energy at high voltage (nominal voltage not less than 11 kV) and make a capital contribution towards their connection assets and transformers. High voltage customers have the option of owning and operating their own high voltage assets. Some customers have aggregated their load, incorporating part of ActewAGL Distribution's low voltage network to become a high voltage customer. A separate high voltage network charge is available for such customers.

Customers taking their energy at high voltage also have the option of selecting the network tariffs available to low voltage customers. For example, a high voltage customer with a poor load factor may select the *General time-of-use* network tariff.

As set out in ActewAGL Distribution's first TSS, HV commercial customers will be offered three tariff options in 2017/18. This is a change from 2016/17 where four tariffs were offered to HV commercial customers. Specifically, from 1 July 2017, the HV TOU Demand Network – Consumer HV (Code 112) tariff will be eliminated. The tariff currently has no consumers, so there is no consumer impact from this change. Given that ActewAGL Distribution has a relatively small number of HV commercial customers, and that the tariffs offered to those customers are already similar, this change will simplify the tariff schedule.

Table 2-3 Network tariff structure - high voltage

Tariff (code)	*Charging parameters*	*Explanation*
HV TOU Demand Network (111)	Network access charge (c/day/connection point) Max demand (in billing period) (c/kVA/day) Capacity (max demand in past year) (c/kVA/day) Energy at business times* (c/kWh) Energy at evening times (c/kWh) Energy at off-peak times (c/kWh)	This tariff is appropriate for large customers taking supply at high voltage with a low voltage network owned and maintained by ActewAGL Distribution. The network access charge relates to the connection services provided to the customer including provision of the current transformer necessary to meter these large loads. The demand charge is applied to the maximum demand in the billing period while the capacity chare is applied to the maximum demand in the previous 12 months. The capacity charge encourages the consumer to monitor and manage their peak demand over the year while the demand charge continues to encourage consumers to manage their capacity requirements each month. The energy charges relate to supply of network services at different times, with lower rates in off-peak times reflecting the relatively low costs of off-peak supply, and thereby providing incentives for customers to switch their utilisation of the network to off-peak periods.
HV TOU Demand Network – Customer LV (121)	Network access charge (c/day/connection point) Max demand (in billing period) (c/kVA/day) Capacity (max demand in past year) (c/kVA/day) Energy at business times* (c/kWh) Energy at evening times (c/kWh) Energy at off-peak times (c/kWh)	This network tariff is appropriate for large customers taking supply at high voltage where the customer owns and is fully responsible for their own low voltage network. The network access charge relates to the connection services provided to the customer including provision of the current transformer necessary to meter these large loads. The demand charge is applied to the maximum demand in the billing period while the capacity chare is applied to the maximum demand in the previous 12 months. The capacity charge encourages the consumer to monitor and manage their peak demand over the year while the demand charge continues to encourage consumers to manage their capacity requirements each month. The energy charges relate to supply of network services at different times, with lower rates in off-peak times reflecting the relatively low costs of off-peak supply, and thereby providing incentives for customers to switch their utilisation of the network to off-peak periods.
HV TOU Demand Network – Customer HV and LV (122)	Network access charge (c/day/connection point) Max demand (in billing period) (c/kVA/day) Capacity (max demand in past year) (c/kVA/day) Energy at business times* (c/kWh) Energy at evening times (c/kWh) Energy at off-peak times (c/kWh)	This network tariff is appropriate for large customers taking supply at high voltage where the customer owns and is fully responsible for their own low voltage network and where the customer owns and is responsible for their high voltage assets (including transformers and switch gear). The network access charge relates to the connection services provided to the customer including provision of the current transformer necessary to meter these large loads. The demand charge is applied to the maximum demand in the billing period while the capacity chare is applied to the maximum demand in the previous 12

Tariff (code)	*Charging parameters*	*Explanation*
		months. The capacity charge encourages the consumer to monitor and manage their peak demand over the year while the demand charge continues to encourage consumers to manage their capacity requirements each month. The energy charges relate to supply of network services at different times, with lower rates in off-peak times reflecting the relatively low costs of off-peak supply, and thereby providing incentives for customers to switch their utilisation of the network to off-peak periods.

* Business times are between 7 am and 5 pm Eastern Standard Time on weekdays. Evening times are between 5 pm and 10 pm Eastern Standard Time on weekdays. Off-peak times are all other times.

2.2.1 Ancillary network charges

In addition to the network tariffs set out above, ActewAGL Distribution offers a range of ancillary network services. The structure of each ancillary service charge depends on the type of service. Some services are charged on a per visit basis, others per installation or per test. The charges for ancillary network services are set on a cost reflective basis, as per the Undertaking, and consistent with the AER's Final Decision[17]. For example, separate rates apply for temporary connections depending on whether they relate to an overhead or underground connection, as these will involve different costs. Ancillary network services and metering services charges are discussed further in chapter 3.

2.3 Network charges for 2017/18

ActewAGL Distribution's network charges for 2017/18 are made up of distribution charges, transmission charges, jurisdictional scheme charges and metering capital charges. The distribution charges recover the cost of ActewAGL Distribution's electricity distribution service within the ACT. The transmission charges recover TransGrid's charges to ActewAGL Distribution for the delivery of energy to the ACT and most of ActewAGL Distribution's costs for sub-transmission services.

The AER regulates both ActewAGL Distribution's distribution charges and TransGrid's transmission charges. Also, the National Electricity Rules (NER) provide that ActewAGL Distribution is to recover the cost of jurisdictional schemes including the ACT feed-in tariff, the Utilities Network Facilities Tax and the Energy Industry Levy in its network charges.

Furthermore, the AER in its Final Decision required ActewAGL Distribution to charge new customers (after 1 July 2015) the full cost of their meter. To facilitate that change, the AER split metering charges into two components: one to recover the capital costs and the other to recover metering operating and maintenance costs. To apply these charges in the manner that the AER has determined, ActewAGL Distribution included the capital metering cost in the network charges for existing customers (that is, customers with regulated meters installed before 30 June 2015). New customers that have paid upfront for their meter are placed on

[17] AER 2015, *Final Decision, ActewAGL distribution determination 2015/16 to 2018/19*, Attachment 16

network charges that exclude metering capital charges (XMC tariffs) and pay only the non-capital component of the metering charge. Table 2-4 shows the AER approved distribution, transmission, jurisdictional scheme, metering capital and network charges for 2017/18, excluding GST.

Table 2-4 Network use of system charges 2017/18 (excluding GST)

Description	Unit	Distribution Charges 2017/18	Transmission Charges 2017/18	Jurisdictional Charges 2017/18	Metering Capital 2017/18	Network Charges 2017/18
RESIDENTIAL TARIFFS						
010 Residential Basic Network						
Network access charge	cents/day	26.048	0.000	0.000	7.742	33.790
Energy consumption	cents/kWh	3.609	1.064	2.487		7.160
011 Residential Basic Network XMC*						
Network access charge	cents/day	26.048	0.000	0.000		26.048
Energy consumption	cents/kWh	3.609	1.064	2.487		7.160
015 Residential TOU Network						
Network access charge	cents/day	26.048	0.000	0.000	7.742	33.790
Energy at max times	cents/kWh	7.544	1.467	3.109		12.120
Energy at mid times	cents/kWh	2.704	0.919	2.487		6.110
Energy at economy times	cents/kWh	0.509	0.694	1.857		3.060
016 Residential TOU Network XMC*						
Network access charge	cents/day	26.048	0.000	0.000		26.048
Energy at max times	cents/kWh	7.544	1.467	3.109		12.120
Energy at mid times	cents/kWh	2.704	0.919	2.487		6.110
Energy at economy times	cents/kWh	0.509	0.694	1.857		3.060
020 Residential 5000 Network						
Network access charge	cents/day	47.548	0.000	0.000	7.742	55.290
Energy for the first 60 kWh per day	cents/kWh	2.309	1.064	2.487		5.860
Energy above 60 kWh per day	cents/kWh	3.609	1.064	2.487		7.160
021 Residential 5000 Network XMC*						
Network access charge	cents/day	47.548	0.000	0.000		47.548
Energy for the first 60 kWh per day	cents/kWh	2.309	1.064	2.487		5.860
Energy above 60 kWh per day	cents/kWh	3.609	1.064	2.487		7.160
025 Residential Demand Network						
Network access charge	cents/day	26.048	0.000	0.000	7.742	33.790
Energy consumption	cents/kWh	1.076	0.117	2.487		3.680
Peak period maximum demand	cents/kW/day	11.500	3.600	0.000		15.100
026 Residential Demand Network XMC*						
Network access charge	cents/day	26.048	0.000	0.000		26.048
Energy consumption	cents/kWh	1.076	0.117	2.487		3.680
Peak period maximum demand	cents/kW/day	11.500	3.600	0.000		15.100
030 Residential with Heat Pump Network						
Network access charge	cents/day	90.848	0.000	0.000	7.742	98.590
Energy for the first 165 kWh per day	cents/kWh	0.849	1.064	2.487		4.400
Energy above 165 kWh per day	cents/kWh	3.609	1.064	2.487		7.160
031 Residential with Heat Pump Network XMC*						
Network access charge	cents/day	90.848	0.000	0.000		90.848
Energy for the first 165 kWh per day	cents/kWh	0.849	1.064	2.487		4.400
Energy above 165 kWh per day	cents/kWh	3.609	1.064	2.487		7.160
060 Off-Peak (1) Night Network						
Energy consumption	cents/kWh	0.215	0.485	1.300		2.000

070 Off-Peak (3) Day & Night Network						
Energy consumption	cents/kWh	0.316	0.827	1.857		3.000
Renewable Energy Generation						
Gross metered energy	cents/kWh	0.000	0.000	0.000		0.000
Net metered energy	cents/kWh	0.000	0.000	0.000		0.000
COMMERCIAL LOW VOLTAGE TARIFFS						
040 General Network						
Network access charge	cents/day	47.690	0.000	0.000	13.540	61.230
Energy for the first 330 kWh per day	cents/kWh	7.020	1.403	2.487		10.910
Energy above 330 kWh per day	cents/kWh	10.257	1.406	2.487		14.150
041 General Network XMC*						
Network access charge	cents/day	47.690	0.000	0.000		47.690
Energy for the first 330 kWh per day	cents/kWh	7.020	1.403	2.487		10.910
Energy above 330 kWh per day	cents/kWh	10.257	1.406	2.487		14.150
135 Small Unmetered Loads Network						
Network access charge	cents/day	38.800	0.000	0.000		38.800
Energy consumption	cents/kWh	7.826	1.656	1.860		11.342
080 Streetlighting Network						
Network access charge	cents/day	47.990	0.000	0.000	13.540	61.530
Energy consumption	cents/kWh	4.438	0.860	2.512		7.810
081 Streetlighting Network XMC*						
Network access charge	cents/day	47.990	0.000	0.000		47.990
Energy consumption	cents/kWh	4.438	0.860	2.512		7.810
090 General TOU Network						
Network access charge	cents/day	47.690	0.000	0.000	13.540	61.230
Energy at business times	cents/kWh	11.064	2.194	3.162		16.420
Energy at evening times	cents/kWh	4.873	0.940	2.487		8.300
Energy at off-peak times	cents/kWh	2.195	0.199	1.897		4.290
091 General TOU Network XMC*						
Network access charge	cents/day	47.690	0.000	0.000		47.690
Energy at business times	cents/kWh	11.064	2.194	3.162		16.420
Energy at evening times	cents/kWh	4.873	0.940	2.487		8.300
Energy at off-peak times	cents/kWh	2.195	0.199	1.897		4.290
Low voltage time of use demand network						
101 LV TOU kVA Demand Network						
Network access per connection point	cents/day	52.907	0.000	0.000	109.281	162.188
Maximum demand charge	c/KVA/day	35.707	6.593	0.000		42.300
Energy at business times	cents/kWh	1.741	1.307	3.162		6.210
Energy at evening times	cents/kWh	0.748	0.100	2.342		3.190
Energy at off-peak times	cents/kWh	0.328	0.100	1.762		2.190
103 LV TOU Capacity Network						
Network access per connection point	cents/day	52.907	0.000	0.000	109.281	162.188
Maximum demand charge	c/KVA/day	16.717	3.083	0.000		19.800
Capacity charge	c/KVA/day	16.717	3.083	0.000		19.800
Energy at business times	cents/kWh	1.741	1.307	3.162		6.210
Energy at evening times	cents/kWh	0.748	0.100	2.342		3.190
Energy at off-peak times	cents/kWh	0.328	0.100	1.762		2.190
104 LV TOU kVA Demand Network XMC*						

Network access per connection point	cents/day	52.907	0.000	0.000		52.907
Maximum demand charge	c/KVA/day	35.707	6.593	0.000		42.300
Energy at business times	cents/kWh	1.741	1.307	3.162		6.210
Energy at evening times	cents/kWh	0.748	0.100	2.342		3.190
Energy at off-peak times	cents/kWh	0.328	0.100	1.762		2.190
105 LV TOU Capacity Network XMC*						
Network access per connection point	cents/day	52.907	0.000	0.000		52.907
Maximum demand charge	c/KVA/day	16.717	3.083	0.000		19.800
Capacity charge	c/KVA/day	16.717	3.083	0.000		19.800
Energy at business times	cents/kWh	1.741	1.307	3.162		6.210
Energy at evening times	cents/kWh	0.748	0.100	2.342		3.190
Energy at off-peak times	cents/kWh	0.328	0.100	1.762		2.190
106 LV Demand Network						
Network access charge	cents/day	47.690	0.000	0.000	13.540	61.230
Energy consumption	cents/kWh	1.613	0.460	2.487		4.560
Peak period maximum demand	cents/kW/day	29.700	7.000	0.000		36.700
107 LV Demand Network XMC*						
Network access charge	cents/day	47.690	0.000	0.000		47.690
Energy consumption	cents/kWh	1.613	0.460	2.487		4.560
Peak period maximum demand	cents/kW/day	29.700	7.000	0.000		36.700
High voltage time of use demand network with ActewAGL low voltage network						
111 HV TOU Demand Network						
Network access per connection point	$/day	19.600	0.000	0.000		19.600
Maximum demand charge	c/KVA/day	12.500	2.000	0.000		14.500
Capacity charge	c/KVA/day	12.500	2.000	0.000		14.500
Energy at business times	cents/kWh	0.748	1.294	3.099		5.140
Energy at evening times	cents/kWh	0.281	0.100	2.169		2.550
Energy at off-peak times	cents/kWh	0.090	0.100	1.630		1.820
High voltage time of use demand network without ActewAGL low voltage network						
121 HV TOU Demand Network – Customer LV						
Network access per connection point	$/day	19.600	0.000	0.000		19.600
Maximum demand charge	c/KVA/day	12.500	2.000	0.000		14.500
Capacity charge	c/KVA/day	12.500	2.000	0.000		14.500
Energy at business times	cents/kWh	0.238	1.294	3.099		4.630
Energy at evening times	cents/kWh	0.081	0.100	2.169		2.350
Energy at off-peak times	cents/kWh	0.020	0.100	1.630		1.750
122 HV TOU Demand Network – Customer HV and LV						
Network access per connection point	$/day	19.600	0.000	0.000		19.600
Maximum demand charge	c/KVA/day	11.700	2.000	0.000		13.700
Capacity charge	c/KVA/day	11.700	2.000	0.000		13.700
Energy at business times	cents/kWh	0.238	1.294	3.099		4.630
Energy at evening times	cents/kWh	0.081	0.100	2.169		2.350
Energy at off-peak times	cents/kWh	0.020	0.100	1.630		1.750

2.4 Changes in network charges in 2017/18

Network charges will increase by 2.6 per cent, on average, in 2017/18 compared to 2016/17, as per the Undertaking.

Table 2-5 shows the AER approved network charges for 2016/17 and 2017/18, excluding GST. The non-capital meter charges have been included. The table also shows the amount of the average change in prices and the average percentage change in prices.

High voltage charges do not include metering capital charges as ActewAGL Distribution does not provide metering services to these customers.

Table 2-5 Change in network use of system charges 2016/17 to 2017/18 (including non-capital metering)

Description	Unit	Network Charges 2016/17	Network Charges 2017/18	Average Change c/kWh	Average Change %
RESIDENTIAL TARIFFS					
010 Residential Basic Network				0.28	3.4%
Network access charge	cents/day	25.64	26.05		
Energy consumption	cents/kWh	6.90	7.16		
015 Residential TOU Network				0.36	4.2%
Network access charge	cents/day	25.64	26.05		
Energy at max times	cents/kWh	11.94	12.12		
Energy at mid times	cents/kWh	5.77	6.11		
Energy at economy times	cents/kWh	2.61	3.06		
020 Residential 5000 Network				0.51	6.8%
Network access charge	cents/day	47.16	47.55		
Energy for the first 60 kWh per day	cents/kWh	5.36	5.86		
Energy above 60 kWh per day	cents/kWh	6.90	7.16		
025 Residential Demand Network				N/A	N/A
Network access charge	cents/day	0.00	26.05		
Energy consumption	cents/kWh	0.00	3.68		
Peak period maximum demand	cents/kW/day	0.00	15.10		
030 Residential with Heat Pump Network				0.52	8.2%
Network access charge	cents/day	90.51	90.85		
Energy for the first 165 kWh per day	cents/kWh	3.89	4.40		
Energy above 165 kWh per day	cents/kWh	6.90	7.16		
060 Off-Peak (1) Night Network				0.12	6.5%
Energy consumption	cents/kWh	1.88	2.00		
070 Off-Peak (3) Day & Night Network				0.23	8.3%
Energy consumption	cents/kWh	2.77	3.00		
Renewable Energy Generation				-	0.0%
Gross metered energy	cents/kWh	0.00	0.00		
COMMERCIAL LOW VOLTAGE TARIFFS					
040 General Network				0.19	1.6%
Network access charge	cents/day	47.04	47.69		
Energy for the first 330 kWh per day	cents/kWh	10.73	10.91		
Energy above 330 kWh per day	cents/kWh	13.96	14.15		
135 Small Unmetered Loads Network				0.14	1.2%
Network access charge	cents/day	38.27	38.80		
Energy consumption	cents/kWh	11.207	11.342		
080 Streetlighting Network				0.49	6.7%
Network access charge	cents/day	47.54	47.99		

Energy consumption	cents/kWh	7.32	7.81		
090 General TOU Network				0.17	1.7%
Network access charge	cents/day	47.04	47.69		
Energy at business times	cents/kWh	16.96	16.42		
Energy at evening times	cents/kWh	8.32	8.30		
Energy at off-peak times	cents/kWh	3.44	4.29		
Low voltage time of use demand network					
101 LV TOU kVA Demand Network				0.10	1.3%
Network access per connection point	cents/day	51.06	52.91		
Maximum demand charge	c/KVA/day	42.33	42.30		
Energy at business times	cents/kWh	6.53	6.21		
Energy at evening times	cents/kWh	3.48	3.19		
Energy at off-peak times	cents/kWh	1.56	2.19		
103 LV TOU Capacity Network				0.17	2.7%
Network access per connection point	cents/day	51.06	52.91		
Maximum demand charge	c/KVA/day	19.79	19.80		
Capacity charge	c/KVA/day	19.79	19.80		
Energy at business times	cents/kWh	6.53	6.21		
Energy at evening times	cents/kWh	3.48	3.19		
Energy at off-peak times	cents/kWh	1.56	2.19		
106 LV Demand Network				N/A	N/A
Network access charge	cents/day	0.00	47.69		
Energy consumption	cents/kWh	0.00	4.56		
Peak period maximum demand	cents/kW/day	0.00	36.70		
HIGH VOLTAGE TARIFFS					
High voltage time of use demand network with ActewAGL low voltage network					
111 HV TOU Demand Network				0.06	1.0%
Network access per connection point	$/day	19.29	19.60		
Maximum demand charge	c/KVA/day	16.95	14.50		
Capacity charge	c/KVA/day	16.95	14.50		
Energy at business times	cents/kWh	4.66	5.14		
Energy at evening times	cents/kWh	2.70	2.55		
Energy at off-peak times	cents/kWh	1.13	1.82		
High voltage time of use demand network without ActewAGL low voltage network					
121 HV TOU Demand Network – Customer LV				0.12	2.4%
Network access per connection point	$/day	19.29	19.60		
Maximum demand charge	c/KVA/day	16.95	14.50		
Capacity charge	c/KVA/day	16.95	14.50		
Energy at business times	cents/kWh	4.25	4.63		
Energy at evening times	cents/kWh	2.35	2.35		
Energy at off-peak times	cents/kWh	0.98	1.75		
122 HV TOU Demand Network – Customer HV and LV				0.15	3.0%
Network access per connection point	$/day	19.29	19.60		
Maximum demand charge	c/KVA/day	15.94	13.70		
Capacity charge	c/KVA/day	15.94	13.70		
Energy at business times	cents/kWh	4.25	4.63		
Energy at evening times	cents/kWh	2.35	2.35		
Energy at off-peak times	cents/kWh	0.98	1.75		

3. Charges for metering and ancillary services

3.1 Ancillary services

Table 3-1 shows ActewAGL Distribution's approved charges for ancillary services and its connection service charges for 2017/18, excluding and including GST. The 2017/18 charges have been set as per the Undertaking, and consistent with the AER's Final Decision.

Table 3-1 Charges for ancillary and connection services 2017/18

Code	Description	Unit	Proposed Prices excl GST 2017/18	Proposed Prices incl.GST 2017/18
Premise Re-energisation – Existing Network Connection -These charges also apply where ActewAGL responds to a customer initiated call out and determines that the premise is energised at the connection point.				
501	Re-energise premise – Business Hours	per visit	$69.52	$76.48
502	Re-energise premise – After Hours	per visit	$88.13	$96.94
Premise De-energisation – Existing Network Connection				
503	De-energise premise – Business Hours	per visit	$69.52	$76.48
505	De-energise premise for debt non-payment	per test	$139.06	$152.96
Meter installation				
507	Install single phase, single element manually read interval meter	per meter	$522.25	$574.48
508	Install subsequent single phase, single element meter - same location & visit	per meter	$330.17	$363.18
509	Install single phase, two element meter	per meter	$635.12	$698.64
511	Install subsequent single phase, two element meter - same location & visit	per meter	$443.04	$487.34
512	Install three phase meter	per meter	$764.76	$841.23
513	Install subsequent three phase meter - same location & visit	per meter	$572.66	$629.92
Meter Investigations				
504	Meter Test (Whole Current) – Business Hours	per test	$278.12	$305.93
510	Meter Test (CT/VT) – Business Hours	per test	$322.09	$354.30
Special metering services				
506	Special Meter Read	per read	$32.16	$35.37
Temporary Network Connections				
520	Temporary Builders Supply – Overhead (Business Hours) (excludes meter cost)	per installation	$624.93	$687.42
522	Temporary Builders Supply – Underground (Business Hours) (excludes meter costs)	per installation	$1,364.26	$1,500.68
New Network Connections				
523	New Underground Service Connection – Greenfield	per installation	$0.00	$0.00
526	New Overhead Service Connection – Brownfield (Business Hours)	per installation	$820.78	$902.85
527	New Underground Service Connection – Brownfield from Front	per installation	$1,364.26	$1,500.68
528	New Underground Service Connection – Brownfield from Rear	per installation	$1,364.26	$1,500.68

Network Connection Alterations and Additions				
541	Overhead Service Relocation – Single Visit (Business Hours)	per installation	$783.39	$861.73
542	Overhead Service Relocation – Two Visits (Business Hours)	per installation	$1,566.77	$1,723.45
543	Overhead Service Upgrade – Service Cable Replacement Not Required	per installation	$783.39	$861.73
544	Overhead Service Upgrade – Service Cable Replacement Required	per installation	$820.78	$902.85
545	Underground Service Upgrade – Service Cable Replacement Not Required	per installation	$1,326.88	$1,459.57
546	Underground Service Upgrade – Service Cable Replacement Required	per installation	$1,364.26	$1,500.68
547	Underground Service Relocation – Single Visit (Business Hours)	per installation	$1,364.26	$1,500.68
548	Install surface mounted point of entry (POE) box	per installation	$630.93	$694.03
Temporary De-energisation				
560	Temporary de-energisation – LV (Business Hours)	per occurrence	$417.17	$458.89
561	Temporary de-energisation – HV (Business Hours)	per occurrence	$417.17	$458.89
Supply Abolishment / Removal				
562	Supply Abolishment / Removal – Overhead (Business Hours)	per site visit	$587.55	$646.31
563	Supply Abolishment / Removal - Underground (Business Hours)	per site visit	$1,061.51	$1,167.66
Miscellaneous Customer Initiated Services				
564	Install & Remove Tiger Tails – Per Installation (Business Hours)	per installation	$1,379.74	$1,517.71
565	Install & Remove Tiger Tails - Per Span (Business Hours)	per installation	$694.57	$764.03
566	Install & Remove Warning Flags – Per Installation (Business Hours)	per installation	$1,175.08	$1,292.59
567	Install & Remove Warning Flags - Per Span (Business Hours)	per installation	$595.34	$654.88
Embedded Generation - Operational & Maintenance Fees				
568	Small Embedded Generation OPEX Fees - Connection Assets	per annum	2%	2%
569	Small Embedded Generation OPEX Fees - Shared Network Asset	per annum	2%	2%
Connection Enquiry Processing - PV Installations				
570	PV Connection Enquiry – LV Class 1 (<= 10kW Single Phase / 30kW Three Phase)	per installation	$0.00	$0.00
571	PV Connection Enquiry – LV Class 2 to 5 (> 30kW <= 1500kW Three Phase	per installation	$571.20	$628.32
572	PV Connection Enquiry – HV	per installation	$1,142.41	$1,256.65
573	Provision of information for Network technical study for large scale installations	per installation	$11,424.12	$12,566.54
Network Design & Investigation / Analysis Services - PV Installations				
574	Design & Investigation - LV Connection Class 1 PV (<= 10kW Single Phase / 30kW Three Phase)		$0.00	$0.00
575	Design & Investigation - LV Connection Class 2 PV (> 30kW and <= 60kW Three Phase)	per installation	$3,808.04	$4,188.85
576	Design & Investigation - LV Connection Class 3 PV (> 60 kW and <= 120kW Three Phase)	per installation	$5,712.05	$6,283.26
577	Design & Investigation - LV Connection Class 4 PV (> 120 kW and <= 200kW Three Phase)	per installation	$7,616.08	$8,377.69
578	Design & Investigation - LV Connection Class 5 PV (> 200kW and <= 1500kW Three Phase) – ActewAGL Network Study	per installation	$11,424.12	$12,566.54
579	Design & Investigation - HV Connection Class 5 PV (>200kW and <= 1500kW Three Phase) – Customer Network Study	per installation	$14,280.14	$15,708.16
Residential Estate Subdivision Services*				

580	URD Subdivision Electricity Distribution Network Reticulation - Multi-Unit Blocks	per block	$0.00	$0.00
581	URD Subdivision Electricity Distribution Network Reticulation - Blocks <= 650 m^2	per block	$1,700.39	$1,870.43
582	URD Subdivision Electricity Distribution Network Reticulation - Blocks 650 - 1100m^2 with average linear frontage of 22-25 meters	per block	$2,227.78	$2,450.56
Upstream Augmentation**				
585	HV Feeder	per KVA	$36.83	$40.52
586	Distribution substation	per KVA	$21.33	$23.46
Rescheduled Site Visits				
590	**Rescheduled Site Visit – One Person**	**per site visit**	$139.06	$152.96
591	**Rescheduled Site Visit – Service Team**	**per site visit**	$587.55	$646.31
Trenching charges				
592	Trenching - first 2 meters	per visit	$533.33	$586.67
593	Trenching - subsequent meters	per meter	$124.03	$136.43
Boring charges				
594	Under footpath	per occurrence	$967.44	$1,064.19
595	Under driveway	per occurrence	$1,153.49	$1,268.84

3.2 Metering services charges for 2017/18

In 2015/16, there were a series of changes made to metering service charges. In its Final Decision, the AER approved two types of metering service charges:

- Upfront capital charge (for all new and upgraded meters installed from 1 July 2015); and
- Annual charge comprising two components:
    - capital —metering asset base recovery; and
    - non-capital —operating expenditure and tax.

For existing regulated meters installed before 30 June 2015, ActewAGL Distribution has paid upfront for the capital costs of these meters which were then added to the asset base and recovered gradually, over the life of the meter, through annual charges. These customers pay the following charges:

- Capital component of regulated annual metering charge
- Non-capital component of the regulated annual metering charge.

For regulated new meter connections installed after 1 July 2015, the capital costs of the meter are paid upfront by the customer. As they have already paid for their capital component upfront, the only costs relating to their regulated metering service left to be recovered through annual charges, are the non-capital costs.

To facilitate records of these customers, ActewAGL Distribution has network tariffs that exclude metering capital charges (XMC tariffs). These network tariffs are applied to new connections that have paid for their metering assets. The unmetered loads do not have an XMC tariff because ActewAGL Distribution has not connected meters to these loads. Also, the off-peak network tariffs do not have an equivalent XMC tariff because the metering costs are associated with the customer's substantive tariff, not the supplementary off-peak tariff. Furthermore, there are no high voltage XMC network tariffs, because high voltage network tariffs exclude metering charges as ActewAGL Distribution has not provided manually read meters to these customers since they have been required to use remotely read (types 1- 4) meters. The XMC tariffs ensure that ActewAGL Distribution and retailers are able to clearly identify, through the network billing system, which customers have paid for their meters and are therefore not liable for the metering capital charge.

From 1 December 2017, the Metering Rule Change[18] comes into effect, and a customer with an existing regulated metering connection on their premises may choose to switch to a competitive advanced metering service. When a customer switches to a type 4 meter after 1 December 2017, they stop paying the non-capital component of the regulated annual metering charge (assuming they are not receiving ongoing meter operating and maintenance services from ActewAGL Distribution). However, a customer with a regulated type 5 or 6 meter installed before 1 July 2015 will continue to pay to ActewAGL Distribution the capital component of the regulated annual metering charge (as per the AER's Final Decision, which states that these customers must continue to make a contribution to recovery of the value of the existing meter asset base).

[18] http://www.aemc.gov.au/Rule-Changes/Expanding-competition-in-metering-and-related-serv

3.3 Metering non-capital charges for 2017/18

Table 3-2 presents the metering non-capital charges for 2017/18. The annual metering non-capital charges apply to both existing and new metering customers. The non-capital metering charges in 2017/18 are escalated by CPI, as per the Enforceable Undertaking.

Table 3-2 Metering non-capital charges, 2017/18

Code	Description	Unit	Excluding GST 2017/18	Including GST 2017/18
MP1	**Quarterly basic metering rate**			
	Accumulation and time-of-use meters read quarterly	cents per day per NMI *	3.810	4.191
MP2	**Monthly basic metering rate**			
	Accumulation and time-of-use meters read monthly	cents per day per NMI	6.670	7.337
MP3	**Time-of-use metering rate**			
	Time-of-use meters read monthly	cents per day per NMI	6.670	7.337
MP4	**Monthly manually-read interval metering rate**			
	Interval meters recording at either 15- or 30-minute intervals, read manually and processed monthly	cents per day per NMI	54.000	59.400
MP6	**Quarterly manually-read interval metering rate**			
	Interval meters recording at either 15- or 30-minute intervals, read manually and processed quarterly	cents per day per NMI	15.370	16.907

*National Meter Identifier.

3.4 Metering capital charges for 2017/18

The metering capital charges for 2017/18 are shown below in Table 3-3 and were added to the network charges in Table 2-4. These amounts are derived by applying CPI of 1.28 per cent to the 2016/17 metering capital charges, as per the Undertaking.

Table 3-3 Metering capital charges, 2017/18

Code	Description	Unit	Excluding GST 2017/18	Including GST 2017/18
MP7	**Quarterly basic metering rate**			
	Accumulation and time-of-use meters read quarterly	cents per day per NMI *	7.742	8.516
MP8	**Monthly basic metering rate**			
	Accumulation and time-of-use meters read monthly	cents per day per NMI	13.540	14.894
MP9	**Time-of-use metering rate**			
	Time-of-use meters read monthly	cents per day per NMI	13.540	14.894
MP10	**Monthly manually-read interval metering rate**			
	Interval meters recording at either 15- or 30-minute intervals, read manually and processed monthly	cents per day per NMI	109.281	120.209

MP11	**Monthly manually-read interval metering rate**			
	Interval meters recording at either 15- or 30-minute intervals, read manually and processed monthly	cents per day per NMI	31.180	34.298

*National Meter Identifier

4. Expected price trends

4.1 Expected network price trends

Table 4-1 presents ActewAGL Distribution's indicative Distribution Use of System (DUOS) charges for 2018/19 (the remaining year in this regulatory period).

Given the uncertainty surrounding the basis of 2018/19 DUOS prices, indicative 2018/19 prices are based on a CPI escalation of 2017/18 prices. The CPI used to calculate the 2018/19 indicative DUOS prices is based on the CPI contained in the post tax revenue model (PTRM) from the AER's Final Decision, at 2.38 per cent.

Table 4-1 Indicative distribution use of system charges, 2018/19 (excluding GST)

Code	Description	Unit	2018/19 Indicative
010	**Residential Basic Network**		
	Network access charge	cents/day	27
	Energy consumption	cents/kWh	4
015	**Residential TOU Network**		
	Network access charge	cents/day	27
	Energy consumption at max times	cents/kWh	8
	Energy consumption at mid times	cents/kWh	3
	Energy consumption at economy times	cents/kWh	1
020	**Residential 5000 Network**		
	Network access charge	cents/day	49
	Energy consumption for the first 60 kWh per day	cents/kWh	2
	Energy consumption above 60 kWh per day	cents/kWh	4
025	**Residential Demand Network**		
	Network access charge	cents/day	27
	Energy consumption	cents/kWh	1
	Peak period maximum demand	cents/kW	12
030	**Residential with Heat Pump Network**		
	Network access charge	cents/day	93
	Energy consumption for the first 165 kWh per day	cents/kWh	1
	Energy consumption above 165 kWh per day	cents/kWh	4
040	**General Network**		
	Network access charge	cents/day	49
	Energy consumption for the first 330 kWh per day	cents/kWh	7
	Energy consumption above 330 kWh per day	cents/kWh	11
135	**Small Unmetered Loads Network**		
	Network access charge	cents/day	40
	Energy consumption	cents/kWh	8
060	**Off-Peak (1) Night Network**		
	Energy consumption	cents/kWh	0
070	**Off-Peak (3) Day & Night Network**		
	Energy consumption	cents/kWh	0
080	**Streetlighting Network**		
	Network access charge	cents/day	49
	Energy consumption	cents/kWh	5

090	**General TOU Network**		
	Network access charge	cents/day	49
	Energy consumption at business times	cents/kWh	11
	Energy consumption at evening times	cents/kWh	5
	Energy consumption at off-peak times	cents/kWh	2
Low voltage time of use demand network			
101	**LV TOU kVA Demand Network**		
	Network access charge per connection point	cents/day	54
	Maximum demand charge	c/KVA/day	37
	Energy consumption at business times	cents/kWh	2
	Energy consumption at evening times	cents/kWh	1
	Energy consumption at off-peak times	cents/kWh	0
103	**LV TOU Capacity Network**		
	Network access charge per connection point	cents/day	54
	Maximum demand charge	c/KVA/day	17
	Capacity charge	c/KVA/day	17
	Energy consumption at business times	cents/kWh	2
	Energy consumption at evening times	cents/kWh	1
	Energy consumption at off-peak times	cents/kWh	0
106	**LV Demand Network**		
	Network access charge	cents/day	49
	Energy consumption	cents/kWh	2
	Peak period maximum demand	c/kW/day	30
High voltage time of use demand network with ActewAGL low voltage network			
111	**HV TOU Demand Network**		
	Network access charge per connection point	$/day	20
	Maximum demand charge	c/KVA/day	13
	Capacity charge	c/KVA/day	13
	Energy consumption at business times	cents/kWh	1
	Energy consumption at evening times	cents/kWh	0
	Energy consumption at off-peak times	cents/kWh	0
High voltage time of use demand network without ActewAGL low voltage network			0
121	**HV TOU Demand Network – Customer LV**		
	Network access charge per connection point	$/day	20
	Maximum demand charge	c/KVA/day	13
	Capacity charge	c/KVA/day	13
	Energy consumption at business times	cents/kWh	0
	Energy consumption at evening times	cents/kWh	0
	Energy consumption at off-peak times	cents/kWh	0
122	**HV TOU Demand Network – Customer HV and LV**		
	Network access charge per connection point	$/day	20
	Maximum demand charge	c/KVA/day	12
	Capacity charge	c/KVA/day	12
	Energy consumption at business times	cents/kWh	0
	Energy consumption at evening times	cents/kWh	0
	Energy consumption at off-peak times	cents/kWh	0

4.2 Expected metering price trends

Indicative metering capital and non-capital charges for 2018/19 are shown in Table 4-2. [19]

Table 4-2 Indicative 2018/19 metering charges

Code	Description	Unit	Excluding GST 2018/19
MP1	**Quarterly basic metering rate**		
	Accumulation and time-of-use meters read quarterly	cents per day per NMI	3.9
MP2	**Monthly basic metering rate**		
	Accumulation and time-of-use meters read monthly	cents per day per NMI	6.8
MP3	**Time-of-use metering rate**		
	Time-of-use meters read monthly	cents per day per NMI	6.8
MP4	**Monthly manually-read interval metering rate**		
	Interval meters recording at either 15- or 30-minute intervals, read manually and processed monthly	cents per day per NMI	55.3
MP6	**Quarterly manually-read interval metering rate**		
	Interval meters recording at either 15- or 30-minute intervals, read manually and processed quarterly	cents per day per NMI	15.7
MP7	**Quarterly basic metering rate**		
	Accumulation and time-of-use meters read quarterly	cents per day per NMI	7.9
MP8	**Monthly basic metering rate**		
	Accumulation and time-of-use meters read monthly	cents per day per NMI	13.9
MP9	**Time-of-use metering rate**		
	Time-of-use meters read monthly	cents per day per NMI	13.9
MP10	**Monthly manually-read interval metering rate**		
	Interval meters recording at either 15- or 30-minute intervals, read manually and processed monthly	cents per day per NMI	111.9
MP11	**Monthly manually-read interval metering rate**		
	Interval meters recording at either 15- or 30-minute intervals, read manually and processed monthly	cents per day per NMI	31.9

[19] The indicative prices in Table 4-2 do not include an X factor. They are calculated by escalating the charges from the previous year by a CPI of 2.38%.

4.3 Expected ancillary and connection service price trends

Indicative charges for ancillary services for 2018/19 are shown in Table 4-3. These prices are based on the AER's CPI assumption of 2.38 per cent per annum[20].

Table 4-3 Indicative ancillary & connection service charges, 2018/19 (excluding GST)

Code	Service		Prices excl. GST 2018/19
Premise Re-energisation – Existing Network Connection -These charges also apply where ActewAGL responds to a customer initiated call out and determines that the premise is energised at the connection point.			
501	Re-energise premise – Business Hours	per visit	$71.18
502	Re-energise premise – After Hours	per visit	$90.23
Premise De-energisation – Existing Network Connection			
503	De-energise premise – Business Hours	per visit	$71.18
505	De-energise premise for debt non-payment	per test	$142.37
Meter installation			
507	Install single phase, single element manually read interval meter	per meter	$534.68
508	Install subsequent single phase, single element meter - same location & visit	per meter	$338.02
509	Install single phase, two element meter	per meter	$650.24
511	Install subsequent single phase, two element meter - same location & visit	per meter	$453.58
512	Install three phase meter	per meter	$782.96
513	Install subsequent three phase meter - same location & visit	per meter	$586.29
Meter Investigations			
504	Meter Test (Whole Current) – Business Hours	per test	$284.74
510	Meter Test (CT/VT) – Business Hours	per test	$329.76
Special metering services			
506	Special Meter Read	per read	$32.92
Temporary Network Connections			
520	Temporary Builders Supply – Overhead (Business Hours) (excludes meter cost)	per installation	$639.80
522	Temporary Builders Supply – Underground (Business Hours) (excludes meter costs)	per installation	$1,396.73
New Network Connections			
523	New Underground Service Connection – Greenfield	per installation	$0.00
526	New Overhead Service Connection – Brownfield (Business Hours)	per installation	$840.31
527	New Underground Service Connection – Brownfield from Front	per installation	$1,396.73
528	New Underground Service Connection – Brownfield from Rear	per installation	$1,396.73
Network Connection Alterations and Additions			
541	Overhead Service Relocation – Single Visit (Business Hours)	per installation	$802.04
542	Overhead Service Relocation – Two Visits (Business Hours)	per installation	$1,604.06

[20] The indicative prices in Table 4-3 do not include an X factor. They are calculated by escalating the charges from the previous year by a CPI of 2.38%.

543	Overhead Service Upgrade – Service Cable Replacement Not Required	per installation	$802.04
544	Overhead Service Upgrade – Service Cable Replacement Required	per installation	$840.31
545	Underground Service Upgrade – Service Cable Replacement Not Required	per installation	$1,358.46
546	Underground Service Upgrade – Service Cable Replacement Required	per installation	$1,396.73
547	Underground Service Relocation – Single Visit (Business Hours)	per installation	$1,396.73
548	Install surface mounted point of entry (POE) box	per installation	$645.95
Temporary De-energisation			
560	Temporary de-energisation – LV (Business Hours)	per occurrence	$427.10
561	Temporary de-energisation – HV (Business Hours)	per occurrence	$427.10
Supply Abolishment / Removal			
562	Supply Abolishment / Removal – Overhead (Business Hours)	per site visit	$601.53
563	Supply Abolishment / Removal - Underground (Business Hours)	per site visit	$1,086.77
Miscellaneous Customer Initiated Services			
564	Install & Remove Tiger Tails – Per Installation (Business Hours)	per installation	$1,412.57
565	Install & Remove Tiger Tails - Per Span (Business Hours)	per installation	$711.10
566	Install & Remove Warning Flags – Per Installation (Business Hours)	per installation	$1,203.05
567	Install & Remove Warning Flags - Per Span (Business Hours)	per installation	$609.51
Embedded Generation - Operational & Maintenance Fees			
568	Small Embedded Generation OPEX Fees - Connection Assets	per annum	2%
569	Small Embedded Generation OPEX Fees - Shared Network Asset	per annum	2%
Connection Enquiry Processing - PV Installations			
570	PV Connection Enquiry – LV Class 1 (<= 10kW Single Phase / 30kW Three Phase)	per installation	$0.00
571	PV Connection Enquiry – LV Class 2 to 5 (> 30kW <= 1500kW Three Phase	per installation	$584.79
572	PV Connection Enquiry – HV	per installation	$1,169.60
573	Provision of information for Network technical study for large scale installations	per installation	$11,696.02
Network Design & Investigation / Analysis Services - PV Installations			
574	Design & Investigation - LV Connection Class 1 PV (<= 10kW Single Phase / 30kW Three Phase)		$0.00
575	Design & Investigation - LV Connection Class 2 PV (> 30kW and <= 60kW Three Phase)	per installation	$3,898.68
576	Design & Investigation - LV Connection Class 3 PV (> 60 kW and <= 120kW Three Phase)	per installation	$5,848.00
577	Design & Investigation - LV Connection Class 4 PV (> 120 kW and <= 200kW Three Phase)	per installation	$7,797.34
578	Design & Investigation - LV Connection Class 5 PV (> 200kW and <= 1500kW Three Phase) – ActewAGL Network Study	per installation	$11,696.02
579	Design & Investigation - HV Connection Class 5 PV (>200kW and <= 1500kW Three Phase) – Customer Network Study	per installation	$14,620.01
Residential Estate Subdivision Services*			
580	URD Subdivision Electricity Distribution Network Reticulation - Multi-Unit Blocks	per block	$0.00

581	URD Subdivision Electricity Distribution Network Reticulation - Blocks <= 650 m2	per block	$1,740.86
582	URD Subdivision Electricity Distribution Network Reticulation - Blocks 650 - 1100m2 with average linear frontage of 22-25 meters	per block	$2,280.80
Upstream Augmentation**			
585	HV Feeder	per KVA	$37.71
586	Distribution substation	per KVA	$21.84
Rescheduled Site Visits			
590	**Rescheduled Site Visit – One Person**	**per site visit**	$142.37
591	**Rescheduled Site Visit – Service Team**	**per site visit**	$601.53
Trenching charges			
592	Trenching - first 2 meters	per visit	$546.03
593	Trenching - subsequent meters	per meter	$126.98
Boring charges			
594	Under footpath	per occurrence	$990.47
595	Under driveway	per occurrence	$1,180.95