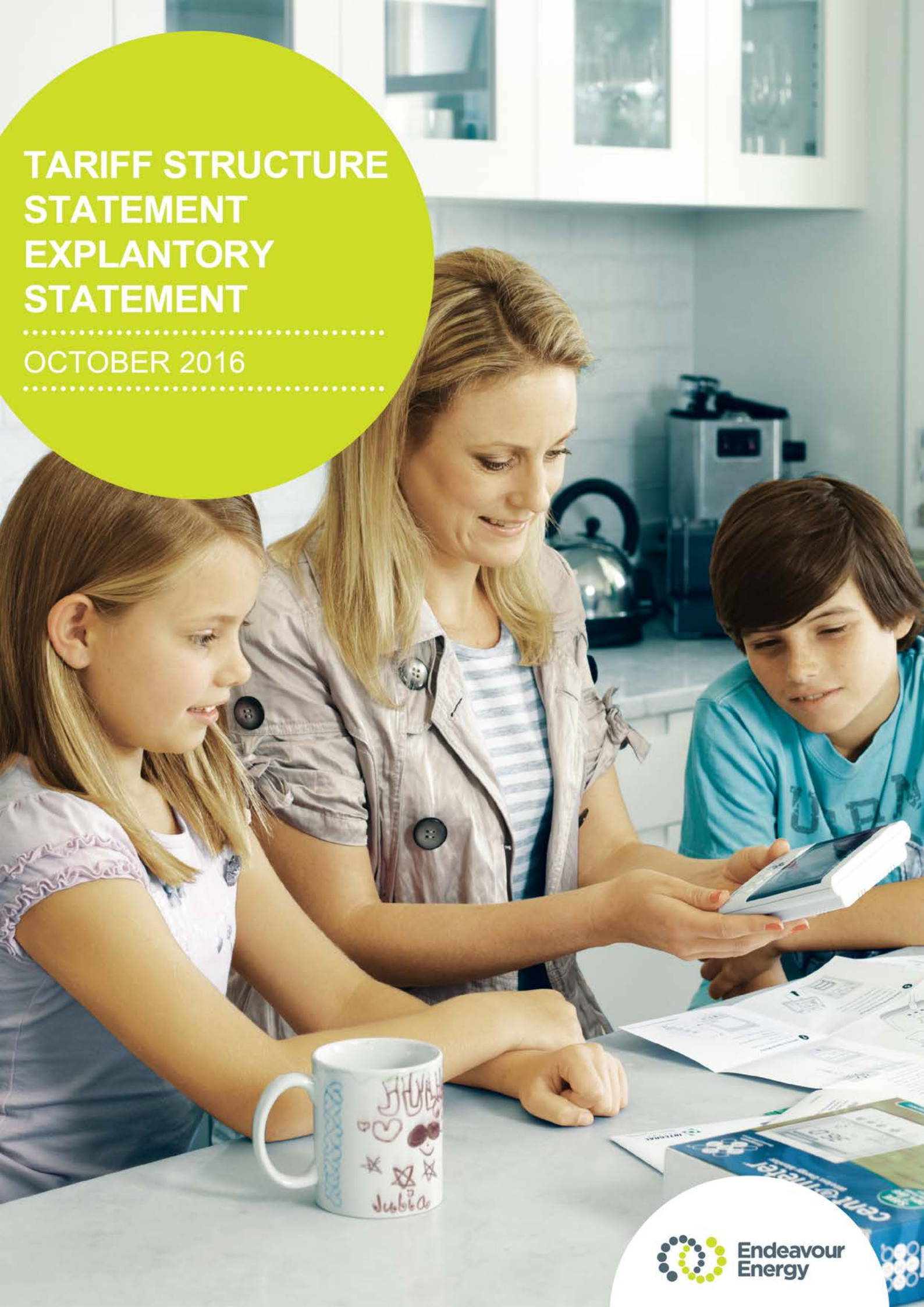
TARIFF STRUCTURE STATEMENT EXPLANTORY STATEMENT

OCTOBER 2016



Endeavour Energy

CONTENTS

CONTENTS

CONTENTS

CONTENTS

Figures

CONTENTS

Tables

EXECUTIVE SUMMARY

Endeavour Energy is pleased to present this explanatory statement to go alongside our Tariff Structure Statement (TSS) dated October 2016.

What is the TSS?

The TSS is a new requirement, emerging from recent changes to the National Electricity Rules (Rules). These changes require us to explain our proposed tariff structures for the 2017/18 to 2018/19 period, together with our strategy for the evolution of tariffs in the medium term.

The Rules set out a range of formal obligations and considerations that must be contained in the TSS. The objectives of these new requirements have simple and common sense concepts behind them:

- transparency for customers on how we calculate our prices
- improved understanding for Endeavour Energy of the manner in which customers want to use our network and the impact on them of changes in pricing reforms
- transparency regarding our forward pricing reforms
- predictability for each individual customer on when the available prices or tariffs may apply.

Rationale for pricing reform

The way in which customers are using Endeavour Energy's distribution network is changing.

It has become more important to make sure that network prices provide signals to electricity retailers that in turn potentially allow customers to make informed choices about when and how to use the network, based on the costs of providing the services they use. This has the potential to result in lower costs for everyone, where network investment can be avoided.

This means that there is a need for changes in the structure of tariffs that consumers face.

It is important that changes in tariffs are moderately paced, to give customers time to adapt, and to ensure that more vulnerable customers are not left behind. The regulatory framework recognises this, and places emphasis on consideration of customer impact. This means that we need to understand directly from customers how tariff changes are likely to affect them, and how they can adapt.

Customer engagement is central to Endeavour Energy's focus in considering changes to its tariff structure. Our TSS is the first step on the journey of price reform, which Endeavour Energy is taking together with its customers. Endeavour Energy has undertaken a number of stakeholder engagement activities, including:

- five consumer group forums
- nineteen face-to-face interviews with peak advocacy groups
- a social and mainstream media campaign inviting customer feedback on our Issues Paper.

We also recently held a forum with stakeholders to discuss our preliminary responses to the Australian Energy Regulator's (AER's) draft decision on our initial TSS.

Continuing consultation and input from customers will be key in 'getting it right', and delivering an outcome which is of benefit to all.

As a consequence of Endeavour Energy's primary concern with impact on customers, our default tariff structures for 2017/18 to 2018/19 will evolve from those currently in place, with some changes being proposed to move towards more cost reflective tariffs. These existing structures, which provide a mechanism for transition, coupled with additional tariff structures that provide for more efficient price signals, will provide customers with choice.

EXECUTIVE SUMMARY

In future years, as metering and meter data systems with advanced capabilities become installed on a more widespread basis, we envisage that we will be able to continue the process of transition to more efficient tariff structures, from this proposed base.

Balancing efficient prices with the impact of change on customers

In considering our future tariff strategy, it is recognised that Endeavour Energy needs to balance:

- prices that promote the efficient use of the network and network investment into the future
- recovery of the regulated revenue the AER has allowed us
- the short term impacts on customers from moving away from current tariff structures towards more efficient structures.

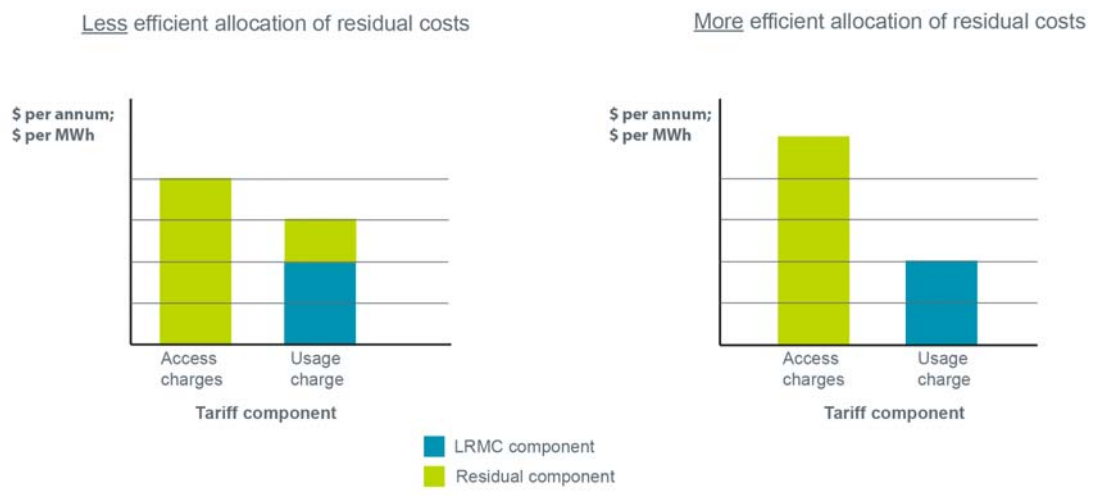
The Rules require that costs that are incurred regardless of the level of a customer's consumption (which are termed 'residual costs'), should be recovered in a manner that minimises distortions to the price signals for the efficient use of the network. This means that these costs should be recovered in a manner that doesn't influence consumption decisions. 'Fixed' or 'access charges' have this property.

Efficient pricing needs to signal to customers the cost of consuming the next unit of the product. Where there are no network constraints (such as in off-peak times) this cost will be very low. However, if the network is reaching capacity at peak times, the cost to the network of consumers using more energy/demand at that time will grow until it reaches the cost required to augment the network to continue to meet the demand. This price is the variable or usage component of a tariff and is referred to as the Long Run Marginal Cost (LRMC) of supply.

Box 1: Making Existing Tariff Structures More Efficient

A more efficient price structure would have:

- recovery of the costs of the network as it stands today in the fixed component of tariffs, which would imply an increase in the fixed component of tariffs
- price signals to consumers as to the cost of needing to augment the network in the future in the variable charge – which would currently be low, as there is available capacity in the network at certain times throughout the year.



EXECUTIVE SUMMARY

When setting the price levels to provide efficient pricing signals the Rules require Endeavour Energy to base the pricing levels on an estimate of LRMC. There are two important points to note

- firstly there is more than one way to calculate LRMC and therefore the result will always be a point in time estimate
- secondly the time required to responsibly transition to the efficient pricing levels mean that our proposed tariff structure strategies are not impacted by variability in the LRMC estimate resulting from the different methods and inputs to the calculation.

The change from existing tariff structures to those that have these characteristics will require transition, in order to avoid unacceptable impacts on customers.

Taking into account feedback from our customer engagement sessions, Endeavour Energy considers that the determining factor in relation to this balance should be the potential impact on customers.

In considering the impact on our customers, we recognise that the status of metering infrastructure currently limits the ability to introduce new cost reflective tariff structures, without requiring customers to also have to pay for new meters. This is likely to change going forward as more advanced metering and metering data systems are introduced.

Endeavour Energy considers that it can learn from the experience of other distributors located in network areas with higher penetration of more advanced meters as to what tariffs are likely to work well, going forward.

These factors argue for the speed of pricing reform to be moderate – recognising that it is a process that will need to continue into the future.

How is Endeavour Energy engaging with customers in this process?

Customer engagement is central to the process of thinking about appropriate tariff structures. For tariff reform to be effective, it is important that customers are able to understand and contribute to the changes proposed.

Endeavour Energy must understand how customer use of the network is changing and to appreciate how changes in tariff structures will affect different customer groups.

Box 2: Description of Customer Engagement to Date

EXECUTIVE SUMMARY

Throughout our consultation leading up to this point Endeavour Energy has sought to ensure that all stakeholders consider this document as a formal milestone in what may well be a perpetual process of ongoing tariff reform.

Even once a TSS has been approved by the AER and is being implemented by Endeavour Energy, we remain committed to an ongoing and open dialogue on issues as they arise and areas for refinement and improvement over the coming years.

We intend to continue the engagement process during the remainder of this regulatory period in the lead-up to the next TSS in identifying areas for refinement and improvement.

Proposed tariff structure for 2017/18 and 2018/19 will evolve from current arrangements

Given Endeavour Energy's principal concern for customer impact, our primary default tariff structures will be largely consistent with those currently in place, namely:

- inclining block tariffs (IBT) for small to medium commercial customers
- demand based tariffs for large commercial and industrial customers.

In the initial TSS, Endeavour Energy included a declining block tariff (DBT) for residential consumers because this tariff:

- recovers greater residual costs from the least price sensitive parts of consumption, reducing the distortive impacts of usage charges
- recovers residual costs from those tariff components that are least volatile, reducing annual revenue fluctuation and in-turn increasing annual price path stability. Greater pricing stability provides certainty to consumers and improves efficient consumption and appliance investment decisions over the longer term.

However, the AER was not satisfied that the DBT structure contributes to the achievement of compliance with the distribution pricing principles because[1]

- it does not consider that it efficiently recovers costs from customers because in its opinion our evidence is not sufficient to show that the first block of energy consumption is less price sensitive than consumption in higher blocks[2]
- it was not satisfied that a declining block structure provides efficient price signals to consumers to make use of spare capacity within the NSW networks, in particular it does not provide a signal regarding the timing of consumption.[3]

The AER stated that a more neutral tariff such as a flat tariff, whilst still not sending signals regarding the timing of consumption, would reduce the risk of encouraging too much consumption (over incentivising) compared to a DBT when there are constraints on the network.[4]

Further, the AER argues that a flat rate tariff is consistent with the pricing principles in the following respects:[5]

- for tariffs to comply with the pricing principles, albeit after a reasonable period of transition, and
- the ability of customers to mitigate the impact of changes through their usage decisions.

Whilst Endeavour Energy believes that a DBT is consistent with the pricing principles, we are proposing to transition to a flat tariff based on the AER's opinion that this would be consistent with the pricing principles.

[1] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 47.

[2] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 94.

[3] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 49.

[4] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 49.

[5] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 51.

EXECUTIVE SUMMARY

Endeavour Energy is also proposing to increase the fixed tariff component for residential customers – see the proposed changes in tariff structures for general supply and residential customers in Figure E1.

Figure E1: Proposed transition to more efficient tariff structures in this TSS period

Endeavour Energy will maintain its current inclining block structure for small to medium commercial customers. The benefits of this tariff structure in the context of commercial customers, where the penetration of more advanced interval meters is greater, is that it:

- incentivises customers with higher consumption to move to more efficient demand based tariff structures. These tariffs directly signal the cost of specific amounts of network capacity or based on maximum demand at particular times. Demand based tariffs provide more efficient signals relative to the inclining block structure, but require interval metering

- ensures that this signal to large customers does not create distortions to smaller customers on the tariff. We are proposing to increase the energy consumption point at which the second block starts from the current threshold of 10 MWh to 120 MWh per annum so that the lowest block covers the vast majority of customers.

These changes to our tariff structures will not change the overall amount of revenue that Endeavour Energy is allowed to collect from customers. However, they will change how much is paid by different types of customer, such that the price that each customer pays is more closely aligned with the costs that they impose on the network.

Endeavour Energy continues to offer tariffs that provide more efficient signals for the use of the network, and has ensured that more customers will move to these tariffs.

Endeavour Energy currently offers an opt-in TOU tariff for residential consumers with fixed, peak, shoulder and off-peak charging parameters, and for small to medium commercial customers, as well as optional controlled load tariffs – and will maintain these tariffs.

The TOU tariff comprises higher prices at times when the network is more likely to be constrained, and lower prices when there are no constraints on the network – which provides a signal to customers about how the time of their usage affects the costs of the network, and can encourage them to alter their consumption pattern in order to avoid these costs.

In its draft decision, the AER stated that allowing customers to opt-in to TOU tariffs shows insufficient progress towards the use of more cost reflective tariffs because in the AER's opinion:[6]

- TOU tariffs are able to send signals regarding the timing of consumption[7] (which flat, inclining and declining block tarrifs cannot)
- Endeavour Energy's opt-in policy has not been successful in moving customers to TOU tariffs.[8]

In order to increase the number of consumers on TOU tariffs, we propose that, from 1 July 2018:

- new customers (all of whom will have interval meters under the metering rule change) be assigned to the default TOU with the option to opt-out to the non-TOU tariff
- existing customers with interval meters be assigned to the non-TOU tariff with the option to opt-in to the default TOU.

Figure E2 shows that we expect this to lead to an additional 10% to 20% of residential and general supply customers being on a TOU tariff by the end of the next TSS period, from a very low base currently.

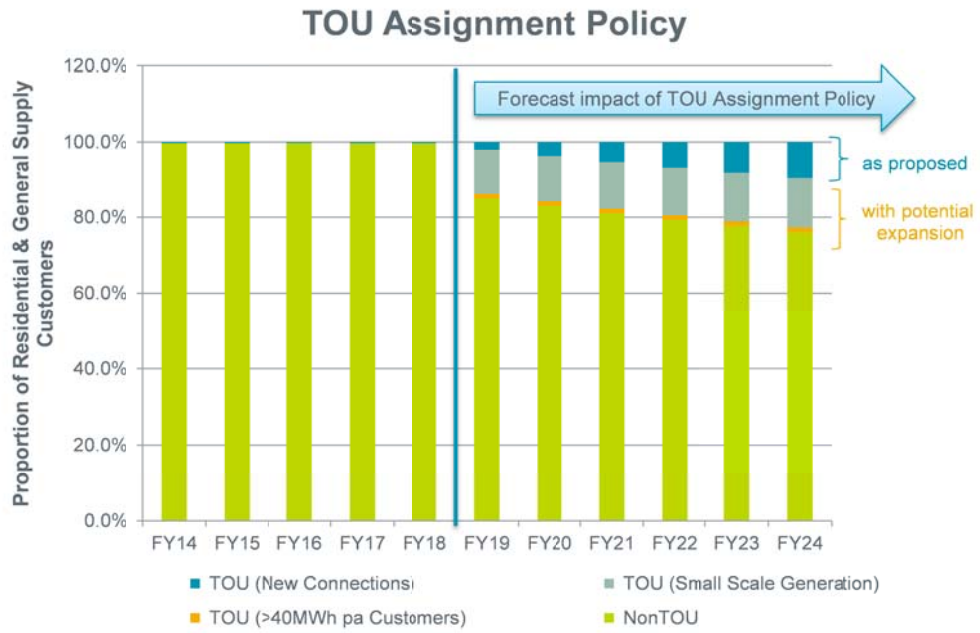
[6] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 101.

[7] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 45.

[8] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 101.

EXECUTIVE SUMMARY

Figure E2: TOU assignment policy



Endeavour Energy proposes, therefore, to offer a suite of tariffs as a means of transition:

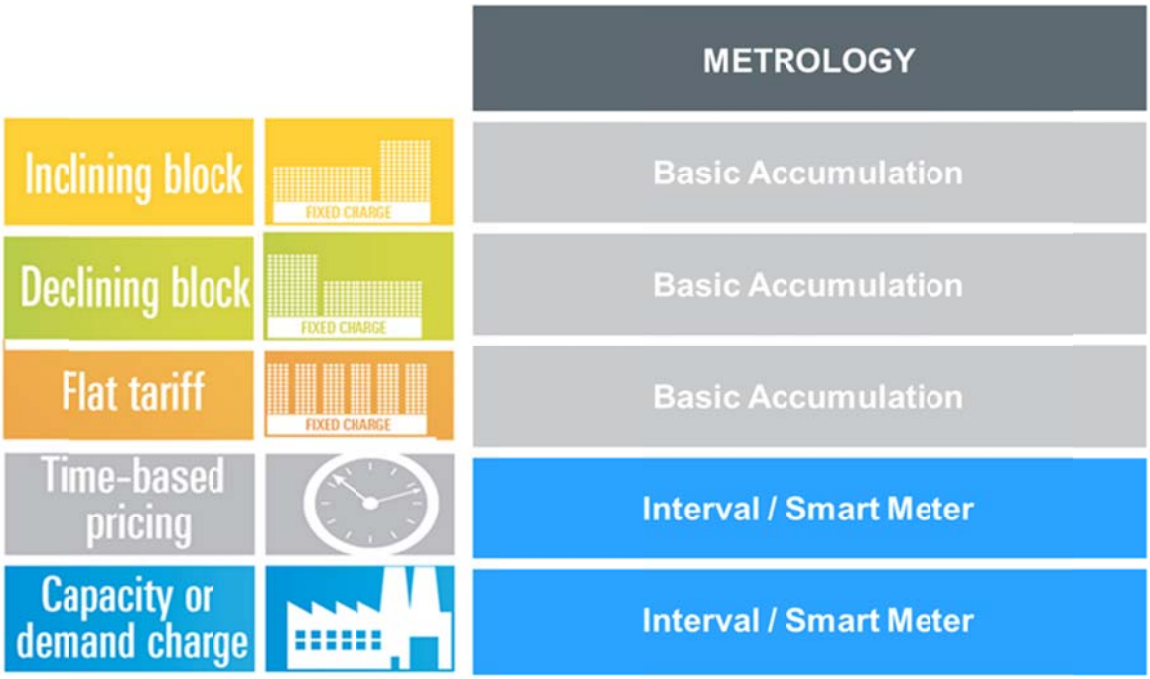
- each tariff provides the best possible signals for the efficient usage of the network, within the constraints of that tariff structure
- allows customers to make sensible decisions about when to change tariffs.

Endeavour Energy's proposed tariffs are consistent with the requirements in the regulatory framework.

Our proposed tariff structures are also consistent with our current metering capabilities. Basic accumulation type metering limits our ability to charge customers based on their utilisation of the network at peak times, without also requiring them to obtain a new meter.

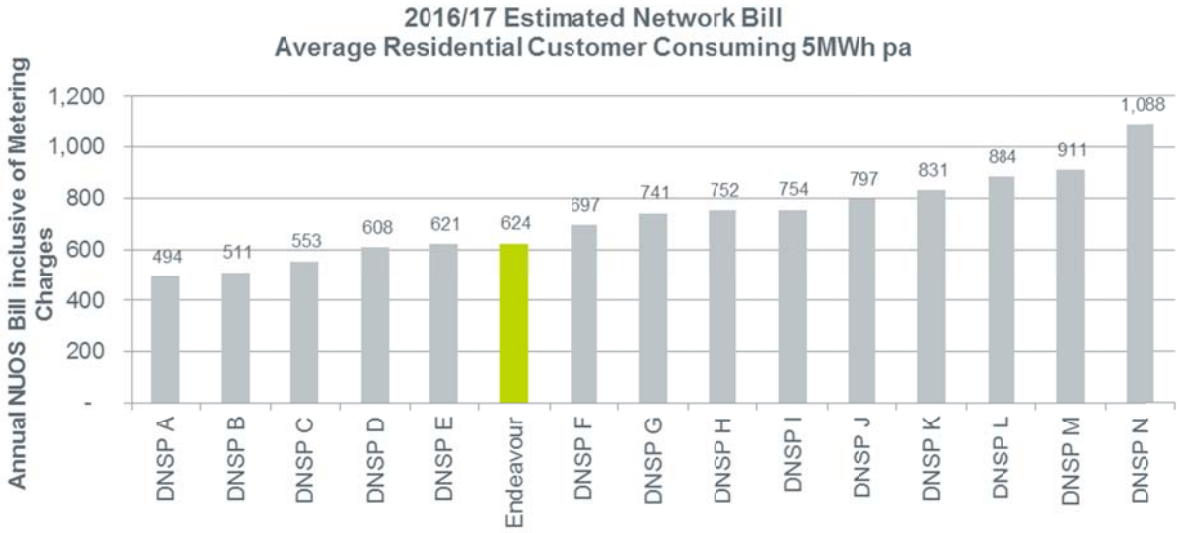
EXECUTIVE SUMMARY

Figure E3: Current metering restricts the range of tariffs that customers can adopt



The 2016/17 network bill comparison below, demonstrates that Endeavour Energy's flat tariff does not produce adverse bill outcomes for average customers when compared to the bill impacts of other NEM[9] distribution businesses.[10]

Figure E4: Residential distribution network bill comparison (2016/17).



EXECUTIVE SUMMARY

Introduction of demand charges requires further consultation and upgrade to metering

Demand charges mean that part of a customer's bill is based on the maximum demand that they have placed on the network in a preceding period. Tariffs which incorporate 'demand' or 'capacity' charges, if passed on by the retailer, are widely seen as being able to provide signals for the efficient use of the network.

Demand charges are efficient because Endeavour Energy's network must be built to accommodate the maximum peak demand that occurs in the network, across all users.

Demand charges can provide a signal to customers to alter the time of their consumption, where possible, which in turn will reduce the amount of network peak demand and may allow network investment to be avoided, lowering overall costs.

Endeavour Energy currently incorporates demand charges as part of its tariff structure for larger commercial and industrial customers. We are proposing to retain this charging structure for these customers. Our site-specific tariffs for the even larger commercial and industrial customers also typically contain demand-based charging parameters, which we propose to retain.

Some customers during our consultation process thought that Endeavour Energy should introduce demand charges on an opt-in basis for residential customers.

Distribution businesses in Victoria have proposed the introduction of demand charges for residential customers, however interval metering has already been rolled-out in Victoria which easily facilitates this intent. Endeavour Energy has carefully considered whether it is appropriate to introduce demand charges for its residential customers, and, if so, whether now is the time to do that.

We have decided not to introduce a demand charge component as part of our tariffs in this TSS period. The reasons for this decision are:

- demand-based charging can have a substantive impact on individual customers, particularly more vulnerable customers who have limited flexibility in being able to change the time at which they use electricity. Any transition to demand-based charging needs to be carefully managed
- the absence of interval metering in the majority of Endeavour Energy's network means both that it is not yet possible to charge residential customers on the basis of their demand without also requiring them to change their meter. It also means that the detailed information which would be needed to design appropriate demand tariffs is not currently available.

Advanced interval metering is expected to become more widespread following the introduction of Rule changes in late 2017 that will enable meters to be provided to customers on a competitive basis by a range of parties, including retailers.

The design of effective demand tariffs is a complex exercise. By waiting, Endeavour Energy will be able to build on the experience of the Victorian distributors in identifying the best way to design a demand charge, as well as observing how consumers and retailers react to the charges, should this be an option that continues to be supported by customers, and which Endeavour Energy seeks to pursue in the future.

We consider that this is a prudent approach, given the current limitations in metering technology in Endeavour Energy's network.

In the meantime however, we intend to more actively promote with both retailers and customers our current opt-in TOU tariff for both residential and small commercial and industrial customers.

We will also introduce an opt-out TOU tariff for new residential and small commercial and industrial customers effective 1 July 2018.

EXECUTIVE SUMMARY

What happens next?

The AER will make a final TSS decision in late January 2017.

Endeavour Energy will commence stakeholder discussion on the TSS to cover the regulatory period from 2019-24 in mid- 2017.

Box 3: Description of Future Customer Engagement

1 ABOUT THIS TARIFF STRUCTURE EXPLANATORY STATEMENT

1.1. Introduction

Endeavour Energy is submitting this Tariff Structure Explanatory Statement (TSES) to the Australian Energy Regulator (AER) to accompany the Tariff Structure Statement (TSS) that Endeavour Energy is submitting to the AER in accordance with the requirements of the National Electricity Rules (the Rules). This TSES demonstrates that our TSS complies with the Rules.

The development of the TSS is a new requirement, emerging from recent changes to the Rules. These changes require us to explain the process by which we have set our tariffs, and how that process satisfies the principles established in the Rules.

The objectives of these new requirements have simple and common sense concepts behind them:

- transparency for customers on how we calculate our prices.
- transparency regarding our forward pricing reforms.
- predictability for each individual customer on when the available prices or tariffs may apply.

Under the Rules, Endeavour Energy must set its network tariffs with reference to the efficient cost of providing distribution services to its customers. Setting tariffs that better reflect the cost of serving our customers will help both us, and our customers, make better decisions:

- our customers will receive a signal as to the costs that arise from their usage of the network, which helps them make better decisions about their electricity consumption andmay reduce the need for us to invest in the augmentation of our network.
- we can better identify where and when we must invest so as to provide the infrastructure needed to serve our customers in an efficient manner.

Our network tariffs allow us to recover the revenue we require to provide an efficient, reliable and safe electricity network. This revenue is determined by the AER every five years.

The regulatory control period relevant to the TSS is 2015-19, although the period for which our proposed tariffs will be applied is a shorter period from 2017/18 to 2018/19. Endeavour Energy will be required to submit a new TSS covering the 2019/20 to 2023/24 period as part of our next regulatory proposal.

Our TSS has been developed following a period of consultation with our customers and reflects our strong consideration of customer impacts through this period of transition.

1 ABOUT THIS TARIFF STRUCTURE EXPLANATORY STATEMENT

1.2. Structure of this TSES

Endeavour Energy's TSES is structured as follows:

Table 1.1: Structure of this document

Chapter	Title	Purpose
2	About Endeavour Energy	This section provides a description of our business
3	Understanding our network pricing	This section sets out the basic components of network pricing and explains the rationale for our existing network tariffs
4	The environment in which we operate	This section provides a description of changes in the use of our network and the implications this has for the structure and level of our tariffs over the coming regulatory period
5	Our customer engagement	This section outlines the process we have undertaken in engaging with our customers and responds to the feedback we have received through stakeholder consultation
6	Our proposed network tariffs	This section explains the proposed changes to our network tariffs over the next regulatory period
7	Compliance with the pricing principles	This section sets out how our proposed tariff structures comply with the Pricing Principles set out in the Rules
8	Future tariff options	This section provides greater detail on new tariffs that are currently under consideration
A1	Glossary	This provides a definition for some key terms used throughout this TSES
A2	Allocation of customers to tariff classes	This section sets out the procedures that apply for the allocation of our customers to different tariff classes
A3	Proposed tariff structures – standard control services	This section provides details of the charging parameters for each of our proposed tariffs for Standard Control Services
A4	Proposed tariff structures – alternative control services	This section provides details of the charging parameters for each of our proposed tariffs for Alternative Control Services
A5	Estimating stand-alone and avoidable cost	This section sets out our approach to estimating stand-alone and avoidable cost for each of our tariff classes
A6	Estimating LRMC	This section sets out our approach to estimating long-run marginal cost for each of our tariff classes
A7	Allocation of residual costs	This section sets out the process by which we allocate residual costs between tariff components and our tariff classes
A8	Pass through of specified costs	This section provides further detail on cost items that are passed-through in our network charges

A9	Indicative pricing schedule	This section sets out some indicative prices based on the existing determination, although we note that the determination is subject to merits review
A10	Bill impact analysis	This section sets out our analysis of the impact of proposed changes to our tariffs on those customers to whom such changes will apply
A11	CSIRO study	This section summarises the findings of a recent CSIRO study on customer perceptions of demand-based electricity pricing structures
A12	Compliance checklist	This section sets out a checklist that identifying where each of the TSS Rule Requirements are met in the TSS and this TSES
A13	Supporting documents	Supporting documents to the TSS

1.3. Changes from the initial TSS

The most significant changes from our initial TSS are that:

- we will transition over two years to a flat tariff for residential customers, when previsouly we were proposing to maintain a decling block tariff (DBT) – see section 7.3
- all new customers from 1 July 2018 will be assigned to the default time of use (TOU) with the option to opt-out to the non-TOU tariff, when previously we were proposing those customers could opt-in to a TOU tariff – see section 6.4
- we will remove the proposed shoulder charging windows for residential TOU customers on non-business days and propose to undertake a detailed review of our charging windows (and stakeholder consultation) in preparation for the next TSS – see section 7.1.

2 ABOUT ENDEAVOUR ENERGY

2.1. Our Network

Endeavour Energy is a commercially successful, customer focused electricity distribution business owned by the New South Wales Government. We are a 'poles and wires' business, responsible for the safe and reliable supply of electricity to 951,801 customers or 2.3 million people in households and businesses across Sydney's Greater West, the Blue Mountains, Southern Highlands, Illawarra and the South Coast.

With an estimated asset value of $6.2 billion, our network spans 24,800 square kilometres and is made up of more than 432,500 power poles, over 205,000 streetlights, 185 major substations and 32,000 distribution substations connected by 47,000 kilometres (more than the distance from Sydney to London and back) of underground and overhead cables.

We power the third largest economy in Australia, with the population of Greater Western Sydney forecast to grow approximately 46% by 2031. Our network area includes the North West and South West priority growth areas of Sydney, established in 2005 to accommodate 500,000 new residents over 30 years. These priority growth areas are the result of the biggest coordinated land release in NSW's history. We are preparing to meet this extra growth and maintain existing services by investing responsibly and efficiently in our network. Endeavour Energy is an electricity distribution company serving some of the largest and fastest growing regional economies in the state.

Figure 2.1: Endeavour Energy's franchise area

3 UNDERSTANDING OUR NETWORK PRICING

Before setting out the types of tariffs that Endeavour Energy currently offers, it is useful to define some key terms and describe some common types of electricity tariffs offered by distributors.

3.1. Defining key terms

Network businesses assign customers to what is termed a 'tariff class'. This generally represents a group of customers with similar characteristics. Each tariff class is comprised of one or more tariffs.

Tariffs between or within tariff classes may have a different tariff structure, ie, they may be comprised of different tariff components. For example, a tariff may comprise a fixed charge and an energy based consumption charge. These separate charges within a single tariff each represent two separate tariff components.

Charging parameters relate to the specific characteristics of tariff components. Examples of a charging parameter would be the time periods applicable to a peak energy consumption tariff component, or the consumption threshold applicable to the energy consumption blocks of a block tariff.

Once we have a tariff structure – with its tariff components and charging parameters – we set the level of each tariff component (the number of dollars per annum, per kilowatt, per kilowatt hour or per kilovolt-ampere as is appropriate for that component). We call these the price levels.

3.2. Common tariff structures

The network tariff structures we are able to adopt depend fundamentally on the type of metering technology available to measure the customer's energy consumption or demand. There are two types of meters:

- basic or accumulation meters
- more advanced interval or smart meters.

Basic or accumulation meters are capable of keeping track of the total amount of electricity a customer has used. Customers with an accumulation meter may be charged different types of tariffs on the basis of their total energy consumption. For example, common charging structures for customers with accumulation meters include:

- **Flat Tariff** - a single "Flat" or "All-time" energy based variable tariff component charged on a c/kWh basis.
- **IBT** - a multi-block energy based tariff component charged on a c/kWh basis. The price level of each "block" charging parameter increases as customer consumption increases.
- **DBT** - a multi-block energy based tariff component charged on a c/kWh basis. The price level of each "block" charging parameter decreases as customer consumption increases.

Interval and smart meters record a customer's electricity use every half an hour. The primary distinction between interval and smart meters is that smart meters can communicate remotely, which allows for other services to be provided to customers. Where customers have interval or smart meters, the tariffs offered to them can be based on the timing of their electricity consumption, with different electricity rates for usage at different times of the day. For example, they may be offered a:

- **TOU Tariff** - a multi-parameter energy based tariff charged on a c/kWh basis. The price level by charging parameter varies by the time of day that electricity is consumed. Charging parameters defined as "peak", "shoulder" and "off-peak" are generally used to define the time of day as it relates to the tariff. TOU tariffs may also contain seasonal based charging parameters.
- **Demand Tariff** - A single or multi-parameter demand based tariff charged on the basis of $/kW or $/kVA. Typically, the demand charging parameter is levied against the customer's peak half-hour consumption (measured in kW or kVA) over a defined period, commonly corresponding to the customer's billing period.

3 UNDERSTANDING OUR NETWORK PRICING

- **Critical Peak Pricing (CPP) Tariff** - A multi-parameter energy or demand based tariff charged on a c/kWh, $/kW or $/kVA basis. Typically, customers pay a peak energy or demand price on a small number of days each year, as determined by the network, to more accurately target peak usage on extreme demand days. The remainder of the year is charged on the basis of a significantly lower "off-peak" energy or demand charging parameter.
- **Peak Time Rebate (PTR) Tariff** - A multi-parameter energy or demand based tariff charged on a c/kWh, $/kW or $/kVA basis. Typically, customers receive a bill rebate for energy or demand not used on a small number of critical days each year, as determined by the network, to reward reduced peak usage on extreme demand days.

Those tariffs that can be put in place with the use of interval or smart meters are considered to be more 'efficient', as they provide better signals to consumers regarding the costs they impose on the network.

The costs of running and maintaining a distribution network are mostly fixed. However, where demand for electricity reaches peak levels, distributors incur costs from the expansion of the network to accommodate excess demand. This typically occurs on the hottest days of the year and the peak levels of demand may only last for a short time.

The introduction of tariff structures with some 'time of use', 'demand' or 'peak pricing' component can help distributors contain their costs by reducing or deferring the need for network augmentation. This is because they allow distributors to provide price signals to customers through their retailers that encourage them to reduce their consumption at times of peak demand. By encouraging consumers to spread their consumption of electricity over longer periods of time, distributors can achieve higher utilisation of their network and lower the cost of new investment, without compromising the safety, quality and reliability of their services.

However, currently only a small proportion of Endeavour Energy's customers have interval or smart meters.

3.3. Our existing network tariffs

Endeavour Energy currently adopts a variety of tariff structures depending on the type of customer in question. More specifically, we adopt:

- a DBT for residential consumers
- an IBT for small to medium commercial customers
- demand based tariffs for large commercial customers
- site specific tariffs for our industrial customers.

We also provide our residential and general supply customers with optional TOU and controlled load tariffs. Where customers opt for a TOU tariff, they are required to install an interval or smart meter. Our current tariff structures reflect a transition that has been occurring for some time.

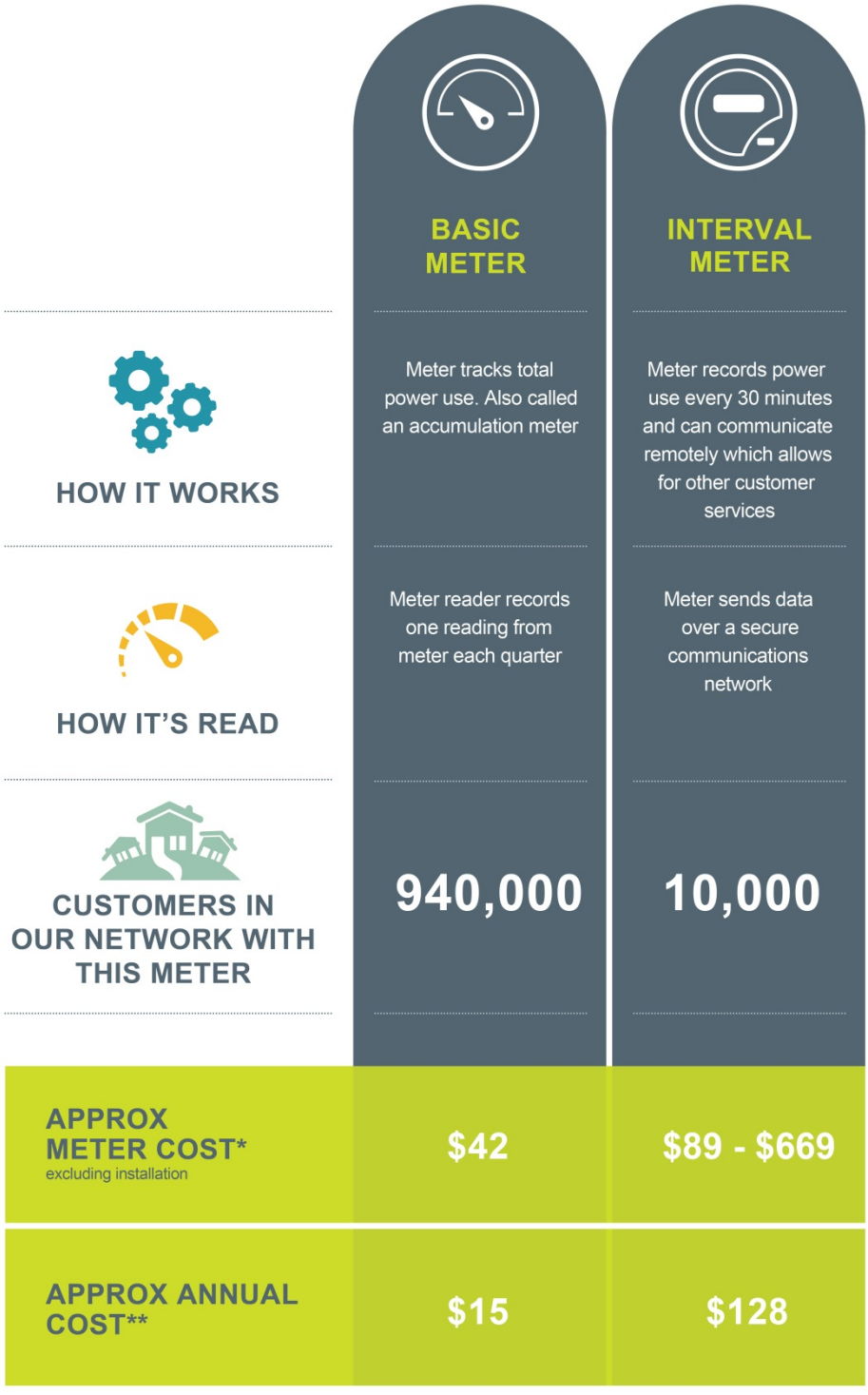
We altered the tariff structure for residential customers from an IBT to DBT effective 2015/16.

By contrast, for small to medium commercial customers we have continued to charge an IBT. Although such a price structure does not provide these customers with 'efficient' price signals, Endeavour Energy has historically maintained this to incentivise customers with high consumption to transfer to more efficient demand tariffs.

Although we have offered our residential and general supply customers optional TOU tariffs for over 10 years, we have seen little take-up of these alternatives with only 2,500 residential and general supply customers opting for this voluntary tariff type. This reflects the very low penetration of interval meters in our network area. There are approximately 940,000 customers with basic accumulation meters across our network area, compared to only 10,000 customers with interval meters. Those customers within our area that currently have an interval meter are, in the vast majority, larger commercial and industrial customers.

3 UNDERSTANDING OUR NETWORK PRICING

Figure 3.1: Customer metrology in the Endeavour Energy network



* Whole current single element meter - single phase (excluding GST)
** Ongoing capital and maintenance cost - residential customer (excluding GST)

3 UNDERSTANDING OUR NETWORK PRICING

The low penetration of interval meters in our network area is, in part, due to the relatively high cost of this type of meter. Endeavour Energy estimates that interval meters cost between $89 and $669 (depending on the functionality of the meter), with the annual cost of capital and maintenance at around $128 for residential customers. By contrast, an accumulation meter costs approximately $42, with the annual cost of capital and maintenance around $15.

Although Endeavour Energy expects the penetration of interval meters will increase over the coming regulatory period, we do not anticipate significant, voluntary take-up of our optional tariffs prior to the anticipated competitive roll-out of smart meters following the change in the Rules at the end of December 2017.

4 THE ENVIRONMENT IN WHICH WE OPERATE

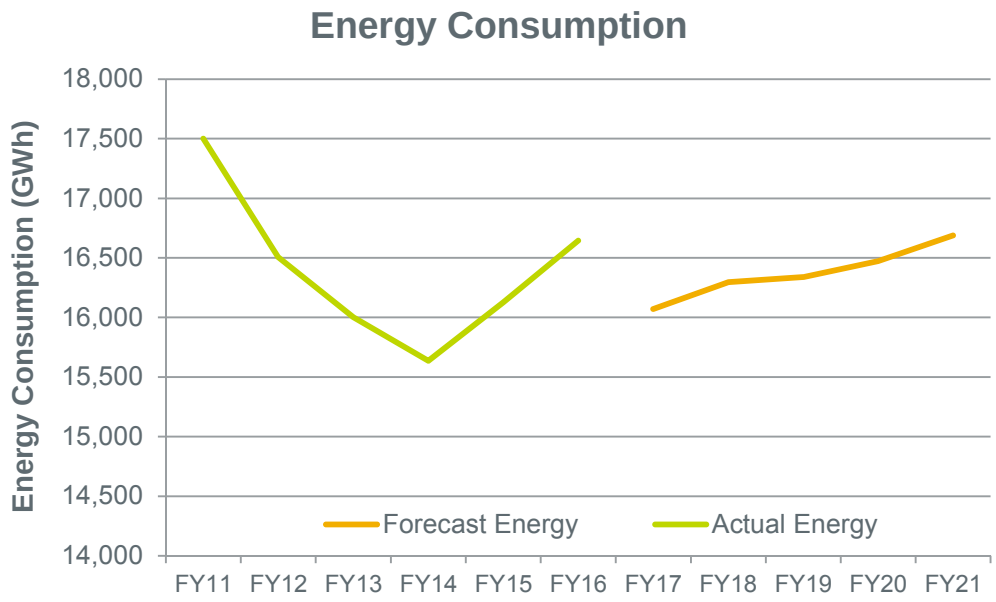
Any change to our existing network tariffs must take into account the way in which customers use our network and, as a result, the nature of the costs that we incur.

In this section we outline the changes in the environment that Endeavour Energy is operating in, and the implications this has for our network pricing.

4.1. Reduction in energy consumption and peak demand

Figure 4.1 shows that electricity consumption across our network has declined markedly over the last five years, albeit this has stabilised in recent times and is expected to return to growth on the back of customer growth.

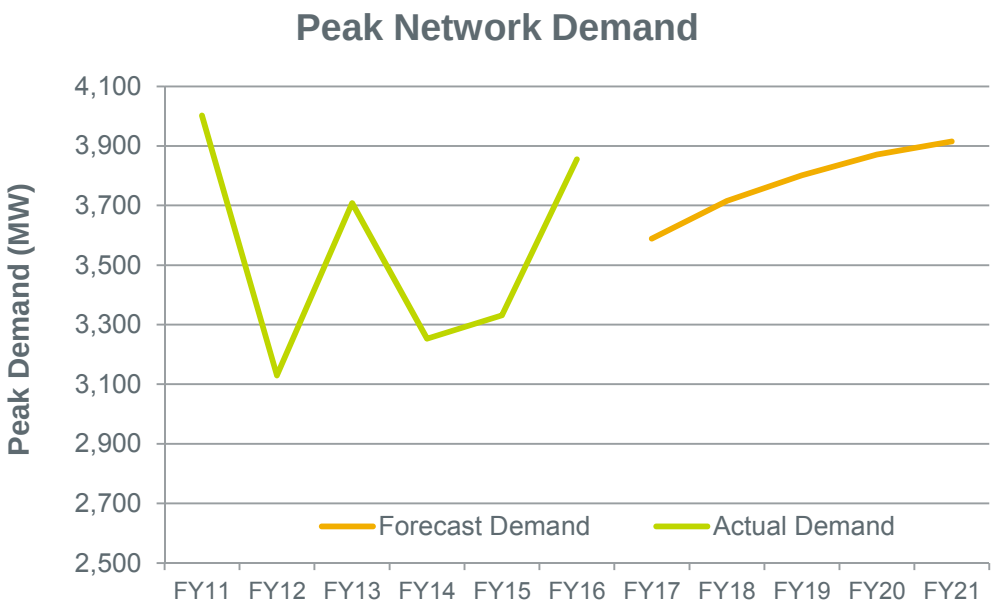
Figure 4.1: Actual and Forecast Electricity Consumption across Endeavour Energy's Network



4 THE ENVIRONMENT IN WHICH WE OPERATE

Figure 4.2 shows that we have experienced variable peak demand across our network from 2010/11 to 2015/16, which has fallen slightly over that period, whilst it is expected to grow gradually in the next few years.

Figure 4.2: Actual and Forecast Peak Demand across Endeavour Energy's Network



The fall in energy consumption across our network is, in part, due to the growth in micro-generation, which has increased over the last five years to a total of approximately 100,000 customers, despite the significantly reduced financial incentives following closure of the NSW Solar Bonus Scheme (SBS).[11]

From 1 January 2017, the SBS will cease payments to participants who feed energy into the network. For the majority of these customers it is likely that they will be financially better off by converting from the gross connected arrangement (where customers feed generation directly into the network) to the net connected arrangement (where customers only export energy that they do not use themselves). Given that, on average, net connected customers consume less electricity from the Endeavour Energy network, a general shift toward net connection arrangements will, all other things being equal, reduce energy consumption across Endeavour Energy's network.

[11] The SBS has been closed to new participants for approximately five years. The number of Endeavour Energy's customers with mirco-generation that are not participants in the NSW SBS now outnumber those customers who are participants.

4 THE ENVIRONMENT IN WHICH WE OPERATE

4.2. Implications for network pricing

The way in which customers are using Endeavour Energy's distribution network is changing. It has become more important to make sure that network prices provide signals that allow customers to make informed choices about when and how to use the network, based on the costs of providing the services they use.

Under the Rules, distribution businesses are required to develop their tariffs by reference to the efficient costs of providing services to their customers.

As noted earlier, the costs of operating and maintaining a distribution network are largely fixed. However, distributors incur large, lumpy incremental costs when augmentation to the network is required to alleviate constraints at times of peak demand.

In light of this cost structure, tariffs should be designed so as to ensure that:

- the fixed costs of the network (residual costs) are recovered from all customers that use the network in a manner that does not affect their consumption of electricity (given that the fixed costs of the network do not change with the use of the network).
- the cost of network augmentation is recovered from those customers that use the network at times of peak demand – customers that use the network at times of peak demand should be provided with an incentive to alter their consumption profile so as to reduce demand, thereby eliminating the need for network augmentation, or delaying the point at which such network augmentation is required.

An efficient price structure would, therefore have:

- recovery of the costs of the network as it stands today in the fixed components – this would imply an increase in the fixed components of our current network charges.
- price signals to consumers as to the future cost of network augmentation reflected in the variable charge – this would imply a reduction in the variable component of our existing charges, given the existance of spare capacity in our network at certain times throughout the year.

These changes to our tariff structures would not change the overall amount of revenue that Endeavour Energy is allowed to collect from customers. However, they would change how much is paid by different types of customer, such that the price that each customer pays is more closely aligned with the costs that they impose on the network.

The change from existing tariff structures to those that have these characteristics will require transition, in order to avoid unacceptable impacts on customers.

Taking into account feedback from our customer engagement sessions, Endeavour Energy considers that the determining factor in relation to this balance should be the potential impact on customers.

The status of metering infrastructure also currently limits the ability to introduce new tariff structures, without requiring customers to also have to pay for new meters. This is likely to change going forward as more advanced metering is introduced.

Both of these factors argue for the speed of pricing reform to be moderate, whilst recognising that it is a process that will need to continue into the future.

5 OUR CUSTOMER ENGAGEMENT

Endeavour Energy is strongly committed to customer engagement to help shape and improve our plans and customer services.

As we developed our TSS, we sought customers' and stakeholders' views on tariff design in line with the AER Consumer Engagement Guideline and the AEMC's recent Rule change.

5.1. Our engagement approach

We engaged our community and stakeholders using community engagement principles set out by the International Association of Public Participation. We have used these principles since 2008 on key issues and we employed them for this process towards the development of the inaugural TSS.

5.2. Our starting point

We began talking with retailers, industry regulators, economic advisers, peak consumer groups and stakeholders about our plans to move to a flatter, then declining, block tariff in various stakeholder forums two years ago.

Like many of the groups we met with, we recognise the complexity of the issues and believe this is the start of a much longer conversation to shape tariff design into the future.

The diagram below sets out how Endeavour Energy consulted with various stakeholders on tariffs that will apply over the two years from July 2017. We used a three phase approach as outlined below.

Figure 5.1: Consultation timeline

5 OUR CUSTOMER ENGAGEMENT

5.3. Phase 1 engagement

In 2013/14 Endeavour Energy designed a consumer engagement plan to help shape its five year revenue proposals to the AER.

As part of these plans, we recognised that one of the challenges facing our business was that current tariff structures did not adequately address changing customer needs, emerging technologies, and other challenges being faced.

Our customers told us in multiple forums that their chief concern was electricity affordability, but most were not prepared to sacrifice reliability or service, even if it did mean a reduction in electricity prices.

This important customer priority was reflected in quantitative and qualitative consumer research completed by Woolcotts for Endeavour Energy in July 2013 and again in a Willingness to Pay study conducted by IPSOS in January 2015.

We raised the need for tariff reform with key stakeholders in various forums from early 2014, signalling our intent to move from inclining block tariffs to declining block tariffs, over time, in the interests of pricing stability for customers, given we are operating under a regulated revenue cap. These discussions were led by our former CEO and senior managers and attended by peak consumer advocacy groups, local government, retailers and customer committee representatives.

The forums included:

- Networks NSW (NNSW) peak consumer group forum in March 2014. We held this forum to gauge the views of consumer advocacy groups on our proposed tariff strategy and welcomed the attendance and contributions from key stakeholders, including Energy & Water Ombudsman NSW, Public Interest Advocacy Centre and members of the three network's customer consultative committees
- NNSW retailer forum in May 2014. This was attended by 19 retailers and canvassed the challenges of tariff reform in NSW
- Endeavour Energy's annual pricing proposal in May 2014, subsequently approved by the AER
- The AER's public forum on regulatory determinations in July 2014, where our CEO Vince Graham detailed our proposed tariff strategy and explained the reasons for this approach
- NNSW workshop in February 2015 on our revised regulatory proposal, again canvassing issues about tariff design
- NNSW workshop in June 2015 which focused specifically on tariff strategy and consumer preferences for consultation

In addition, our plain English summary of our regulatory proposal flagged proposed changes to our current tariff structure and the reasons for it. This summary formed an important attachment to our 2014 initial regulatory proposal.

We have also trialled innovative methods to engage directly with end-use consumers on tariffs. Through the Your Power, Your Say Facebook campaign conducted by Ausgrid, Endeavour Energy and Essential Energy in 2014, we sought to engage directly with consumers on different types of tariffs. More than 95,000 Facebook users viewed this discussion.

In the interests of transparency, these forums and reports are on Endeavour Energy's website.

We worked with our industry association to connect with interested stakeholders across the NEM and to benefit from the experience of other networks. We also reviewed research on tariff reform, and in particular research focused on customer experience and behavioural economics. That included the CSIRO research conducted for

5 OUR CUSTOMER ENGAGEMENT

Energy Consumers Australia, *Australian Consumers' Likely Response to Cost Reflective Electricity Pricing (June, 2015)*. According to this work, consumers see cost-reflective tariffs as complex pricing structures, and

> *"consumers find all forms of cost reflective pricing significantly less attractive than traditional flat rates tariffs".*
>
> *"…consistent with well-known biases against complexity, novelty and risk, and the pervasive human preference for simplicity familiarity and certainty, it appears that Australian consumers generally prefer flat rate tariffs to all forms of cost reflective pricing."*

Source: Australian Consumers' Likely Response to Cost Reflective Electricity Pricing – CSIRO, June 2015

Research undertaken for a CSIRO report, *Change and Choice: The Future Grid Forum's analysis of Australia's potential electricity pathways to 2050*, indicates that in terms of cost reflective pricing:

> *"consumer knowledge is low, particularly about which appliances most affect their electricity use. Consumers can also be cynical about new technologies, such as smart meters, particularly if the technology is mandated rather than actively chosen".*

Source: Change and Choice: The Future Grid Forum's analysis of Australia's potential electricity pathways to 2050

These conclusions were subsequently echoed by many of the stakeholders we listened to and talked with in later phases of engagement.

5.4. Learnings from Phase 1 engagement

We learned through retailers, economic advisers, research and feedback from peak consumer groups that many customers find tariff structures complex, with low engagement with their energy provider.

Despite this, the overriding issues of concern for our customers and stakeholders in Phase 1 were:

- doing all that we could to end steep network price increases to ease cost of living pressures on families and businesses
- the need for stable and predictable pricing
- the need to ensure tariff redesign did not inadvertently impact vulnerable customers
- the need to better educate energy consumers about electricity consumption, meters, and bills
- the need for simplicity in tariff design

We have used these insights from Phase 1 in making key decisions across our business.

5.5. Our approach to Phase 2 engagement

In Phase 2 we invited specific feedback on eight different types of tariff structures, outlined in an issues paper.

We committed to talking with, and listening to, a range of diverse stakeholders during this period through this issues paper and a series of Roundtable discussions, along with our NSW network distribution partners, Ausgrid and Essential Energy.

This collaborative approach meant we could limit time demands on stakeholders, whose views were also being sought by other network distribution businesses as part of their TSS processes. However, we underestimated the timeframe required for this phase of consultation. This meant we were constrained for time, a view shared by some stakeholders who generally welcomed the Roundtable approach, but would have preferred more time to work with us to consider tariff options and better understand related customer impact analysis.

5 OUR CUSTOMER ENGAGEMENT

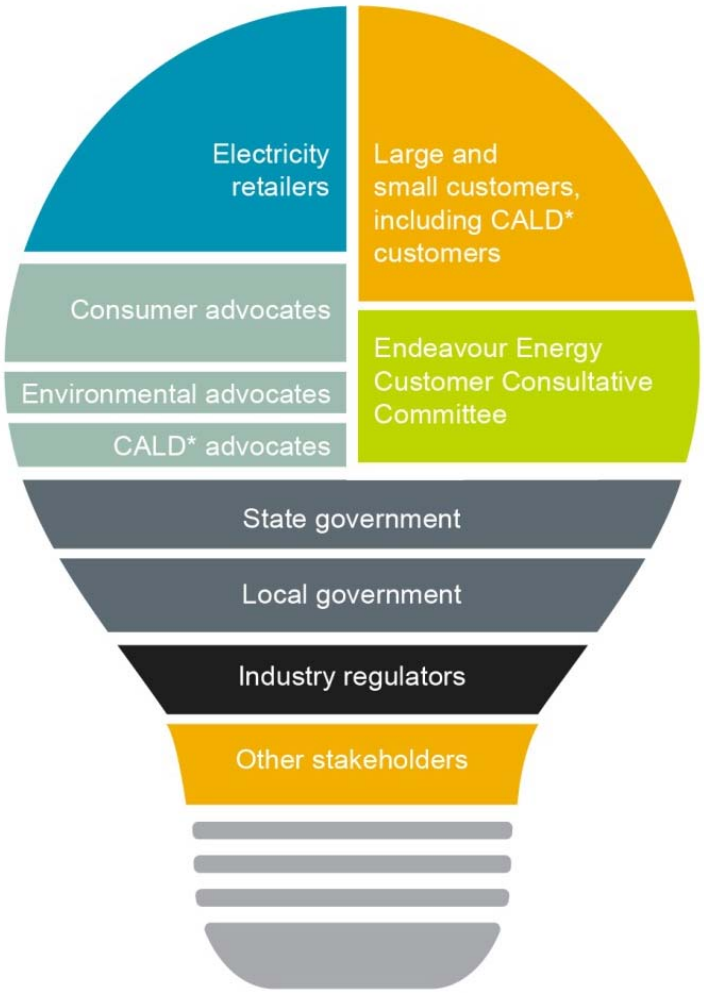
5.6. What we did

Stakeholder mapping

Understanding the complexity of tariffs and the lack of knowledge of most consumers, we sought to engage more actively with economic advisers, the AER, retailers and consumer, technology and environmental advocates in Phase 2, given their deeper interest and experience in regulation, pricing and tariff design and the reach they had with key stakeholder groups.

We used stakeholder mapping to help prioritise stakeholders and then sought to understand the topics of most concern to their constituents through targeted interviews and to seek advice on how they would like to be consulted. Endeavour Energy's key stakeholder groups for engagement on our TSS are shown in the figure on this page.

Figure 5.2: Key stakeholder consultation groups



*CALD - Culturally and Linguistically Diverse communities

5 OUR CUSTOMER ENGAGEMENT

Issues paper

We developed a plain English TSS Issues Paper, to explain our thinking on current and future electricity tariff design and canvassed eight different tariff options. We also set out the case for our current and preferred tariff structures.

We distributed this paper widely, emailing it to stakeholders and releasing it via Have Your Say, a dedicated public consultation portal, and alerted the community through traditional and social media.

The issues paper was also designed to help inform and educate consumers on different types of tariffs and to garner feedback from stakeholders who may not have been available to participate in face-to-face forums. It played an important role in giving individual customers a voice, and documenting evidence-based feedback from consumer groups on different types of tariffs.

Responses were received from retailer Origin Energy, consumer advocacy groups NSW EWON, PIAC and NCOSS and environmental advocacy groups TEC and Solar Citizens. Nine individuals also replied with comments.

Roundtable workshops

We met with a variety of stakeholders through five dedicated roundtable workshops which enabled us to outline the issues around tariff structures, test our thinking and receive feedback from a diverse cross-section of the community. The five roundtables focused on priority stakeholder groups. They included: retailers; vulnerable customers, environmental and technology groups, and consumer and community groups.

The Roundtables were professionally facilitated and supported by senior managers and economic advisers. They proved valuable in explaining the drivers for our preferred tariff structures, understanding particular perspectives, considering alternatives, and discussing key issues of concern.

Response to the issues paper and summaries of each Roundtable are on our website.

Other consultation

- Endeavour Energy consulted with its customer committee on tariff strategy and structures. Details of the meeting can be found on our website.
- Detailed, bilateral conversations were held with around 20 stakeholders to test assumptions and respond to concerns out of sessions. These conversations were conducted by our engagement partner, ACIL Allen and Ogilvy and generated candid commentary on concerns and issues which we detail on our website.
- Nineteen local councils covering Endeavour Energy's network area were invited to give feedback and no responses were received. Endeavour Energy maintains six monthly engagement meetings with each council in its area.

5 OUR CUSTOMER ENGAGEMENT

5.7. Key themes from Phase 2 engagement

Consumer understanding of tariffs

A number of stakeholders commented that the community's understanding of network electricity tariffs was low – including representatives from retailers, environment, consumer, and vulnerable groups.

Environment, technology and consumer advocates perceived that culturally and linguistically diverse (CALD) groups have particular difficulty understanding their bills; and that one third of SMEs do not read their bills.

> *"I suppose most customers wouldn't even understand there is an underlying network tariff, let alone how they relate."*

A related point made was that consumers find tariffs confusing. This means they are unable to make informed decisions that can reduce their electricity costs.

> *"I'd imagine a lot of consumers are still struggling with the difference between a retailer and a distributor, let alone understanding that a distributor has a network tariff and a retailer can choose to reflect that or not in their retail tariff."*

Stakeholders perceived that the complexity of network and retail tariffs – rather than a lack of information about them – contributed to consumer confusion (many noted tariff information provided by networks was generally considered to be good).

Stakeholders interviewed concluded that customers are unware of the complexity of the electricity distribution system, and the elements that contribute to network charges – or that the complexity of the system produces "white noise", or a low will to want to understand the system.

Declining block tariff

Retailers generally supported Endeavour Energy's preference for the declining block tariff structure, while other stakeholders opposed a declining block tariff for customers.

Some stakeholders felt that declining block tariffs would provide incentives to consumers to use more electricity, which would have an adverse impact on the environment. Environmental and vulnerable customer representatives felt that a move to declining block tariffs might send confusing signals about reducing consumption.

Some stakeholders felt maintenance of a declining block tariff could be "unfair" to customers encouraged to invest in energy-saving and alternative energy generation devices.

> *"(DBTs) reward increased consumption. So some people who are into energy efficiency would not like that because it sends a contradictory message."*

Vulnerable customer and environment advocates were concerned that a declining block tariff may disadvantage low-income, low consumption households.

> *"Low consumption consumers will not benefit from the declining cost of energy in the subsequent consumption blocks, and high prices will be maintained for non-discretionary energy consumption required to support a basic standard of living."*

Some stakeholders, particularly retailers, supported a DBT as an interim measure to manage a transition to a long-term tariff structure — while NSW "catches up" with other States to install more smart meters.

Others noted that the declining block tariff structure was so close to a flat tariff in design that Endeavour Energy's customers would be better off if a flat tariff was adopted as the default tariff.

Stakeholders who supported smart meters felt that they should be introduced by retailers in NSW, and paid for by consumers, as long as they were not imposed upon them.

> *"Ultimately the customer should pay, but hopefully the meters will be creating some efficiencies that can be incorporated into the final cost of the unit making it a very, very modest cost. Otherwise people will be very much getting up in arms."*

Demand tariff

This tariff was supported by food and fibre producers, environmental advocates, and some retailers and consumer groups. They considered a demand tariff provided consumers with more choice about when to use electricity to suit their budget. This type of tariff was particularly supported if customers could opt-in.

Environmental stakeholders felt that the low take-up of smart meters in NSW should not prevent network businesses offering a demand tariff while other stakeholders did not support this tariff. One vulnerable customer stakeholder was strongly opposed to it because it was considered to be problematic for low income families:

> *"They hate it, they've got kids that all come home from school right at the peak. They switch on the TV because it occupies the kids while they're cooking – there's no way in the world that this demand tariff is friendly, it's not family friendly, because they're terrified that it's going to be loaded up because 60 per cent of an annual bill turns up in the summer time."*

Some stakeholders stated they would be more supportive of demand tariffs if smart meters were rolled out in NSW, because these meters would enable customers to be more aware of, and monitor, their electricity consumption.

Time of use tariff

Only a small number of stakeholders supported this tariff. They considered it was fair, reflective of network infrastructure use, and a good lever to change consumption behaviour:

> *"Our understanding is always that the network was built for peak times, so cost reflectivity wise, and equity wise, customers who use more at the peak [should pay more] than customers who manage to avoid the peak."*

However, many stakeholders questioned the practicality of responding to the price signal inherent in time of use tariffs:

> *"The tariff doesn't work for my 80 year old mother, because she's scared to put on an air conditioner at 4pm in the afternoon because she's terrified, on a 40 degree day."*

> *"You can't adjust family life to make the kids have their baths at 9pm and lessen the power bill."*

5 OUR CUSTOMER ENGAGEMENT

Social tariff

The NSW Council of Social Services (NCOSS) was happy to be quoted, and is strongly in favour of social tariffs. NCOSS stated further analysis is required to understand the impact that electricity bills have on specific vulnerable groups, such as carers, large families, people with medical heating or cooling needs, and people with low incomes:

> *"Low income consumers vary greatly by household size, inefficient housing and household appliances, and sometimes lack of understanding about energy consumption."*

However, most stakeholders opposed social tariffs for the following reasons:

- networks are better placed to focus on overall cost reduction rather than the development of a complicated discount system
- multiple tariffs create higher levels of administration, and ultimately costs for the consumer
- there is no guarantee that retailers would pass on social tariffs to the consumer
- social tariffs distort the market and do not address underlying issues of affordability
- the cost of social tariffs needs to be met elsewhere – 'cost-shifting' in effect - and other customers may not be willing to meet these costs
- network businesses should not be responsible for making value judgements about who should receive a discount and who should not. Most stakeholders felt strongly that government was best placed to make those decisions, and had responsibility to do so.

> *"We don't want a multitude of different tariffs across the nation. It's expensive for the industry, it's expensive for everyone, and it creates an enormous amount of cross-charging".*
> *"It is a broad ranging issue that affects more than just vulnerability and affordability of energy... the network (business) should strive to deliver an efficient network tariff, and then any other social policy arrangements are up to other parties to facilitate".*

Location and regional tariff

No stakeholders wanted to see rural consumers charged more for electricity than urban consumers, even though the actual costs of electricity distribution may be higher in regional and remote areas of NSW.

> *"There is a social element in people having the right to access services regardless of where they choose to live".*

Concurrently, there was no appetite for concessional tariff pricing for regional consumers based on their location.

Consumer electricity generation

A small group of stakeholders interviewed felt strongly that consumer generators were contributing nothing to the benefits they gained from exporting to the network, and should therefore pay a tariff.

Environmental advocates were less supportive of this option, citing the following arguments:

- solar users will perceive an export tariff as another cost imposed on them, which would encourage them to leave the grid entirely in the long term
- a solar export tariff would send a contradictory message compared to communications about the environmental and financial benefits of alternative energy sources
- no other network nationally has found it necessary to introduce a solar export tariff in the TSS process

- if the rationale is that the average load profile of solar customers is less favourable, this will be taken care of by demand tariffs
- they is disagreed that solar power production is a cost to networks.

Environmental advocates argued that net solar customers (as opposed to gross solar customers) have invested in solar generation so they can save energy. A higher price in the lower consumption blocks relative to the higher consumption blocks of a DBT may mean these solar customers experience lesser savings than they anticipated.

Consistency and long-term tariff planning

Most stakeholders emphasised the importance of consistency, and long-term thinking around tariff changes. These stakeholders perceive customers want certainty and simplicity, not volatility and complexity.

Two stakeholders flagged the importance of not sending mixed signals to consumers, as tariffs are designed to stimulate behaviour change.

> *"Whatever the business does, whatever tariff structure it decides, it can't keep chopping and changing it once every five years in a regulatory period. People need certainty."*

The consultation process

Some stakeholders wanted to see a longer Phase 2 TSS consultation and engagement period.

Despite some criticism of the timeframe for Phase 2 stakeholder engagement, some stakeholders acknowledged that there was no 'right' answer when it came to the most appropriate network tariffs for NSW; and that the tariff preference of individuals would differ at different stages of their lives depending on age, household arrangements, their business or employment circumstances or energy preferences.

5.8. Learnings from Phase 2 engagement

We acknowledge the interest, constructive feedback and investment of time made by stakeholders in responding to our invitation to participate in roundtable discussions, respond to our issues paper and talk to us in bi-lateral meetings.

As a result of Phase 2 engagement, we developed some key characteristics to consider in framing our future tariff strategy:

- Transparency: Ensure tariff structures are clear and easily understood by customers
- Predictability: Protect customers from bill shock by providing certainty around pricing
- Efficiency: Efficient tariff structures that reflect the true costs of providing the service
- Equity: Ensure that customers pay their fair share.

5.9. Phase 3 engagement

Phase 3 engagement took place against the backdrop of conversations with the AER to determine the legal basis for prices for 2016/17 and 2017/18 following the decision of the Australian Competition Tribunal to set aside the April 2015 Determination. We prioritised this engagement in order to secure pricing stability for customers and decided to wait for this issue to be resolved and to hear the AER's feedback on our initial TSS before re-engaging on tariff structures.

After careful consideration of the potential impacts on our customers, the degree of uncertainty regarding the AER's judicial review proceedings and the potential for the AER to remake its final determination, we offered a court enforceable undertaking to the AER to transition our published network prices by the CPI rate of 1.5%.

5 OUR CUSTOMER ENGAGEMENT

On May 2016, the AER formally accepted our proposed undertaking following consultation with stakeholders. In August 2016, the AER released its feedback on Endeavour Energy's initial TSS. The AER supported some of the proposed TSS changes but not our existing suite of declining block tariffs for residential customers.

Its preference was for Endeavour Energy to transition to TOU tariffs for new customers, using an opt-out approach as it felt that would send strong price signals to retailers and speed the shift to more cost reflective tariffs.

Given this feedback from the AER, we consulted with the NSW Government energy policy advisers as planning for COAG was underway to make sure any revised approach would align with future government policy.

We outlined our revised approach to transition from a DBT to a flat tariff over a possible two year period to manage customer impacts and focused consultation on retailers, peak consumer and environmental groups.

In September 2016, we hosted a stakeholder workshop for consumer advocacy groups, retailers, regulators and electricity distributors. A webcast was streamed to retailers based in Melbourne upon their request.

A key objective of the workshop was to seek feedback from stakeholders on proposed changes to our TSS following the AER's draft decision and stakeholder feedback. It also provided an opportunity to provide better customer impact analysis of possible price fluctuations during transition periods, requested during Phase 2.

One of the key supporting materials provided to stakeholders was an issues paper on our revised TSS. The paper provided an easy-to-read summary of the AER's draft decision and our revised thinking on tariffs in light of the decision and feedback. Key information and questions outlined in the issues paper were presented to the workshop. All attendess were encouraged to provide written feedback to the issues paper, as well as feedback during the workshop. All feedback was given weight in the development of this revised proposal.

Acting CEO Rod Howard emphasised that our tariff proposals would continue to seek a balance of transparency, predictability, efficiency and fairness, and that we would prefer not to propose tariffs or transitional periods that led to excessive price volatility.

Key themes emerging from Phase 3 included the following:

- There is 'no one magic bullet' to the question of which tariff structure is best and it will change over time. The appropriate structure is dependent on the particular set of circumstances unique to the network, including the structure of business, the load structure of customers and future objectives of the business. It is an ongoing process.
- The transition to cost reflective prices should reasonably take place over time and long-term thinking is required to give effect to the best outcomes for customers and Endeavour Energy.
- The proposed policy of opt-out for TOU tariffs for new residential and small business customers was seen by some as a significant shift for the network, and some felt the impacts of this proposed option needed to be further explored.
- Charging windows have dramatic influences on bill impacts and also potential changes in patterns in demand across the network. Whenever charging windows are altered along with different tariff levels, there will be winners and losers in that process. There is a lot of uncertainty around changing these variables, and at end of day not everyone can win.
- General agreement that a newly proposed flat tariff for residential customers was a reasonable alternative to the default DBT for residential customers. All thought that bill impacts would have to be appropriately managed in the transition period to cost reflective prices and that more detailed customer impact analysis would be required.
- In terms of charging windows for tariffs, there was a general consensus that there should be a shorter peak window in winter, weekends, with off-peak in autumn and spring.

5 OUR CUSTOMER ENGAGEMENT

What we plan to do as a result of engagement to date

- We have aligned key elements of our proposed tariff structures for residential customers with other NSW networks to meet retailers preferences for simplicity for customers.
- We have kept our tariffs simple and easy to understand so that retailers can in turn promote them to customers.
- We will transition to a flat tariff for residential customers that consumer and environmental advocates and the AER seem to prefer.
- We will more actively promote with both retailers and customers our current opt-in time of use tariff for both residential and small commercial and industrial customers.
- We will introduce a default time of use tariff for new customers connecting to the network post 1 July 2018. Time of use customers will retain the right to opt-out to the non time of use tariff option.
- We will work to embed the Ethnic Communities Council's community engagement guide to better reach culturally and linguistically diverse communities.
- We will work with retailers and consumer advocates to better understand the impact of our tariffs on low income low energy consumption households to inform future tariff strategy.
- We will collaborate with other network businesses to streamline engagement and leverage investment in planned tariff research wherever possible.
- We will commit to continuing this style of engagement given the preferences expressed by most stakeholders.

What we won't do

- We won't continue with earlier plans for declining block tariffs and nor will we propose location specific tariffs.
- We will not introduce a solar tariff as this was strongly opposed by peak consumer and environment advocacy stakeholders and some retailers.
- We will not propose social tariffs given stakeholder feedback but do recognise however, that we have a significant role to play in electricity affordability and remain strongly committed to driving improved efficiencies across our business to keep downward pressure on network electricity prices for the benefit of families and businesses in our area.

5 OUR CUSTOMER ENGAGEMENT

5.10. Stakeholder feedback summary

We have summarised the issues raised by stakeholders in all phases of engagement below. This is simply a snapshot of our conversations and feedback and readers are encouraged to review the detailed Customer and Stakeholder Report available on our website.

Stakeholder	What they said	How we responded
Retailers	• Need simplicity with network tariffs, otherwise they won't pass on the price signals to customers. • Called for consistent tariffs across networks and across states. • Showed general support for Endeavour Energy's initial preference for declining block tariff (DBT) given metering issues but encouraged further thinking. • Generally supportive of a move to flat tariffs in order to transition to ToU for new customers • No support for social tariffs – felt it is a social policy issue. • Want customers to have choice and flexibility – should be able to access more cost reflective tariffs as smart meters are rolled out or as they upgrade meters.	• Flat tariffs are simple and our gradual transition will protect customers from bill shock. • Endeavour Energy will explore more cost reflective tariffs for our next regulatory period. • We intend to work closely with retailers on the issue of tariff reform and consumer education.
Retailers	• "…Networks NSW considers that declining block tariffs provide the best balance of meeting the requirements of the NER at this time within the context of its operating environment and technological constraints. • We believe this represents a sensible and pragmatic approach to address its obligations under the NER." Source: Origin Energy	
Small Customers	• Need information/education on ways to minimise bills. • Want stability and predictability in pricing, no bill shocks. • Some socially aware customers want access to more cost refective tariffs to minimise the impact of electricity use on the community and environment.	• Flat tariffs are simple and our gradual transition will protect customers from bill shock. • Endeavour Energy will explore more cost reflective tariffs for its next regulatory period including promoting its existing time of use tariff. • We will offer customers clear

Stakeholder	What they said	How we responded
	• Many customers disengaged with conversations on tariffs but are concerned about past electricity price rises.	information about tariff structures.
Advocates of Vulnerable Customers	• Potential for confusion and disputes if a demand tariff was introduced for residential customers. • Concerned small households pay more under a DBT tariff/lack of price signal. • "Low income consumers vary greatly by household size, inefficient housing and household appliances, and sometimes lack of understanding about energy consumption." NCOSS response to NNSW issues paper • " ..consideration needs to be given to a tariff targetting consumers with low consumption and another type of tariff targeting vulnerable customers with larger consumption patterns.." NSW EWON response to NNSW issues paper	• Transitioning to flat tariff, so small households will pay the same per unit residual costs as others. • We are committed to supporting a whole of industry response to vulnerable customers, and to exploring tariff structures for low income/consumption users.
Culturally and Linguistically Diverse Communities	• Culturally and Linguistically Diverse (CALD) advocates were concerned about access to appropriate information on tariffs and felt NNSW's approach for CALD customers was insufficient as traditional methods do not work with this group. Community outreach programs are most effective.	• Endeavour Energy acknowleges there is more work to be done in engaging CALD customers effectively and efficiently and will embed relevant engagement principles set out by the Ethnic Communities' Council of NSW across our business.
Environmental Groups	• Prefer demand tariffs/flat energy tariffs for residential customers rather than declining block tariffs in order to encourage customers to be energy efficient, • Called for an opt-in demand tariff. • Said DBT provided poor incentive to reduce energy use. • Opposed to solar energy generation tariffs. • Called for a Local Network Tariff for people who generate electricity. • "DBTs by design, reward consumers who place high demand on networks and penalise consumers who are more	• Transitioning to flat tariff, so large users will not pay less than others for any increase in electricity network usage. • We are committed to exploring more cost reflective tariffs for our next regulatory period.

Stakeholder	What they said	How we responded
	energy efficient." Alternative Technology Association	
Local Government	• Learnings from the Smart Meter roll out in Victoria need to be considered. • Recommended three NSW networks introduce a reduced network tariff for electricity generation that is used within a defined local network area. • Opposed to solar tariff on energy generators who export to the grid.	• Endeavour Energy will analyse the Victorian lessons from mass roll-out of smart meters and cost reflective tariffs as we work on our next tariffs structure statement for the next regulatory period. • Endeavour Energy has no plans to introduce a solar tariff.

5.11. Next steps

It's clear that there will need to be a significant education program if customers are to feel empowered to understand tariff structures and choices. The responsibility for this rests with all sectors of the industry.

To this end, we are looking forward to taking part in an Energy Consumers Australia funded research program, led by Brisbane City Council through its City Smart program in collaboration with Queensland University of Technology, University of the Sunshine Coast and Energex. This research seeks to assist the Australian energy industry and policy makers to understand the changing needs of the today's energy consumers by creating a segmentation model to facilitate more effective and efficient consumer education and awareness activity to support the implementation of tariff reform.

We are committed to collaborating with other network businesses where possible to ease the burden of consultation and continuing consultation with our community and stakeholders on tariff design after we submit our TSS to the AER.

6 OUR PROPOSED NETWORK TARIFFS

This section sets out Endeavour Energy's pricing objectives followed by an outline of changes to its tariff classes and structures for the 2017/18 to 2018/19 period.

6.1. Our pricing objectives

Endeavour Energy aims to deliver electricity to our customers in a way that is safe, reliable and sustainable.

Consistent with this goal, we seek to price our services in a way that is transparent, equitable, predictable and efficient. More specifically, we seek to structure our tariffs:

- **transparently**, so that our customers can clearly understand how the prices they pay have been derived, and how they compare with those paid by other customers that place different demands on our network
- **equitably**, so that similar customers pay similar prices and that each type of customer pays their fair share of the cost of operating the network
- in a way that provides customers with **predictability** in terms of their likely electricity costs
- in a manner that **efficiently** encourages use of the network by providing customers with incentives to reduce their consumption during times of peak demand, or shift to alternative tariffs that provide better price signals.

Endeavour Energy recognises that at times these objectives will conflict. In particular, the transition to efficient pricing may come at the cost of simplicity and transparency and may not provide customers with the degree of predictability they desire. We will therefore pay close attention to the impact that changes to our tariff structures may have on our customers and aim to mitigate any negative impacts where possible.

In considering our future tariff strategy, Endeavour Energy needs to balance:

- prices that promote the efficient use of the network and network investment into the future
- recovery of the regulated revenue the AER has allowed us
- the short term impacts on customers from moving away from current tariff structures towards more efficient structures.

We consider the transition to efficient pricing to be a long-term goal that will be best achieved by learning from experience and working with our customers to develop tariff structures that best meet their needs.

We consider these pricing goals to be consistent with the Network Pricing Objective and the Pricing Principles as set out in the Rules.

6.2. Proposed tariff classes

Our tariff classes for standard control services remain unchanged. All of our customers will be assigned to a tariff class for one or more of these services.[12]

Our tariff classes for these customers are set on the basis of:[13]

- the nature of the customers' connection to the network, ie, whether they are high or low voltage customers or whether they are metered or unmetered
- the nature and extent of customers' usage, ie, above or below a specified level of consumption per annum.

A summary of our network tariff classes is set out in the table below:

[12] As required under the Rules, Clause 6.18.3(b) and (c).

[13] As required under the Rules, Clause 6.18.4(a)(1).

6 OUR PROPOSED NETWORK TARIFFS

Table 6.1: Endeavour Energy Network Tariff Classes

Customer Type	Tariff Class	Connection Characteristics
Residential and small to medium enterprise businesses	Low Voltage Energy	LV Connection (230/400 V) Total electricity consumption, per financial year, is less than 160MWh
Larger commercial and light industrial	Low Voltage Demand	LV Connection (230/400 V) Total electricity consumption, per financial year, is greater than 160MWh
Industrial	High Voltage Demand	HV Connection (12.7 kV SWER, 11 or 22 kV)
Industrial	Subtransmission Demand	ST Connection (33, 66 or 132 kV)
Distributors	Inter-Distributor Transfer Demand	Distributor Transfer
Unmetered	Unmetered Supply	Unmetered

We consider our existing tariff classes to be economically efficient.[14] This is because customers within each of our existing tariff classes place similar demands on our network – by grouping our customers into these network tariff classes we believe that customers with similar characteristics and similar demands on our network will pay similar prices.[15]

We also consider that the retention of our existing tariff classes will avoid unnecessary transaction costs that would arise from customers switching to new tariff classes:[16]

- we received no feedback from our customer engagement to suggest that customers are not satisfied with our existing tariff classes
- in the absence of strong discontent with our existing tariff classes, we see little reason to subject our customers, or retailers, to the costs of transitioning to alternative tariff classes.

Our tariff class definitions ensure customers with micro-generation facilities are allocated to the same tariff class as those customers without such facilities but with a similar load profile.[17]

In addition to our standard control services, Endeavour Energy provides customer specific or customer requested services, and so the full cost of the service is attributed to that particular customer. These are referred to as alternative control services. One of the defining characteristics of these services is that the AER determines the price for the service or the unit rates used in quoting for a service.

[14] As required under the Rules, Clause 6.18.3(d)(1).

[15] As required under the Rules, Clause 6.18.4(a)(2).

[16] As required under the Rules, Clause 6.18.3(d)(2).

[17] As required under the Rules, Clause 8.18.4(a)(3).

6 OUR PROPOSED NETWORK TARIFFS

The AER has classified the following categories of direct control services as alternative control services:

- ancillary network services
- metering
- public lighting.

Endeavour Energy proposes that customers that use these categories of service form our alternative control service tariff classes. A summary is set out in the table below:

Table 6.2: Endeavour Energy Alternative Control Tariff Classes

Customer Type	Tariff Class	Service Characteristics
Retailers and ASPs on behalf of customers	Ancillary Network Services	Would include authorisations, inspections, permits, site establishment, connections/disconnections and conveyancing information. Service is initiated only at customer request.
Low voltage customers consuming less than 160MW p.a.	Metering	Provision of Type 5 and Type 6 metering assets. Meter reading services for Type 5 and 6 metering assets. Retirement of Type 5 and 6 metering assets.
Public space illuminators (generally local councils)	Public Lighting	Provision of public lighting infrastructure. Maintenance of public lighting infrastructure. Retirement of public lighting infrastructure.

We consider our proposed alternative control service tariff classes to be economically efficient.[18] This is because customers within each of our existing tariff classes place similar demands on our resources – by grouping our customers into these network tariff classes we believe that customers with similar service requirements will pay consistent prices as determined by the AER's form of control.

[18] As required under the Rules, Clause 6.18.3(d)(1).

6 OUR PROPOSED NETWORK TARIFFS

6.3. Allocation of customers to tariff classes

The AER is required to decide on the principles governing the assignment or reassignment of retail customers to or between Endeavour Energy's tariff classes under cl 6.12.1(17) of the Rules.

The AER specified the procedures to apply for the 2015-19 regulatory control period as part of its final determination for the NSW/ACT DNSPs published on 30 April 2015. These procedures are set out in Appendix [A.2].[19]

The process under which new customers are assigned to network tariff classes and network tariffs occurs following the receipt of a connection application by the customer or their retailer. Customers will be assigned or reassigned to network tariff classes in accordance with the criteria described in section 6.4. Under our process, a customer that lodges an application to modify or upgrade an existing network connection is treated identically to a new customer.

6.4. Proposed tariff structures

Our tariff structures for each of our tariff classes will also remain largely unchanged for the period 2016 – 2019, apart from the transition to a flat tariff for residential customers and the removal of the non-business day shoulder charging window for residential customers on TOU tariffs.

A summary of the type of tariffs offered for customers in each of our tariff classes, and a description of the customers that are eligible for each is set out in the sections below.[20]

An indicative pricing schedule for each of our tariff classes, setting out the parameters of each of our tariffs over the two year period 2017/18 to 2018/19 is set out in Appendix [A.9].

Low Voltage Energy Tariff Class

Our default tariffs for residential and general supply customers that consume less than 160MWh per annum are structured as follows:

- a DBT that will transition to a flat tariff over two years for residential consumers
- an IBT for small to medium commercial customers.

We will maintain our optional controlled load tariffs – these tariffs apply to any customer that has a residential or general supply tariff – the electricity load is separately metered and controlled at a connection point.

In our initial TSS we maintained our optional TOU residential and general supply tariffs – these tariffs are available to any customer that has a meter that is capable of supporting such a tariff. In its draft decision, the AER stated that allowing customers to opt-in to TOU tariffs shows insufficient progress towards the use of more cost reflective tariffs because in the AER's opinion:[21]

- TOU tariffs are able to send signals regarding the timing of consumption[22] (which flat, inclining and declining block tariffs cannot)
- Endeavour Energy's opt-in policy has not been successful in moving customers to TOU tariffs.[23]

[19] These procedures meet various requirements under the Rules as set out in Clause 6.18.

[20] During the TSS period, Endeavour Energy may need to introduce new tariff codes for billing purposes. Any new tariff codes introduced will comply with the tariff structures outlined in this document for each tariff class and the price level for NUOS services will equate to the tariff type under which the new tariff code has been created.

[21] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 101.

[22] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 45.

[23] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 101.

6 OUR PROPOSED NETWORK TARIFFS

The AER also noted that the new rules regarding metering and related services[24] provide an opportunity for distributors to reform their tariff assignment policies to make more efficient use of the network[25] because, from 1 December 2017:

- in effect, all new meters will incorporate functionality equivalent to smart meters[26]
- metering can be considered as a determining criterion for tariff assignment.[27]

The AER stated that we could demonstrate progress towards greater cost reflective tariffs in our revised proposal in a number of ways, including making TOU tariffs the default tariff for new customers and/or customers who request supply alterations. This is the option that Endeavour Energy has chosen, in particular, we propose that, from 1 July 2018:

- new customers (all of whom will have interval meters under the metering rule change) be assigned to the default TOU tariff, with the option to opt-out to the non-TOU tariff
- existing customers with interval meters be assigned to the non-TOU tariff, with the option to opt-in to the default TOU.

This proposal takes effect from 1 July 2018 so that:

- we can ensure we have the appropriate systems in place to handle a large number of new customers on TOU tariffs
- electricity retailers are able to prepare for this change
- we have some time to see what the effect of the new rules on metering are before we change our tariff assignment policy.

We expect a large increase in the proportion of our residential and general supply customers on a TOU tariff as the result of this change to our tariff assignment policy, as set out in Figure 6.1.

[24] Expanding Competition in Metering and Related Services final rule, 26 November 2015.

[25] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 111.

[26] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 31.

[27] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 111.

6 OUR PROPOSED NETWORK TARIFFS

Figure 6.1: Effect of default opt-in to the TOU tariff

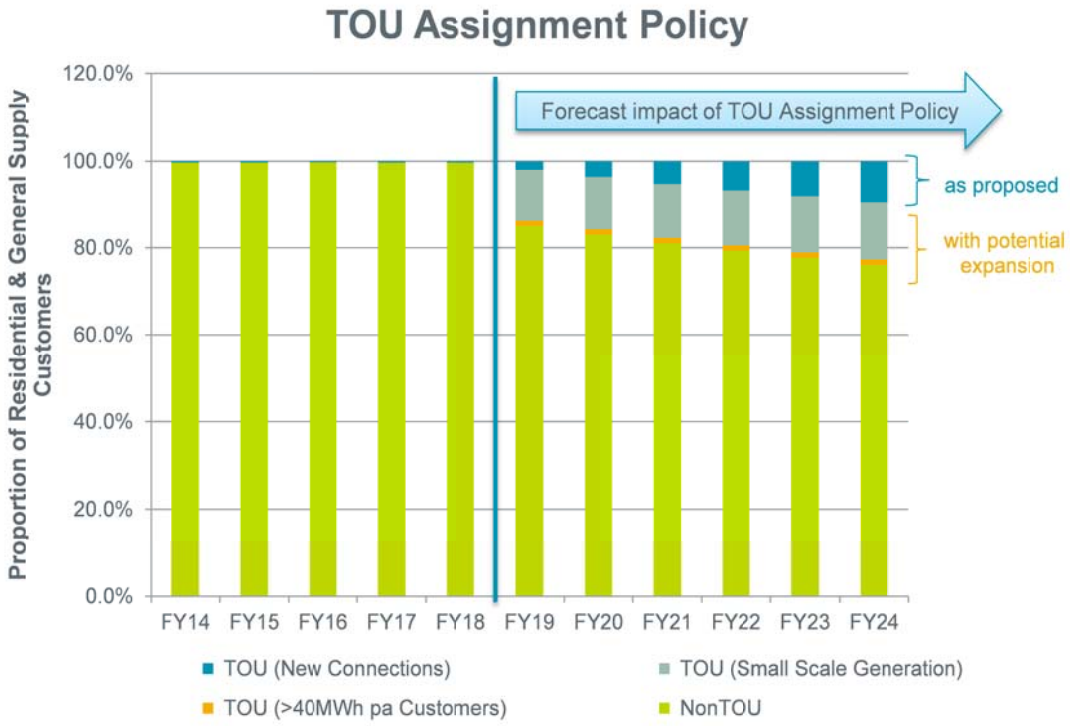
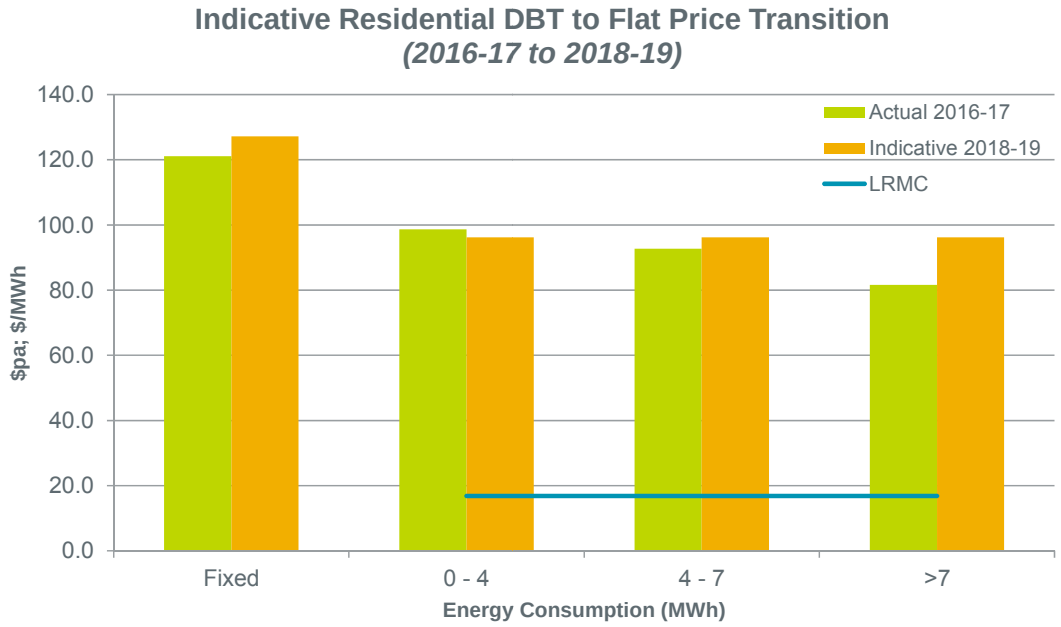
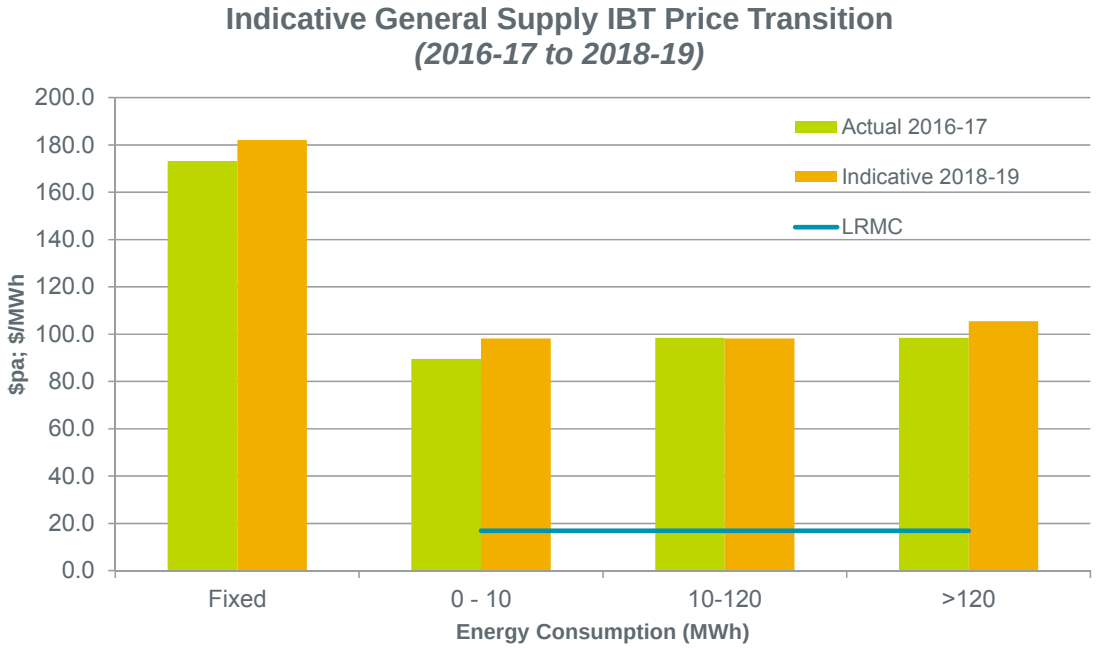


Figure 6.2 below illustrates Endeavour Energy's proposed changes to the declining and inclining block tariffs during this TSS period.

Figure 6.2: Proposed changes to current declining and inclining block tariffs



6 OUR PROPOSED NETWORK TARIFFS



The reasons why we have decided to transition to a flat tariff for residential customers are set out in section 7.3.

The objective of the transitional measures that apply to our general supply customers is to provide enhanced price signals to those customers at the materially larger end of the tariff bands to move to more efficient demand based tariffs.

Endeavour Energy recognises that the inclining block tariff does not minimise price distortions to the price signals for efficient usage of the network, but has historically maintained this structure to incentivise customers with high consumption to transfer to the more efficient demand tariff structure. The vast majority (97.8%) of customers on the general supply tariff consume less than 120MWh per annum. Therefore, increasing the consumption threshold at which the second block commences to this level would provide a long term signal for larger customers on the tariff to switch to a more efficient tariff, whilst minimising distortions to the vast majority of customers on this tariff. We believe this approach is consistent with the twin principles of minimising customer impact and promoting customers moving to more efficient tariffs.

The parameters and indicative price levels of each of the tariffs in this tariff class are set out in Appendix [A.9].

Low Voltage Demand Tariff Class

We plan to offer two network tariff types within the Low Voltage (LV) Demand tariff class:

- a LV TOU demand tariff
- a LV TOU transitional demand tariff.

Our TOU demand tariff is the default tariff for customers that consume more than 160MWh per annum.

Our TOU transitional demand tariff is a mandated transitional tariff for customers whose annual consumption requires a demand based tariff, but who cannot be directly transferred to the LV TOU demand tariff due to a lack of metering capable of supporting this tariff or where the expected bill impact of a direct transition to LV TOU demand is deemed excessive. At a minimum, customers that are allocated to this tariff must have a TOU meter from which interval meter energy data is obtained. The LV TOU demand transition tariff is not available on customer or retailer request.

6 OUR PROPOSED NETWORK TARIFFS

The parameters and indicative price levels of each of the tariffs in this tariff class are set out in Appendix [A.9].

High Voltage Demand

We plan to offer two network tariff types within the High Voltage (HV) Demand tariff class:

- a HV TOU demand tariff
- an individually calculated HV TOU demand tariff.

Our HV TOU Demand Tariff is the default tariff for customers where electricity is supplied at a voltage level defined as High Voltage.

Our individually calculated HV TOU Demand Tariff is a mandated, customer specific tariff where the customer's:

- electricity consumption has been equal to or greater than 100 GWh in total for the 36 months preceding the application, or
- electricity consumption has been equal to or greater than 40 GWh per annum in each of the two financial years preceding the application, or
- monthly peak demand has been equal to or greater than 10 MVA for 24 of the 36 months preceding the application.

The parameters and indicative price levels of the HV TOU demand tariff are set out in Appendix [A.9].

Subtransmission Demand

We plan to offer two network tariff types within the Subtransmission Demand tariff class:

- an ST TOU demand tariff
- an individually calculated ST TOU demand tariff.

Our ST TOU demand tariff is the default tariff for customers where electricity is supplied at a voltage level defined as Subtransmission Voltage.

Our individually calculated ST TOU demand tariff is a mandated, customer specific tariff where the customers:

- electricity consumption has been equal to or greater than 100 GWh in total for the 36 months preceding the application, or
- electricity consumption has been equal to or greater than 40 GWh per annum in each of the two financial years preceding the application, or
- monthly peak demand has been equal to or greater than 10 MVA for 24 of the 36 months preceding the application.

The parameters and indicative price levels of the ST TOU Demand Tariff are set out in Appendix [A.9].

Inter-Distributor Transfer Demand

We plan to offer only one network tariff type within the Inter-Distributor tariff class, being the Inter-Distributor TOU demand tariff. This tariff is a mandated, distributor specific TOU demand tariff for electricity transferred through the Endeavour Energy network on behalf of Ausgrid and Essential Energy.

Unmetered Supply

We plan to offer two network tariff types within the Unmetered Supply tariff class:

- an unmetered block tariff
- an unmetered energy tariff.

6 OUR PROPOSED NETWORK TARIFFS

Our unmetered block tariff is the default tariff for customers in this tariff class.

We plan to offer three unmetered energy tariffs for the specific purpose of:

- streetlighting connection points
- traffic control signal lights connection points
- nightwatch connection points.

The parameters and indicative price levels of the unmetered supply tariffs are set out in Appendix [A.9].

Alternative control services

Endeavour Energy proposes no change to the structure of its ancillary network fees, metering charges or public lighting service charges as determined by the AER for the 2015-19 regulatory period.

These services are charged as either a fee based service or a quoted service, with the full cost of these services attributed to that particular customer that requests them.

The form of control to apply to Endeavour Energy's alternative control services is determined by the AER and is set out in Appendix [A.4].

The indicative price levels of each alternative control services are provided as a supporting document under Appendix [A.13].

7 COMPLIANCE WITH THE PRICING PRINCIPLES

Our proposed tariffs are consistent with the Pricing Principles as set out in the Rules. More specifically:

- our tariffs reflect the efficient costs of providing the services[28]
- our tariffs for each tariff class lie between the stand-alone and avoidable cost of serving our customers[29]
- our tariffs are set by reference to LRMC, with allowance for the recovery of residual costs[30]
- our tariffs mitigate impact on customers.

In setting our tariffs, we have had consideration for the impact that changes to our price levels will have on our customers.

7.1. Tariffs reflect the efficient costs of providing the services

Clause 6.18.5 (a) of the Rules sets out the objective that tariffs should reflect our efficient costs of providing the services. The AER has interpreted this clause as being a rule that encourages more cost reflective pricing.[31] In other words, tariffs should reflect the cost of the incremental supply of network services, so that:

- prices should be lower when there is more space capacity on the network, because increased demand will not lead to additional investment, ie, the cost of fulfilling the additional demand is low
- prices should be higher when there is less spare capacity on the network, because increased demand for electricity may require additional investment, ie, the cost of fulfilling the additional demand is high.

The AER explained that one of the aims of cost reflective pricing is to incentivise customers to shift their use of network services to less congested periods, which would mitigate the need for expenditure.[32] However, there are currently impediments to the full application of cost reflective pricing, for example, the low penetration of interval meters limits the number of customers to whom cost reflective pricing can apply.[33]

For those customers that do have interval meters, setting higher prices at times of greater demand results in tariffs that better reflect efficient costs, as compared to a tariff with the same prices at every time of day. Therefore, a key consideration in setting charging windows is tariffs that reflect our efficient costs, whilst also managing the impacts of tariff changes and customers' ability to respond.[34]

[28] As required under the Rule 6.18.5(a).

[29] As required under the Rule 6.18.5(e).

[30] As required under the Rule 6.18.5(f).

[31] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 64.

[32] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 64.

[33] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 64.

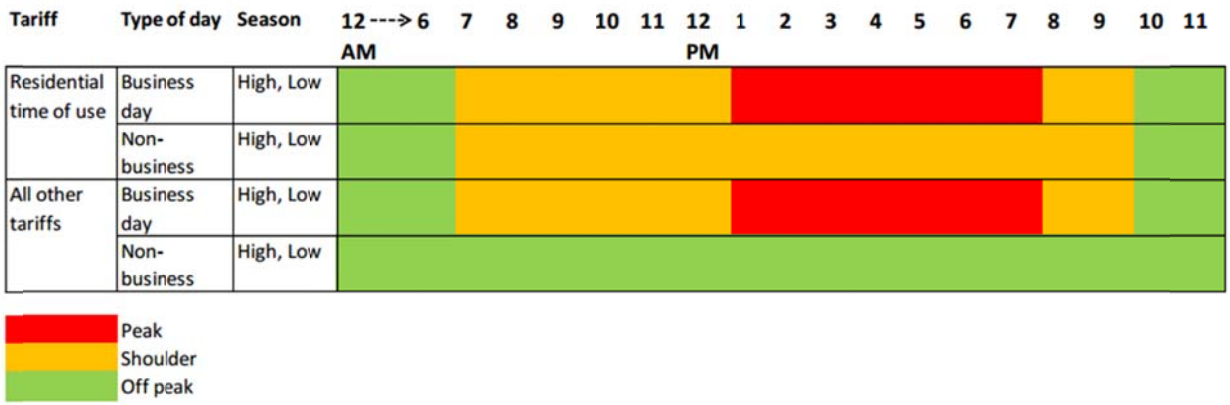
[34] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 64.

7 COMPLIANCE WITH THE PRICING PRINCIPLES

Our proposal for charging windows and the AER's draft decision

Figure 7.1 below sets out the charging windows in our initial TSS.

Figure 7.1: Charging windows for TOU tariffs in initial TSS



The AER responded that it was not satisfied that our proposed charging windows on business days contributed to the achievement of compliance with the distribution pricing principles, and that we had not achieved the appropriate balance between greater cost reflectivity and customer ability to respond, because:[35]

- we did not provide sufficient evidence and reasoning to justify our method for determining the threshold between peak, shoulder and off peak hours
- our proposed times for the shoulder and peak periods are too long and do not reflect the level of congestion in our network, and the times of peak hours on weekdays should be different between summer and winter.

Our method for determining the thresholds

We have determined the thresholds between peak, shoulder and off peak hours by assessing in which half hour periods demand is within 10% (peak) and 20% (shoulder) of the maximum network peak demand. Additional demand in these periods is more likely to lead to costly network augmentation or demand management alternatives.[36]

When planning to augment the network, or employ demand management alternatives in response to peak demand growth, we review the proportion of time within a year that a network asset exceeds its firm rating. When the proportion of time exceeds 1%, this would normally be the trigger to consider augmentation or demand management options.

Endeavour Energy's tariffs apply at the total network rather than asset level. Using the network Load Duration Curve (LDC) as indicative of likely demand at the asset level, we observe that 1% of time equates to a level of demand at or within 20% of the maximum network demand. Figure 7.2 below shows that demand is within 20% of the maximum for 1% of the time.

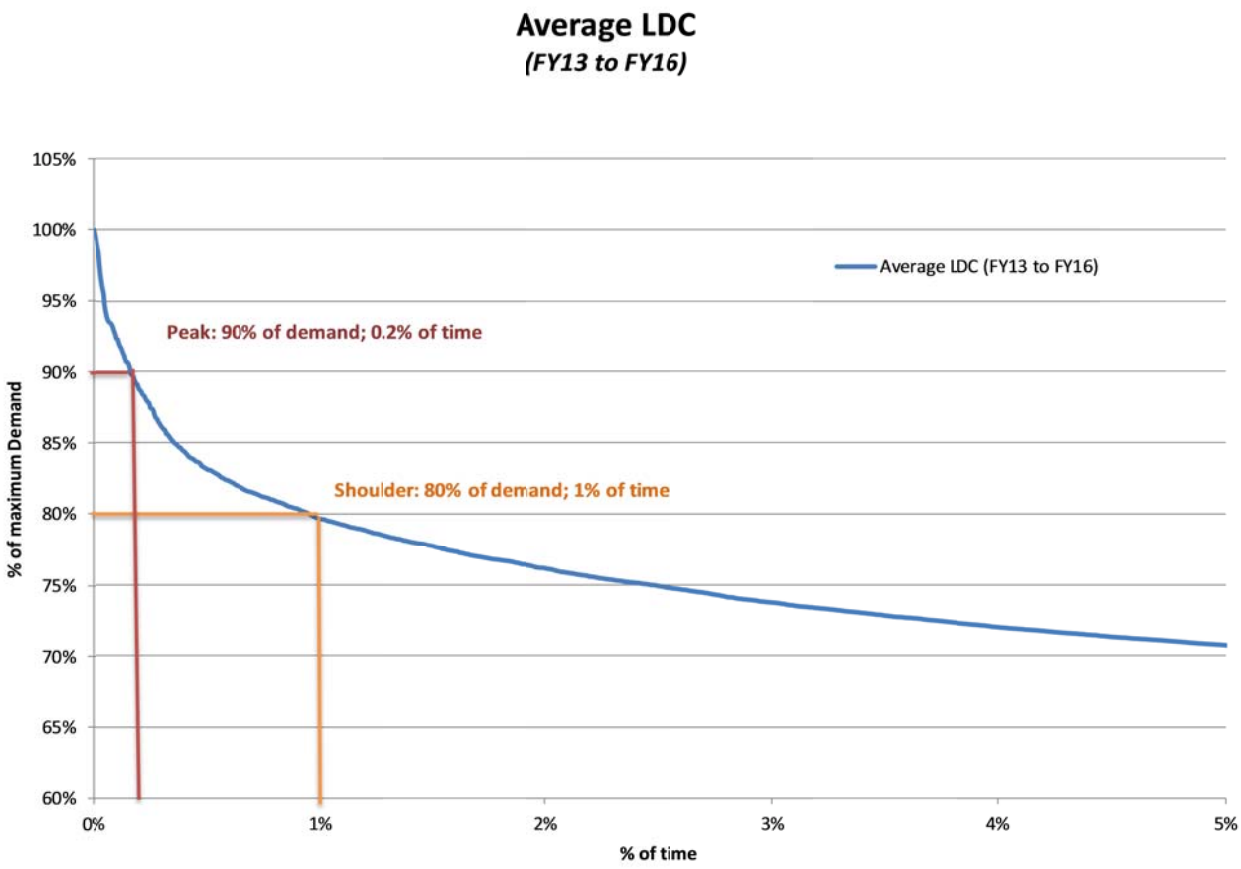
By setting our charging windows to reflect those times of the day that additional demand may require network augmentation, Endeavour Energy is more accurately signalling to consumers those times where the cost of greater demand is high.

[35] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 72.

[36] Congestion will not always be at the same level across all geographic areas of our network at the same time. For example, in the Blue Mountains, the peak is more likely to be in the winter than coastal parts of our network. However, we have used network peak demand to determine charging windows because we do not have locational pricing.

7 COMPLIANCE WITH THE PRICING PRINCIPLES

Figure 7.2: Average network load duration curve



Proposed thresholds

The AER stated that, based on an analysis of when demand was within 10% and 20% of the maximum:[37]

- we should reduce the number of hours in the peak period
- we should reduce the number of hours in the shoulder period.

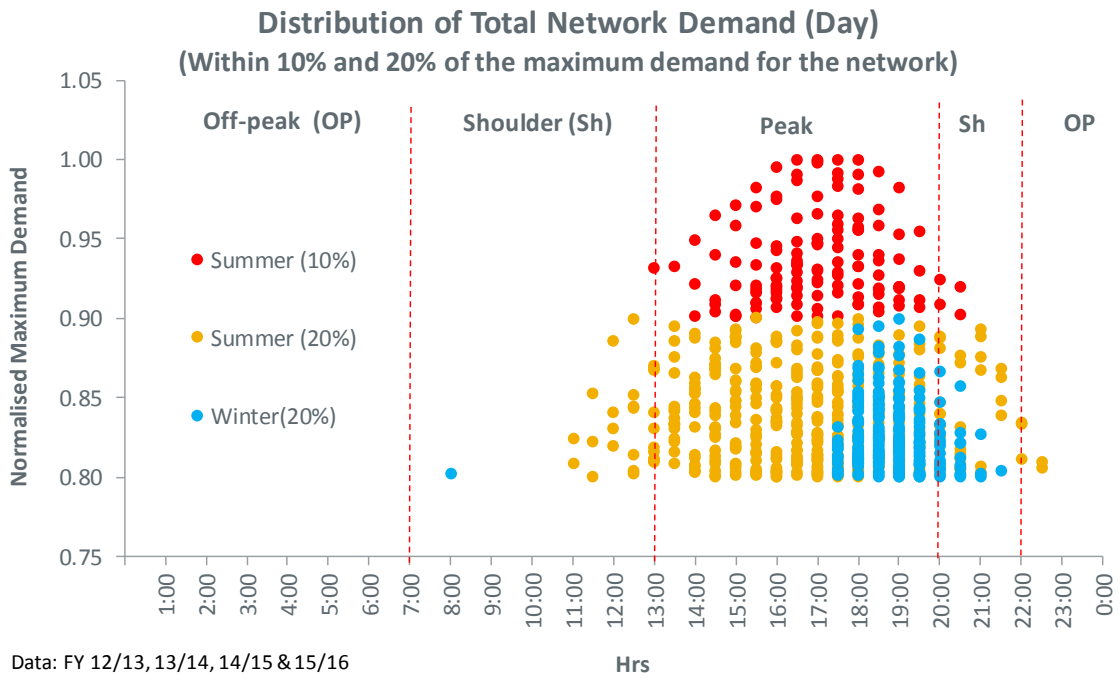
Figure 7.3 below sets out the times at which demand was within 10% or 20% of peak demand for the last four financial years – this is figure 4.5 in the AER's draft decision, but with the addition of one more year of data. Based on Figure 7.3, the number of hours in the peak period is appropriate because it encompasses almost all of the periods when demand was within 10% of the network maximum, and moving the end time for the peak period earlier (as implied by the AER),[38] would significantly increase the number of data points within 10% of the network maximum that are outside of the peak. It follows that this would increase the probability that a peak event occurs outside of the peak period.

[37] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 74.

[38] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 74.

7 COMPLIANCE WITH THE PRICING PRINCIPLES

Figure 7.3: Time of day charging windows



Data: FY 12/13, 13/14, 14/15 & 15/16

Endeavour Energy accepts that a change in charging windows to reflect the seasonal nature of demand would improve the efficiency of our TOU tariffs. However, a decision on time of day pricing definitions should not be undertaken lightly because we need to manage the impacts of tariff changes and take into account our customers' abilities to respond.

A widespread change to charging windows will impact small business, commercial and industrial customers currently taking supply on a TOU tariff. We estimate that a change in charging windows will require a $40m (14%) re-balancing of pricing and revenue across our existing TOU tariff customer base. This has the potential to create a number of 'winners and losers'. Deferring the transition to this tariff structure to the next TSS period will provide the necessary time to conduct a thorough review of impacts, seek stakeholder feedback and where required, prepare a structured communication strategy before implementation.

Based on feedback received to date, stakeholders expect Endeavour Energy's TOU tariffs to accurately reflect periods of network congestion. Endeavour Energy's proposed strategy was seen as a positive step in achieving this aim. While some stakeholders expressed frustration at the proposed speed of transition to a seasonal TOU tariff structure, there was general acceptance that the significance of this change would require careful consideration and further input from stakeholder groups., Consideration and input that could not be achieved within the 45 business day period between the AER's draft TSS decision and Endeavour Energy's revised proposal.

It follows that our revised TSS maintains our business day charging window definitions whilst we will undertake a detailed analysis and review of our charging windows as part of the next TSS. The stakeholder engagement process for our next TSS period will begin mid-2017.

Finally, the AER said that it was not satisfied that our application of shoulder charging windows for residential customers on non-business days contributes to the achievement of compliance with the distribution pricing principles.[39] As Endeavour Energy has only a limited number of residential customers on TOU tariffs, the removal of the weekend shoulder rate for this customer segment (bringing the time of day timing definition into alignment with the non-residential definition) would be achievable within this TSS period.

[39] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 83.

7 COMPLIANCE WITH THE PRICING PRINCIPLES

7.2. Revenue is between stand-alone and avoidable cost for each tariff class

Clause 6.18.5 (e) of the Rules sets the bounds within which our tariffs must be set. For each tariff class, our tariffs must be set at a level such that the revenue we expect to recover from customers lies between:

- the stand-alone cost of serving those customers who belong to that tariff class (the upper bound) and
- the avoidable cost of not serving those customers (the lower bound).

The stand-alone cost of serving a group of customers is the total cost required to serve those customers alone, ie, were we to build the network anew, removing all other customers from the network. Setting the upper bound at this level ensures that customers that belong to any given tariff class do not pay more as a result of the provision of services to other customers.

The avoidable cost of serving a group of customers is the reduction in cost that could be achieved if those customers were no longer served, ie, the reduction in cost associated with a reduction in output that was previously provided to that class of customer. Setting the lower bound at this level ensures customers must face a price no lower than the average cost that could be avoided by not supplying them.

Estimating the stand-alone and avoidable costs for each tariff class is an inherently hypothetical exercise. Networks neither routinely assess the cost reductions that might result from disconnecting large groups of customers, nor estimate the cost to supply those customers under the assumption that the remainder of their customer base no longer exists.

In the absence of these type of detailed studies, it is necessary to adopt an approach to estimating stand-alone and avoidable cost that comprises various assumptions, with a strong rationale for the adoption of each.

Endeavour Energy's approach begins by classifying each of our network cost categories on the basis of the following two dimensions:

- whether costs are **direct** or **indirect** – the framework assumes that a cost category is either:
  - 'direct', meaning that the cost can be attributed to a specific group of users and would not be incurred but for those users (e.g., metering is directly attributable to individual customers), or
  - 'indirect', meaning that the cost is common to multiple groups of users (e.g., operational expenditure costs such as the cost of equity raising cannot be attributed to specific customers or customer groups)
- whether costs are **scalable** or **non-scalable** – the framework assumes that a cost category is either:
  - 'scalable', meaning the cost tends to increase in proportion to the scale at which the service is provided (e.g., maintenance and repair costs are considered scalable as they are likely to be highly dependent on the physical size of the network), or
  - 'non-scalable', meaning the cost is independent of the scale at which the service is provided (e.g., equity raising costs are likely to be relatively independent of network characteristics such as the number of customers or maximum demand).

Endeavour Energy has calculated avoidable cost for each of its tariff classes as the sum of all direct costs multiplied by some weight, which represents the proportion of direct costs that are attributable to that tariff class.

Endeavour Energy's current weights are derived from the estimated value of the assets at each voltage level. Our asset value weights, and the resultant estimates of avoidable cost for each tariff class is set out in Appendix [A.5].

Endeavour Energy has calculated stand-alone cost for each tariff class by taking the avoidable cost for that tariff class and adding to it:

- all non-scalable indirect costs we incur in operating the network; and
- a proportion of our scalable, indirect costs that can be attributed to that tariff class.

Endeavour Energy's estimates of stand-alone cost are also set out in Appendix [A.5].

As illustrated in the table below, in each tariff class, the revenue we expect to recover over the period 2015-16 lies between these upper and lower bounds. This also serves to demonstrate the manner in which the tariffs applying to each tariff class reflect both the efficient costs of serving customers within those classes and the total efficient revenue requirement as set by the AER.

Table 7.1: Estimates of avoidable cost, expected revenue, and stand-alone cost, 2015/16 ($m) [40]

Tariff Class	Avoidable Cost	Expected Revenue	Stand-alone Cost
LV Energy	366	561	725
LV Demand	33	168	392
HV Demand	13	35	285
ST Demand	11	26	105
Inter-Distributor Transfer	3	5	97
Unmetered	-	9	359
Total	**427**	**804**	**1,962**

7.3. Tariffs reflect long-run marginal cost and allow for recovery of costs

Clause 6.18.5(f) of the Rules requires that each tariff be based on the long run marginal cost (LRMC) of providing services to those customers assigned to that tariff. There are a number of methods that can be used to estimate the LRMC of supplying specific groups of customers. When determining the method of calculating LRMC and the manner in which it is to be applied, distributors must have regard to:

- the costs and benefits associated with calculating, implementing and applying their proposed method
- the additional costs likely to be associated with meeting demand from retail customers that are assigned to that tariff at times of greatest utilisation of the relevant part of the distribution network
- the location of retail customers that are assigned to that tariff and the extent to which costs vary between different locations in the distribution network.

Clause 6.18.5(g) allows distributors to set charges that depart from LRMC to the extent that they reflect 'efficient' costs and enable the distributor to recover expected revenue for the relevant services in accordance with their distribution determination. However, this must be done in a way that minimises distortions to the price signals for efficient usage that would result from tariffs that are set purely by reference to LRMC.

[40] The figures in this table have been calculated using the smoothed building block revenue and volume forecasts consistent with the AER's Final Decision. It is important to note that the estimates in this table are illustrative of Endeavour Energy's proposed methodology and will be updated annually to reflect current inputs and assumptions.

7 COMPLIANCE WITH THE PRICING PRINCIPLES

The effect of clause 6.18.5(g) is to allow distributors to recover their residual costs, which are the fixed costs of operating the network, as well as other costs that they currently pass-through to consumers. However, these costs are required to be allocated between customers in a way that promotes efficient use of the network.

We set out our approach to estimating LRMC, allocating residual costs and passing-through other costs in the sections below.

Estimating LRMC

The LRMC of our network is the cost of supplying one more unit of demand during the system peak.

We have estimated the LRMC of supplying each tariff class using an average incremental cost approach.

Under this approach, the LRMC of network services is estimated as the average change in projected operating and capital expenditure attributable to future increases in demand, ie, it averages the total cost of supplying new growth in demand over that growth in demand.

In practice, under this approach LRMC is estimated by:

- projecting future operating and capital costs attributable to expected increases in demand;
- forecasting future load growth for the relevant network asset (or assets); and then
- dividing the present value of projected costs by the present value of expected increases in demand.

Details of our estimates of LRMC and how these estimates have been converted into charging parameters for each tariff class are set out in Appendix [A.6].

Treatment of residual costs

Clause 6.18.5(g) allows for a distributor to recover its residual costs, which are included in its expected revenue allowance.

However, it establishes constraints on the recovery of these costs in that:

- the revenue expected to be recovered from each tariff must reflect the total efficient cost[41] of serving the customers assigned to each tariff; and
- the revenue expected to be recovered from each tariff must minimise distortions to the price signals for efficient usage that would result from tariffs that reflect LRMC.

The requirement that a distributor recovers revenues from each tariff in a manner that minimises distortions for efficient use of the network has implications for:

- the manner in which residual costs are recovered from each tariff, ie, from the different charging parameters that make up each tariff; and
- the manner in which residual costs are recovered from, or allocated to, different tariffs.

Theoretically, it is most efficient for us to recover from our customers the residual costs we incur exclusively from the fixed charge tariff component because these charges are independent of a customer's usage decisions and therefore have no effect on the price signals for efficient usage of the network service. When a customer's usage charges (either in the form of charges for energy or demand) are set equal to LRMC, the marginal cost to the customer is equal to the marginal cost to the network, which promotes efficiency.

Endeavour Energy believes, however, that recovery of all residual costs from the fixed charge tariff component is at odds with the customer impact principle.

[41] We take this to mean the costs necessary to provide the service to each customer, including allocated operating costs and a return on and of the regulated asset base as allocated to the provision of the service to those customers.

7 COMPLIANCE WITH THE PRICING PRINCIPLES

In the initial TSS, Endeavour Energy developed an approach that aimed to lessen the need for significant fixed charge increases, by recovering a greater proportion of these residual costs from tariff components that are less responsive to increases in prices.

Given that we did not have empirical evidence on the price elasticity of demand by tariff component for residential consumers, Endeavour Energy used volume variance by tariff component as a proxy, noting that setting tariffs in a manner that minimises our exposure to volume risk is in itself a contribution to economic efficiency under a regulatory framework that places an annual cap on revenue recovery. The tariff component volume variability increases with energy consumption, leading to a conclusion that the price elasticity of demand is likely to increase with energy consumption.

Therefore, in our opinion, a DBT:

- recovers greater residual costs from the least price sensitive parts of consumption, reducing the distortive impacts of usage charges
- recovers residual costs from those tariff components that are least volatile, reducing annual revenue fluctuation and in-turn increasing annual price path stability. Greater pricing stability provides certainty to consumers and improves efficient consumption and appliance investment decisions over the longer term.

The AER considers that minimising distortions in the recovery of residual costs aligns with the pricing principles.[42] However, the AER was not satisfied that the DBT structure contributes towards the achievement of compliance with the distribution pricing principles because:[43]

- it does not consider that it efficiently recovers costs from customers because in its opinion our evidence regarding volume variability is not sufficient to show that the first block of energy consumption is less price sensitive than consumption in higher blocks[44]
- it was not satisfied that a declining block structure provides efficient price signals to consumers to make use of spare capacity within the NSW networks, in particular it does not provide a signal regarding the timing of consumption.[45]

These arguments equally apply to an IBT, ie:

- it does not efficiently recover costs from customers because there is not sufficient evidence to conclude that the last block is less price sensitive than consumption in earlier blocks
- it does not provide efficient price signals to consumers to make use of spare capacity within the NSW networks, in particular it does not provide a signal regarding the timing of consumption.

The AER stated that a more neutral tariff such as a flat tariff, whilst still not sending signals regarding the timing of consumption, would reduce the risk of encouraging too much consumption (over incentivising) compared to a DBT when there are constraints on the network.[46]

Further, the AER argues that a flat rate tariff is consistent with the pricing principles in the following respects:[47]

- for tariffs to comply with the pricing principles, albeit after a reasonable period of transition, and
- the ability of customers to mitigate the impact of changes through their usage decisions.

Whilst Endeavour Energy believes that a DBT is consistent with the pricing principles, we are proposing to transition to a flat tariff based on the AER's opinion that this would be consistent with the pricing principles.

[42] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 94.

[43] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 47.

[44] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 94.

[45] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 49.

[46] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 49.

[47] AER, Draft decision: Tariff structure statement proposals – Ausgrid, Endeavour Energy, Essential Energy, August 2016, p 51.

Details of how we allocate residual costs is set out in Appendix [A.7].

Pass through of other costs

Endeavour Energy passes-through a number of costs that we incur in our tariffs including transmission costs and Climate Change Fund jurisdictional scheme costs.

Our approach to the pass-through of these costs is set out in detail in Appendix [A.8].

7.4. Tariffs mitigate impact on customers

Clause 6.18.5(h) of the Rules creates a requirement on distributors to consider and limit customer impact, and allows them to deviate from efficient pricing to meet that requirement. The principle establishes:

- an objective of transitioning to more efficient tariff structures over time
- the relevance of whether customers can change their tariff, and so lessen the impact of a transition to more efficient prices
- the relevance of whether customers are able to alter their consumption, and so lessen the impact of a transition to more efficient prices.

Endeavour Energy considers customer impact to be an upmost priority at this stage of transitioning to efficient pricing.

As such, and in response to stakeholder concerns regarding the impact on low consuming residential customers of our proposed changes to the fixed charge and move to a flat tariff, Endeavour Energy will adopt a gradualist approach to tariff restructuring by limiting movements in the residential fixed tariff component to the greater of:

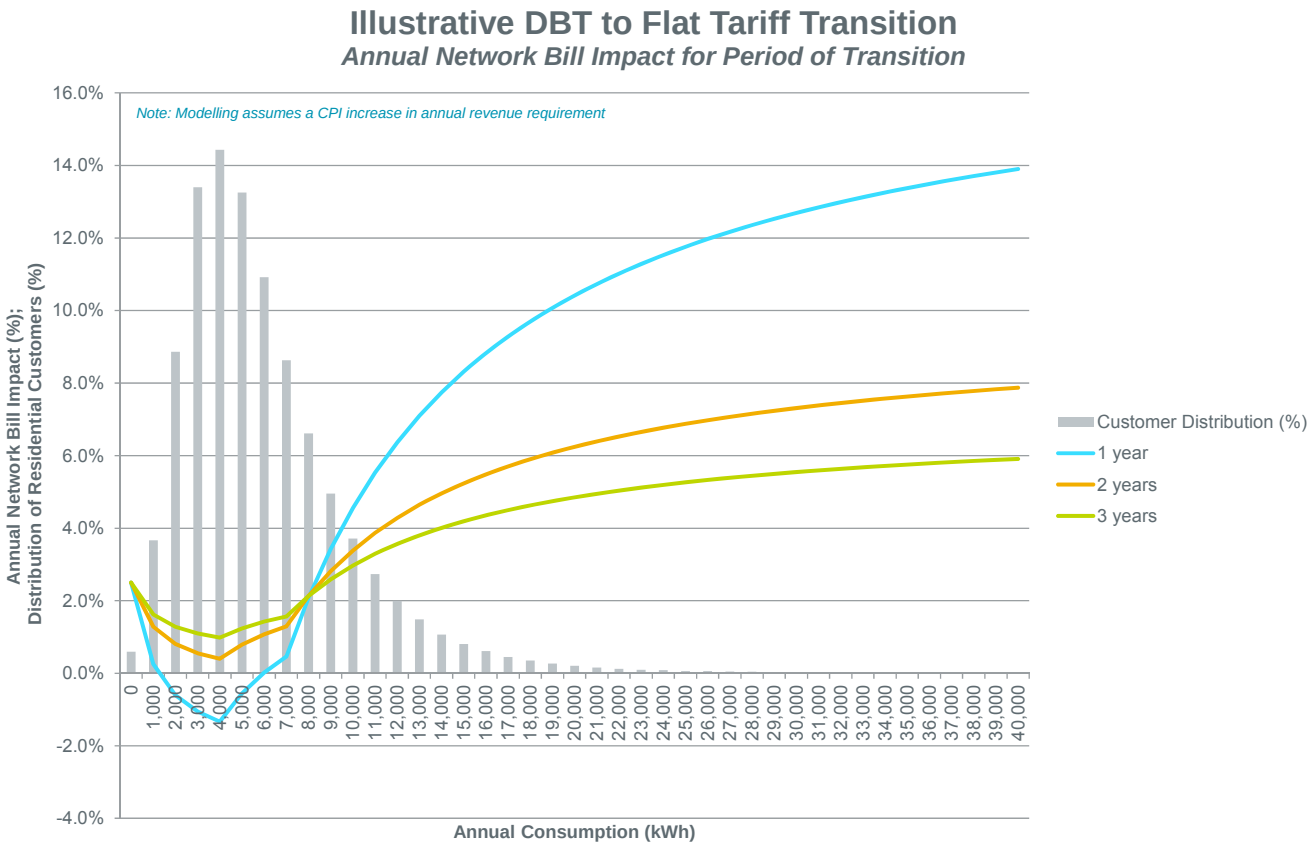
- the average annual price movement plus 2.5%
- the rate of inflation.[48]

Endeavour Energy considered a one, two and three year transition period to manage customer impacts as the DBT is replaced by a flat tariff. Figure 7.4 below shows that the percentage increase in annual bills for customers with large annual consumptions is greater when the transition is faster.

[48] Calculated in accordance with Attachment 14 of the AER's Final Decision for Endeavour Energy.

7 COMPLIANCE WITH THE PRICING PRINCIPLES

Figure 7.4: Illustrative impacts of a one, two or three year transition period



We propose a two-year transition because this would achieve a flat tariff in the second year of this two-year TSS period, whilst mitigating the impact on our customers' network bills. For example, under a two year transition, no customer receives an annual increase in bills of more than 8 per cent, whilst under a one year transition, some larger customers will have an annual bill increase of over 14 per cent.

The period of transition was discussed with stakeholders at our 15 September 2016 forum. Stakeholders understand the need for a transition period to manage customer impacts. As such, stakeholders were generally not opposed to Endeavour Energy's two-year transition proposal.

Endeavour Energy will also offer residential and general supply customers the option to transition to a more efficient TOU tariff on a voluntary basis.

While there will be some stakeholder groups that may be frustrated by a slower pace of reform, it is critical those customers with a lower propensity to engage and respond to their electricity bills are given time to respond as they deem appropriate to our proposed tariff changes.

An indicative pricing schedule for each of our standard control services tariff classes over the two year period 2017/18 to 2018/19 is set out in Appendix [A.9].

Examples of the impact of our proposed changes to our tariff structures on select customer types is set out in detail in Appendix [A.10].

8 FUTURE TARIFF OPTIONS

The electricity industry has undergone significant change through the Power of Choice reforms. These reforms were designed to respond to several emerging trends in the industry including high electricity prices, the penetration of solar panels, the oversupply of generation capacity, uncertainty regarding carbon policy and reliability standards and a declining trend in peak demand and consumption patterns. They were however, principally intended to empower customer choice.

The CSIRO Future Grid Forum examined these issues and conducted a detailed analysis of potential changes to the electricity industry to 2050. The electricity landscape is expected to change significantly over this period, primarily driven by:[49]

- 'megashifts': brought on by the advent of low cost electricity storage, sustained lower demand for centrally-supplied electricity and the need for significant greenhouse abatement
- consumer choice: as an outcome of potential new business models, a greater degree of cost-reflectivity in pricing, and a higher overall level of consumer engagement.

The Future Grid Forum considers that the increasing prevalence of cost-reflective pricing will provide a number of benefits to the electricity system as these changes occur. There are four general tariff options identified being: fixed volume-based tariffs, seasonal time-of-use volume-based tariffs, critical peak tariffs and combined capacity and volume tariffs. The usefulness and applicability of these general tariff options will be dependent on how the market develops over time.

Historically, customers have perceived electricity as an essential service that should largely be provided to all customers at a similar price. Evidence suggests that, household knowledge of energy use is currently quite low and behavioural changes are lagged despite a willingness to change. The CSIRO notes that customers will need to have the time and motivation to engage, and become better informed and sufficiently energy literate to navigate and understand all of the options that might emerge.[50]

Endeavour Energy believes that there is a potential efficiency argument for the introduction of a broader range of demand-based tariffs for our residential and general supply customers going forward. However, in transitioning to alternative tariff structures it is important that we engage with our customers to understand their appetite and ability to make this transition. This will necessarily involve monitoring the rate at which smart meters are deployed and customers take-up our existing optional tariffs.

We have conducted a number of trials of different forms of demand-based pricing with limited groups of customers in our network area to determine whether these forms of pricing are likely to be effective in reducing demand for our network during peak periods.

Although these trials have been valuable, we consider that there is strong benefit in taking a "wait and see" approach before committing our customers to the transaction costs of maintaining demand based tariffs for what is likely, at least within this TSS period, to be a relatively small number of customers.

We consider this to be a prudent approach in light of the fact that:

- forecast demand for our network has only recently returned to growth
- new metering technology will be required - we expect that retailers and metering coordinators will begin this process during this TSS period. However, it is unclear how endemic the technology will become.

[49] CSIRO Future Grid Forum, Change and choice: The Future Grid Forum's analysis of Australia's potential electricity pathways to 2050, 6 December 2013, p 3.

[50] CSIRO Future Grid Forum, Change and choice: The Future Grid Forum's analysis of Australia's potential electricity pathways to 2050, 6 December 2013, p 55.

8 FUTURE TARIFF OPTIONS

Under our "wait and see" approach, Endeavour Energy will:

- observe the penetration of interval meters in our network area over the TSS period – if there is significant penetration of meters capable of supporting a demand based tariff, we will reconsider the case for offering such tariffs for the following TSS period[51]
- observe consumer and retailer response to proposed demand based tariffs in jurisdictions with high interval meter penetration, such as Victoria. This would include:
    - consumer acceptance and response to more complex demand based price signals
    - retailer propensity to pass-through the demand tariff to their end-use customers
    - observed take-up of demand based tariffs, if offered, in other jurisdictions with low interval meter penetration.

The following sections outline some of the demand-based tariffs currently under consideration, including the results from our trials of these types of tariffs. In designing our tariff options, Endeavour Energy has sought to consider the nature of our existing customer base, discussed earlier in this document, energy trends and technological constraints. Should we propose such tariffs in any future TSS, a more detailed design will be provided based on additional analysis and customer consultation.

8.1. Peak time rebate

Under a Peak Time Rebate (PTR) tariff customers are typically charged a flat price for electricity used, with a rebate provided when they use less electricity than normal during a designated critical event day. A recent study conducted by the CSIRO found that PTR tariffs are one of the more preferable demand-based tariff options available to customers because:[52]

- they offer the perceived certainty that comes with a flat-rate tariff
- the demand component is structured as a reward rather than a penalty, ie, the customer obtaines a rebate for reduced peak consumption rather than paying a higher charge for consumption at times of peak demand.

Endeavour Energy has previously engaged with its customers through a trial PTR program (PeakSaver). This trial was conducted over two summer periods from 1 November 2012 to 31 March 2013, and 1 November 2013 to 31 March 2014.

The purpose of this trial was to:

- investigate smart metering technology
- gauge customer interest in, and acceptance of, PTR
- determine the level of demand reduction achievable
- better understand the overall costs and benefits of a broad-based approach to demand management.

Over the trial period there were six load curtailment event days where customers were provided a financial incentive to reduce their consumption below their calculated baseline. On average participants were able to reduce their peak time consumption by 3.7 kWh, or 17.1%, on event days.

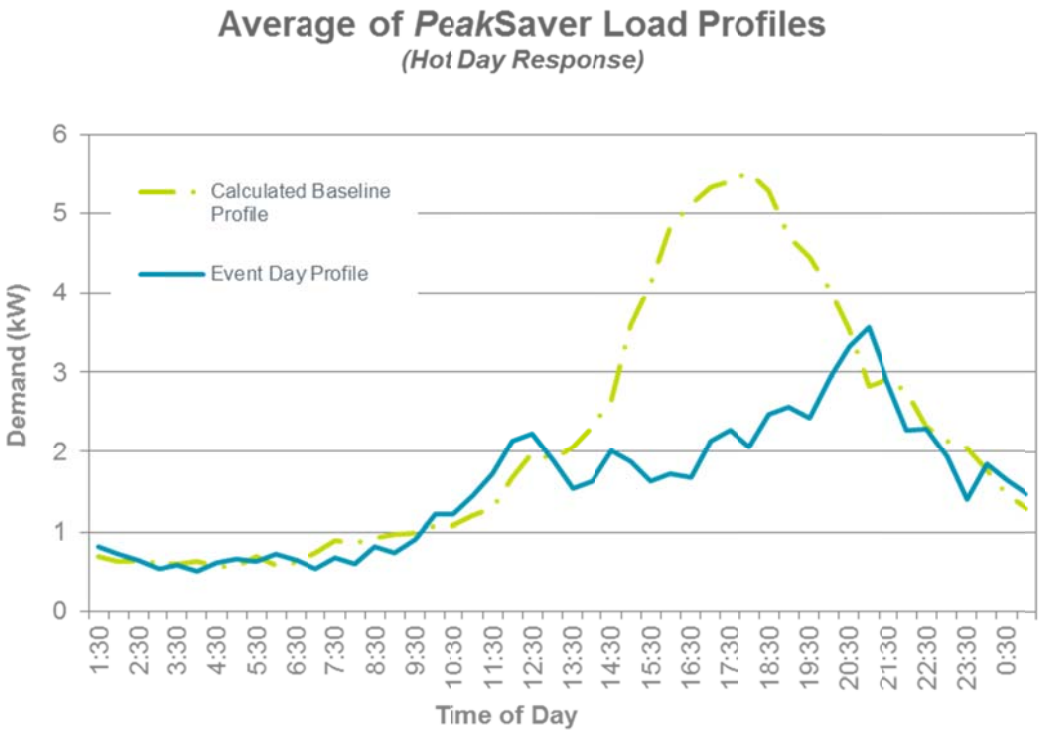
An example of the results is provided in the figure below:

[51] Competition in metering is expected from the end 2017, which is expected to result in retailers rolling out smart meters to customers.

[52] A description of the CSIRO study can be found at Appendix [A.11].

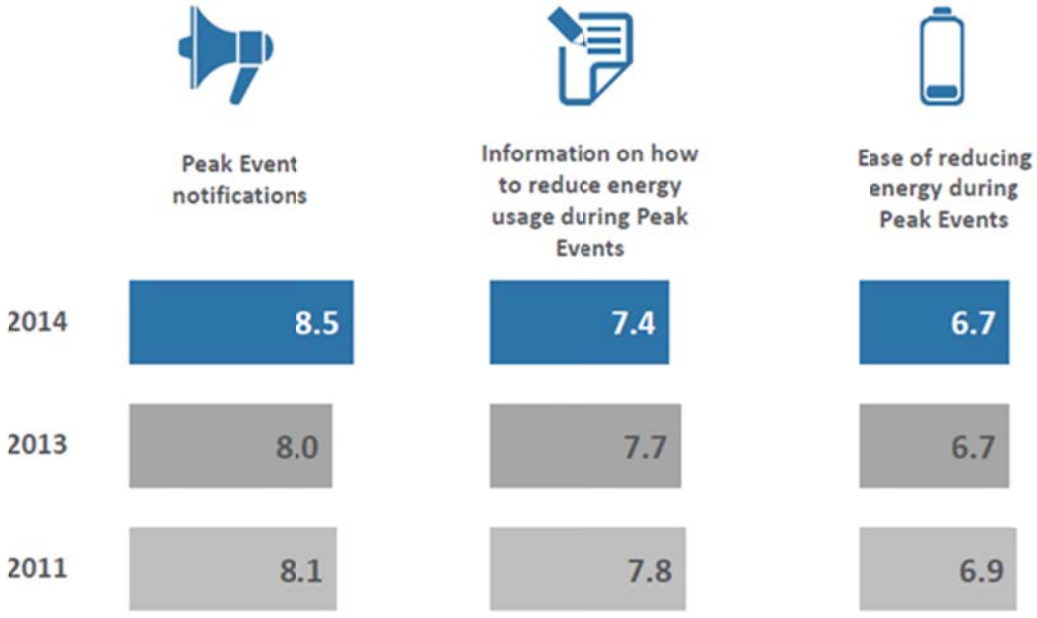
8 FUTURE TARIFF OPTIONS

Figure 8.1: Average of PeakSaver Load Profiles (Hot Day Response)



Following the trial we undertook a quantitative study to determine participants' satisfaction with the program. The finding of the study suggested that participants were satisfied with the program.

Figure 8.2: Participant satisfaction with the trial PTR program (PeakSaver)



Although PTR tariffs appear to provide an effective price signal for reduced demand during peak periods, our ability to introduce such tariffs is currently limited due to the relatively low take-up of interval and smart meters in our

network area. We expect that opportunities for the introduction of PTR tariffs will improve over time as the Power of Choice Rule changes are implemented. These reforms will increase the take up of enabling metering technology and improve the levels of customer engagement and choice.

Broadly, we anticipate that any proposed PTR tariff will be available on a locational basis with an LRMC priced rebate complementing the customers' existing tariff for non-critical event day usage. Should we propose a PTR tariff in any future TSS, a more detailed design will be provided based on additional analysis and customer consultation.

8.2. Critical peak pricing

Critical Peak Pricing (CPP) tariffs seek to modify customers' behaviour on a predetermined number of event days per year, being extreme temperature days. While a PTR tariff provides a rebate for reduced consumption during a few hours on an event day, under a CPP tariff customers are charged a higher price during these periods, typically in exchange for lower prices on all other days.

Compared to other demand-based tariffs that require customers to understand and monitor their usage on a daily basis, CPP tariffs only require a customer to modify their behaviour over a number of pre-defined, short periods each year. A recent study conducted by the CSIRO found that, compared to other demand-based tariffs, CPP tariffs had the greatest appeal to lower income households because:[53]

- they hold out the prospect of much cheaper electricity for much of the year
- they provide greater certainty – because the critical peak periods are pre-determined and conveyed to the consumer ahead of time there may be fewer demands on decision-making and less chance of the consumer 'getting it wrong', ie, incurring higher electricity bills by not responding to price signals appropriately.

Endeavour Energy has conducted a trial study (the Western Sydney Pricing Trial) to understand customer responsiveness to CPP tariffs and the resulting impact on maximum demand and consumption more generally.[54]

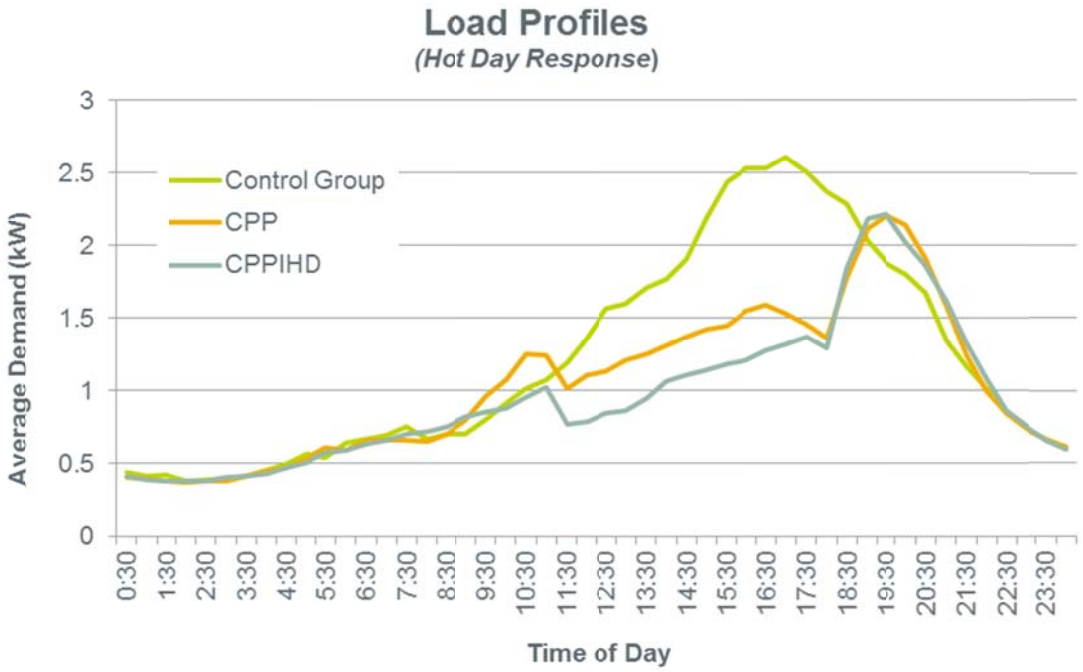
As illustrated in Figure 8.3 below, customers involved in the trial responded well to the price signals provided by the CPP tariff, reducing their consumption during the peak period on extreme weather days. This reduction was more pronounced for customers that also had an in home display (an additional 3% reduction in consumption by customers with an in home display). Overall, customers on the CPP tariff saved up to 41% on their network bill compared to that which would have been payable under a default network tariff over the trial period.

[53] A description of the CSIRO study can be found at Appendix [A.11]. See p. 44 of CSIRO study.

[54] This trial was conducted between 1 August 2006 and 31 July 2009.

8 FUTURE TARIFF OPTIONS

Figure 8.3: Load Profiles (Hot Day Response)



CPP tariffs are likely to be most effectively implemented on a locational basis, targeting regional congestion. However, they are contingent on greater penetration of enabling metering technology. Endeavour Energy will continue to monitor the feasibility of introducing CPP tariffs and, should we propose a CPP tariff in any future TSS, a more detailed design will be provided based on additional analysis and customer consultation.

8.3. Micro-generation

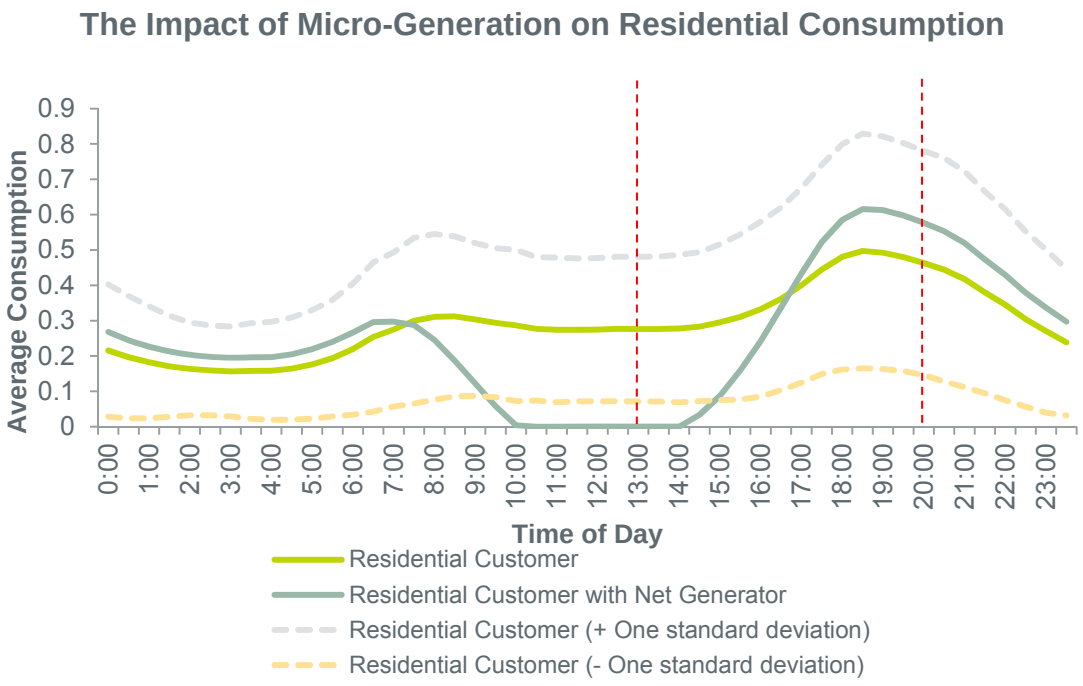
Approximately 11% of Endeavour Energy's residential customers have installed micro generation.

Under our existing DBT, residual costs are recovered in both our fixed and variable energy charges. A consequence of net-connected micro-generation is that customers with this technology reduce their contribution to the recovery of our residual costs relative to others.

This is despite the fact that the presence of a micro-generator has no material impact on peak demand (and so has no impact on future augmentation costs). As illustrated in Figure 8.4 below, customers with net connected micro-generation significantly reduce their energy consumption in the morning and early afternoon (avoiding their contribution to residual cost recovery), while making no material contribution to the reduction of peak demand which occurs in late afternoon and drives future augmentation costs.

8 FUTURE TARIFF OPTIONS

Figure 8.4: Impact of Micro-Generation on Residential Consumption



This issue may become more significant over the coming regulatory period, with network sourced electricity consumption from customers with micro-generation expected to fall even further:

- From 1 January 2017, the SBS will cease payments to participants who feed energy into the network. For the majority of these customers it is likely that they will be financially better off by converting from the gross connected arrangement (where customers feed generation directly into the network) to the net connected arrangement (where customers only export energy that they don't use themselves).
- If all gross connected customers were to convert to net arrangements the measured energy consumption in Endeavour Energy's network will reduce, all other things being equal.

A number of stakeholder groups and customers are opposed to a specific tariff for customers with micro-generation installed. Endeavour Energy does not propose the introduction of such a tariff in this TSS period however, in order to ensure that micro-generation customers pay their "fair share" of residual costs going forward, Endeavour Energy may consider the implementation of a micro-generation tariff in future TSS periods.

8.4. Location Specific Tariffs

While not a tariff structure in itself, location specific tariffs may be an appropriate option for consideration in conjunction with more efficient tariff structures.

Different geographic areas, climatic regions, transmission connection points or areas of network congestion in Endeavour Energy's network could attract location-specific tariffs for customers to address local issues. A location-specific tariff could be used to reflect higher or lower costs or big swings in demand within a particular area.

While Endeavour Energy recognises the potential efficiency arguments for location specific tariffs, stakeholder feedback on this tariff option raised concerns around equity and customer impact. In addition to these concerns, location based pricing will increase tariff setting complexity and administrative costs for both retailers and network businesses. Ultimately, increased complexity and administrative costs translate to higher electricity prices.
It is unclear at this time if the potential economic benefits of location specific tariffs outweigh the equity concerns of consumers and the added complexity and administrative cost imposed on networks and retailers.

8 FUTURE TARIFF OPTIONS

Endeavour Energy also believes that transitioning customers to a more efficient tariff structure should take priority over the introduction of location specific tariffs. To attempt to introduce a transition to location specific tariffs at the same time that we are transitioning tariff structures would only add unnecessary complexity and confusion to the tariff reform process and may ultimately derail both objectives.

As such, Endeavour Energy does not propose to introduce location specific tariffs in this TSS period.

A1. GLOSSARY

Term	Definition
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AIC	Average incremental cost
ASP	Accredited service provider
CALD	Culturally and linguistically diverse
CPP	Critical peak pricing
DBT	Declining block tariff
DNSP	Distribution network service provider
DUOS	Distribution Use of System
EWON	Energy and Water Ombudsman NSW
GWh	Gigawatt hour
HV	High voltage
IBT	Inclining block tariff
kV	Kilovolt
kVA	Kilovolt-ampere
kW	Kilowatt
kWh	Kilowatt hour
LGA	Local government area
LRMC	Long run marginal cost
LV	Low voltage
NEM	National Electricity Market
NER or the Rules	National Electricity Rules
NUOS	Network Use of System
NCOSS	NSW Council of Social Service
MVA	Megavolt-ampere
MW	Megawatt
MWh	Megawatt hour
PIAC	Public Interest Advocacy Centre
PTR	Peak time rebate
SBS	NSW Solar Bonus Scheme
ST	Subtransmission voltage
TEC	Total Environment Centre
TOU	Time of use
TSS	Tariff structure statement

A2. ALLOCATION OF CUSTOMERS TO TARIFF CLASSES

Procedure for Assigning or Re-Assigning Retail Customers to Tariff Classes

The AER is required to decide on the principles governing assignment or reassignment of retail customers to or between tariff classes under cl 6.12.1(17) of the Rules. The AER specified the procedures to apply for the 2015-19 regulatory control period as part of its final determination for the NSW/ACT DNSPs published on the 30th April 2015. These procedures are set out below.

Assignment of existing customers to tariff classes at the commencement of the next regulatory control period

1. Each customer who was a customer of Endeavour Energy immediately prior to 1 July 2015, and who continues to be a customer of Endeavour Energy as at 1 July 2015, will be taken to be "assigned" to the tariff class which Endeavour Energy was charging that customer immediately prior to 1 July 2015.

Assignment of new customers to a tariff class during the next regulatory control period

2. If, after 1 July 2015, Endeavour Energy becomes aware that a person will become a customer of Endeavour Energy, then Endeavour Energy will determine the tariff class to which the new customer will be assigned.

3. In determining the tariff class to which a customer or potential customer will be assigned, or reassigned, in accordance with paragraph 2 or 5, Endeavour Energy will take into account one or more of the following factors:
    a) the nature and extent of the customer's usage
    b) the nature of the customer's connection to the network
    c) whether remotely–read interval metering or other similar metering technology has been installed at the customer's premises as a result of a regulatory obligation or requirement.

4. In addition to the requirements under paragraph 3, Endeavour Energy, when assigning or reassigning a customer to a tariff class, will ensure the following:
    a) that customers with similar connection and usage profiles are treated equally
    b) that customers which have micro–generation facilities are not treated less favourably than customers with similar load profiles without such facilities.

Reassignment of existing customers to another existing or a new tariff during the next regulatory control period

5. If Endeavour Energy believes that an existing customer's load characteristics or connection characteristics (or both) are no longer appropriate for that customer to be assigned to the tariff class to which the customer is currently assigned or a customer no longer has the same or materially similar load or connection characteristics as other customers on the customer's existing tariff, then Endeavour Energy may reassign that customer to another tariff class.

Notification of proposed assignments and reassignments

6. Endeavour Energy will notify the customer's retailer in writing of the tariff class to which the customer has been assigned or reassigned, prior to the assignment or reassignment occurring.

7. A notice under paragraph 6 above must include advice informing the customer's retailer that they may request further information from Endeavour Energy and that the customer's retailer may object to the proposed reassignment. This notice must specifically include reference to Endeavour Energy's published procedures for customer complaints, appeals and resolution.

A2. ALLOCATION OF CUSTOMERS TO TARIFF CLASSES

8. If the objection is not resolved to the satisfaction of the customer's retailer under the Endeavour Energy's internal review system or EWON, then the retail customer is entitled to seek a decision of the AER via the dispute resolution process available under Part 10 of the NEL.

9. If, in response to a notice issued in accordance with paragraph 7 above, Endeavour Energy receives a request for further information from a customer's retailer, then it must provide such information within a reasonable timeframe. If Endeavour Energy reasonably claims confidentiality over any of the information requested by the customer's retailer, then it is not required to provide that information to the retailer or retail customer. If the customer's retailer disagrees with such confidentiality claims, it may have resort to the dispute resolution procedures referred to in paragraph 7 above (as modified for a confidentiality dispute).

10. If, in response to a notice issued in accordance with paragraph 7 above, a customer's retailer makes an objection to Endeavour Energy about the proposed assignment or reassignment, Endeavour Energy must reconsider the proposed assignment or reassignment. In doing so Endeavour Energy must take into consideration the factors in paragraphs 3 and 4 above, and notify the customer's retailer in writing of its decision and the reasons for that decision.

    If a customer's retailer objection to a tariff class assignment or reassignment is upheld, in accordance with Endeavour Energy's published procedures for customer complaints, appeals and resolution then any adjustment which needs to be made to tariffs will be done by Endeavour Energy as part of the next annual review of prices.

System of assessment and review of the basis on which a customer is charged

11. Where the charging parameters for a particular tariff result in a basis of charge that varies according to the customer's usage or load profile, Endeavour Energy will set out in its pricing proposal a method of how it will review and assess the basis on which a customer is charged.

A3. PROPOSED TARIFF STRUCTURES - STANDARD CONTROL SERVICES

Endeavour Energy's proposed tariff structures for its Standard Control Services are set out in the sections below.

Our proposed charges for each tariff class for each of the three years from 2016/17 to 2018/19 are set out in Appendix [A.9].

A3.1 Low Voltage Energy Tariff Class

The charging parameters for the proposed tariffs for our low voltage customers in this tariff class are set out in the table below.

Table A3.1: Charging parameters for the Low Voltage Energy Tariff Class

Tariff Type	Components	Measurement	Charging Parameter[55]
Residential Block Tariff	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Energy Block 1	c/kWh	Charge applied to energy consumption up to and including 4MWh per annum.
	Energy Block 2	c/kWh	Charge applied to energy consumption from 4MWh per annum up to an including 7MWh per annum.
	Energy Block 3	c/kWh	Charge applied to energy consumption above 7MWh per annum.
Residential Time of Use	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Peak Energy	c/kWh	Charge applied to energy consumption between 13:00 to 20:00 on business days.
	Shoulder Energy	c/kWh	Charge applied to energy consumption between: 07:00 to 13:00 and 20:00 to 22:00 on business days.
	Off-Peak Energy	c/kWh	All other times
General Supply Block Tariff	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Energy Block 1	c/kWh	Effective 1 July 2018, charge applied to energy consumption up to and including 120 MWh per annum. Prior to 1 July 2018, charge applied to energy consumption up to and including 10 MWh per annum.

[55] Endeavour Energy has displayed block tariff consumption thresholds on a MWh per annum basis. In practice, this annualised consumption threshold will be calculated on a pro-rata basis corresponding to the billing period.

A3. PROPOSED TARIFF STRUCTURES - STANDARD CONTROL SERVICES

Tariff Type	Components	Measurement	Charging Parameter[55]
	Energy Block 2	c/kWh	Effective 1 July 2018, charge applied to energy consumption above 120 MWh per annum. Prior to 1 July 2018, charge applied to energy consumption above 10 MWh per annum.
General Supply Time of Use	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Peak Energy	c/kWh	Charge applied to energy consumption between 13:00 to 20:00 on business days.
	Shoulder Energy	c/kWh	Charge applied to energy consumption between 07:00 to 13:00 and 20:00 to 22:00 on business days.
	Off-Peak Energy	c/kWh	All other times
Controlled Load 1	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Energy	c/kWh	Charge applied to controlled energy consumption where energy consumption is controlled by our equipment so that supply may not be available between 07:00 and 22:00.
Controlled Load 2	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Energy	c/kWh	Charge applied to controlled energy consumption where supply is available for restricted periods not exceeding a total of 17 hours in any period of 24 hours.

A3.2 Low Voltage Demand Tariff Class

The charging parameters for the proposed tariffs for our low voltage customers in this tariff class are set out in the table below.

Table A3.2: Charging parameters for the Low Voltage Demand Tariff Class

Tariff Type	Components	Measurement	Charging Parameter
LV TOU Demand	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Peak Energy	c/kWh	Charge applied to energy consumption between 13:00 to 20:00 on business days.

A3. PROPOSED TARIFF STRUCTURES - STANDARD CONTROL SERVICES

Tariff Type	Components	Measurement	Charging Parameter
	Shoulder Energy	c/kWh	Charge applied to energy consumption between 07:00 to 13:00 and 20:00 to 22:00 on business days.
	Off-Peak Energy	c/kWh	All other times
	High Season Demand	$/kVA/month	Charge applied to maximum energy demand between 13:00 to 20:00 on business days. High Season includes the periods November to March and June to August inclusive.
	Low Season Demand	$/kVA/month	Charge applied to maximum energy demand between 13:00 to 20:00 on business days. Low Season includes the periods September to October and April to May inclusive.
LV TOU Demand Transition Tariff	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Peak Energy	c/kWh	Charge applied to energy consumption between 13:00 to 20:00 on business days.
	Shoulder Energy	c/kWh	Charge applied to energy consumption between 07:00 to 13:00 and 20:00 to 22:00 on business days.
	Off-Peak Energy	c/kWh	All other times

A3.3 High Voltage Demand Tariff Class

The charging parameters for the proposed tariffs for our high voltage demand customers are set out in the table below.

Table A3.3: Charging parameters for the High Voltage Demand Tariff Class

Tariff Type	Components	Measurement	Charging Parameter
HV TOU Demand	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Peak Energy	c/kWh	Charge applied to energy consumption between 13:00 to 20:00 on business days.
	Shoulder Energy	c/kWh	Charge applied to energy consumption between 07:00 to 13:00 and 20:00 to 22:00 on business days.

A3. PROPOSED TARIFF STRUCTURES - STANDARD CONTROL SERVICES

Tariff Type	Components	Measurement	Charging Parameter
	Off-Peak Energy	c/kWh	All other times
	High Season Demand	$/kVA/month	Charge applied to maximum energy demand between 13:00 to 20:00 on business days. High Season includes the periods November to March and June to August inclusive.
	Low Season Demand	$/kVA/month	Charge applied to maximum energy demand between 13:00 to 20:00 on business days. Low Season includes the periods September to October and April to May inclusive.
Individually Calculated HV TOU Demand	As per the HV TOU Demand tariff		

A3.4 Subtransmission Voltage Demand Tariff Class

The charging parameters for the proposed tariffs for our subtransmission voltage are set out in the table below.

Table A3.4: Charging parameters for the Subtransmission Voltage Demand Tariff Class

Tariff Type	Components	Measurement	Charging Parameter
ST TOU Demand	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Peak Energy	c/kWh	Charge applied to energy consumption between 13:00 to 20:00 on business days.
	Shoulder Energy	c/kWh	Charge applied to energy consumption between 07:00 to 13:00 and 20:00 to 22:00 on business days.
	Off-Peak Energy	c/kWh	All other times
	High Season Demand	$/kVA/month	Charge applied to maximum energy demand between 13:00 to 20:00 on business days. High Season includes the periods November to March and June to August inclusive.

A3. PROPOSED TARIFF STRUCTURES - STANDARD CONTROL SERVICES

	Low Season Demand	$/kVA/month	Charge applied to maximum energy demand between 13:00 to 20:00 on business days. Low Season includes the periods September to October and April to May inclusive.
Individually Calculated ST TOU Demand	As per the ST TOU Demand tariff		

A3. PROPOSED TARIFF STRUCTURES - STANDARD CONTROL SERVICES

A3.5 Inter-Distributor Transfer Tariff Class

The charging parameters for the proposed tariffs for our inter-distributor transfer customers are set out in the table below.

Table A3.5: Charging parameters for the Inter-Distributor Transfer Tariff Class

Tariff Type	Components	Measurement	Charging Parameter
Individually Calculated TOU Demand	Fixed	c/day	Access charge reflecting a fixed amount per day.
	Peak Energy	c/kWh	Charge applied to energy consumption between 13:00 to 20:00 on business days.
	Shoulder Energy	c/kWh	Charge applied to energy consumption between 07:00 to 13:00 and 20:00 to 22:00 on business days.
	Off-Peak Energy	c/kWh	All other times
	High Season Demand	$/kVA/month	Charge applied to maximum energy demand between 13:00 to 20:00 on business days. High Season includes the periods November to March and June to August inclusive.
	Low Season Demand	$/kVA/month	Charge applied to maximum energy demand between 13:00 to 20:00 on business days. Low Season includes the periods September to October and April to May inclusive.

A3.6 Unmetered Supply Tariff Class

The charging parameters for the proposed tariffs for our unmetered supply customers are set out in the table below.

Table A3.6: Charging parameters for the Unmetered Supply Tariff Class

Tariff Type	Components	Measurement	Charging Parameter
Unmetered Block Tariff	Energy Block 1	c/kWh	Effective 1 July 2018, charge applied to energy consumption up to and including 120 MWh per annum. Prior to 1 July 2018, charge applied to energy consumption up to and including 10 MWh per annum.

A3. PROPOSED TARIFF STRUCTURES - STANDARD CONTROL SERVICES

	Energy Block 2	c/kWh	Effective 1 July 2018, charge applied to energy consumption above 120 MWh per annum. Prior to 1 July 2018, charge applied to energy consumption above 10 MWh per annum.
Unmetered Energy Tariff	Energy	c/kWh	Charge applied to all energy consumption.

A4. PROPOSED TARIFF STRUCTURES – ALTERNATIVE CONTROL SERVICES

This Appendix sets out Endeavour Energy's proposed tariff structures for its ancillary network services, metering services and public lighting services.

A4.1 Ancillary Network Services

Ancillary network services are non-routine services provided to individual customers on an 'as needs' basis and can be charged as either a fee based service or a quoted service.

The charge for a fee based service is 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 to perform it.

The form of control to apply to ancillary network fee based services is a price cap. 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.

The AER has determined that the following formula gives effect to the cap on prices for alternative control fee based services:

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

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

Where:
$\bar{p}_i^t$ is the cap on the price of service i in year t. For 2015–16 this is the price as determined in appendix A.1 of Attachment 16 of the AER's Final Decision, escalated by ΔCPI and the X-factor.

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

$$\Delta CPI_t = \left[\frac{CPI_{Mar,t-2} + CPI_{Jun,t-2} + CPI_{Sep,t-1} + CPI_{Dec,t-1}}{CPI_{Mar,t-3} + CPI_{Jun,t-3} + CPI_{Sep,t-2} + CPI_{Dec,t-2}}\right] - 1$$

CPI means the all groups index number for the weighted average of eight capital cities as published by the ABS, or if the ABS does not or ceases to publish the index, then CPI will mean an index which the AER considers is the best estimate of the index.

X_i^t is the value of X for the year t in the regulatory control period, as per table 16.1 of Attachment 16 of the AER's Final Decision.

$\bar{p}_i^1$ is the cap on the price of service i in the first year of the subsequent regulatory control period. See appendix A.1 of Attachment 16 of the AER's Final Decision.

A_i^t is an adjustment factor for residual charges when customers choose to replace assets before the end of their economic life. For ancillary network services the AER have determined the value for A is zero.

Our proposed charges for our fee-based ancillary network services for 2017/18 and 2018-19 are set out in Appendix [A.13].

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 time taken and materials used to perform the service, based on the following formula.

Price = labour + contractor services + materials

A4. PROPOSED TARIFF STRUCTURES – ALTERNATIVE CONTROL SERVICES

A4.2 Metering

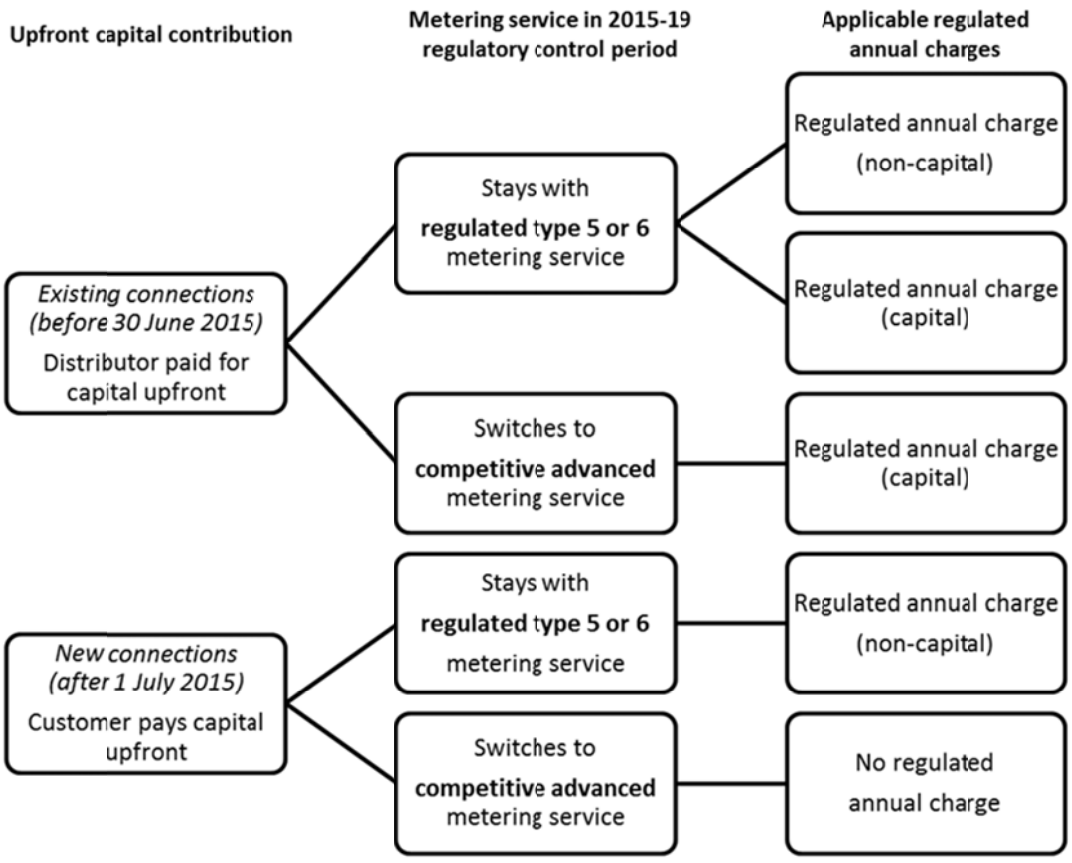
The AER has determined that Type 5 and 6 metering services be (re)classified as alternative control services rather than as standard control services. This means that effective 1 July 2015, Endeavour Energy's metering charges are unbundled from the distribution component of the network tariffs and are charged separately.

The AER's Distribution Determination approves two types of metering service charges:

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

The following figure depicts how the two regulated annual charge components relate to different metering customers.

Figure A4.1: AER Final decision – applicable regulated annual charges



Note: This diagram shows regulated annual charges only. In addition, customers who switch may incur charges for their competitive advanced metering service. Any such charges are not subject to AER oversight and are not shown in the diagram above.

The form of control to apply to metering services is a price cap. 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.

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

A4. PROPOSED TARIFF STRUCTURES – ALTERNATIVE CONTROL SERVICES

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

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 of Attachment 16 of the AER's Final Decision.

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

$$\Delta CPI_t = \left[\frac{CPI_{Mar,t-2} + CPI_{Jun,t-2} + CPI_{Sep,t-1} + CPI_{Dec,t-1}}{CPI_{Mar,t-3} + CPI_{Jun,t-3} + CPI_{Sep,t-2} + CPI_{Dec,t-2}}\right] - 1$$

CPI means the all groups index number for the weighted average of eight capital cities as published by the ABS, or if the ABS does not or ceases to publish the index, then CPI will mean an index which the AER considers is the best estimate of the index.

X_i^t is:

- for the annual metering charges, the factors set out in Table 16.8 of the AER's Final Decision.
- for the upfront capital charges, the factors set out in Table 16.9 of the AER's Final Decision.

Our proposed charges for our metering services for 2017/18 and 2018/19 are set out in Appendix [A.13].

A4.3 Public Lighting

Public lighting has been maintained as an alternative control service. Public lighting services include the design, financing, procurement and construction of public lighting installations, as well as their on-going maintenance and operation.

The form of control to apply to public lighting is a price cap. 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.

The AER has determined that the following formula gives effect to the cap on prices for public lighting:

$\bar{p}_i^t \geq p_i^t$ i=1,...,n and t=1, 2, 3, 4
$\bar{p}_i^t = \bar{p}_i^{t-1}(1 + \Delta CPI_t)(1 - X_i^t) + A_i^t$

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.2 of Attachment 16 of the AER's Final Decision.

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

$$\Delta CPI_t = \left[\frac{CPI_{Mar,t-2} + CPI_{Jun,t-2} + CPI_{Sep,t-1} + CPI_{Dec,t-1}}{CPI_{Mar,t-3} + CPI_{Jun,t-3} + CPI_{Sep,t-2} + CPI_{Dec,t-2}}\right] - 1$$

CPI means the all groups index number for the weighted average of eight capital cities as published by the ABS, or if the ABS does not or ceases to publish the index, then CPI will mean an index which the AER considers is the best estimate of the index.

X_i^t is the value of X for the year t in the regulatory control period. There are no X-factors for public lighting.

A4. PROPOSED TARIFF STRUCTURES – ALTERNATIVE CONTROL SERVICES

A_i^t is an adjustment factor likely to include, but not limited to, adjustments for residual charges when customers choose to replace assets before the end of their economic life. For public lighting we consider the value for A is zero.

Our proposed charges for our public lighting services for 2017/18 and 2018/19 are set out in Appendix [A.13].

A5. ESTIMATING STAND-ALONE AND AVOIDABLE COST

Clause 6.18.5(e) of the Rules requires Endeavour Energy to set tariffs for each tariff class between the avoidable and stand-alone cost of providing services to each class of customers.

Further detail in relation to our estimates of avoidable and stand-alone cost is set out in the section below. It is important to note that the estimates below are illustrative of Endeavour Energy's proposed methodology and will be updated annually to reflect current inputs and assumptions.

A5.1 Avoidable cost

An illustrative example of Endeavour Energy's methodology for the calculation of the avoidable cost of serving customers in each tariff class is set out in the table below.

Table A5.1: Asset value weights and resultant estimates of avoidable cost by tariff class

Tariff Class	Total Direct Cost	Asset Value Weight	Avoidable Cost per Tariff Class
LV Energy	427	86%	366
LV Demand		8%	33
HV Demand		3%	13
ST Demand		3%	11
Inter-Distributor Transfer		1%	3
Unmetered		0%	-

A5.2 Stand-alone cost

Endeavour Energy has calculated stand-alone costs according to the following formula:

$$\text{Stand} - \text{alone Cost}_i = \text{Avoidable Cost}_i + \text{Nonscalable Indirect Costs} + \sum_{j=1}^{n} \beta_{i,j}\text{Scalable Indirect Costs}_j,$$

Where:

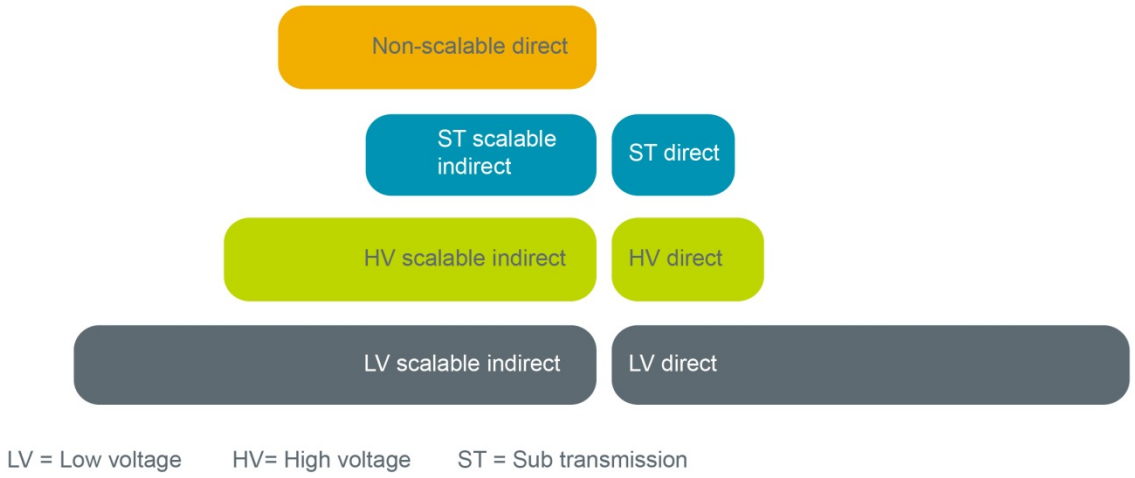
1. i represents each of Endeavour Energy's tariff classes;
2. $\text{Stand alone Cost}_i$ is the stand-alone cost to serve customers on tariff class i;
3. Avoidable Costs_i is the avoidable cost to serve customers on tariff class i;
4. j represents each of Endeavour Energy's scalable indirect cost categories; and
5. $\beta_{i,j}$ is the scaling factor (some value between zero and one) applied to cost category j.

Endeavour Energy's current model has derived all scaling factors from the asset values attributable to customers in each tariff class.

A5. ESTIMATING STAND-ALONE AND AVOIDABLE COST

Figure A5.1 illustrates this process applied to each of the three voltage levels in Endeavour Energy's network, ie, subtransmission, high voltage, and low voltage.[56] The figure illustrates the relationship between the different cost components.

Figure A5.1: Components of stand-alone costs for Endeavour Energy's three voltage levels



Scalable indirect costs of higher voltage services necessarily feed into the scalable indirect costs of lower voltage services. Put another way, part of the low voltage scalable indirect costs are associated with providing subtransmission and high voltage services, which are necessary precursors to low voltage supply.

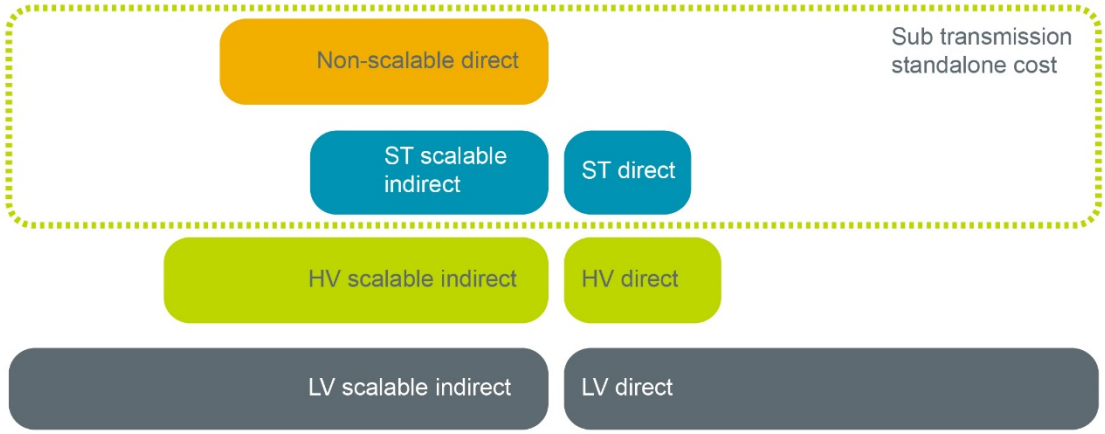
Figure A5.2 shows that stand-alone costs of a particular customer group are calculated to be the sum of:

- non-scalable indirect costs
- direct costs incurred by that group
- scalable indirect costs attributable to that group.

[56] For the purposes of illustration, this figure simplifies Endeavour Energy's tariff classes by the LV Energy and LV Demand tariff classes, and omitting the Inter-Distributor Transfer and Unmetered tariff classes.

A5. ESTIMATING STAND-ALONE AND AVOIDABLE COST

Figure A5.2: Framework for calculating stand-alone cost of subtransmission customers



LV = Low voltage HV= High voltage ST = Sub transmission

Endeavour Energy has used current expenditure as the basis of its estimates of stand-alone and avoidable cost. For example, to assess stand-alone costs for the high voltage tariff class, Endeavour Energy has identified the existing assets and operating expenditure that would be necessary to provide services to its high voltage customers.

Such an approach is predicated on the assumption that current network expenditure is a valid reference point. There is no guarantee that this assumption will always hold.

For example, consider a tariff class consisting only of large industrial customers located at one remote, isolated part of the network. Expenditure to supply these customers via the existing network could potentially well exceed the cost of a new network constructed solely to service these customers alone, say in the form of a small network with energy supplied via a local generator.

In contrast, it seems reasonable to assume that the optimal network to supply all of the customers in the low voltage network – and only those customers, would have similar characteristics to the current network, albeit with a reduction in the scale of investment in the high voltage and subtransmission systems. Given that Endeavour Energy's tariff classes are principally defined with respect to voltage level, we believe this approach is reasonable.

Endeavour Energy's approach yields the estimations of stand-alone cost set out in the table below. We note that low voltage tariff classes have been attributed the highest scalable indirect costs because the majority of our asset value has been attributed to low voltage customers.

A5. ESTIMATING STAND-ALONE AND AVOIDABLE COST

Table A5.2: Components of stand-alone cost for each tariff class, 2015/16 ($m)

Tariff Class	Non-scalable Indirect Costs	Scalable Indirect Costs	Avoidable (Direct) Costs	Stand-alone Cost
LV Energy	16	343	366	725
LV Demand		343	33	392
HV Demand		256	13	285
ST Demand		78	11	105
Inter-Distributor Transfer		78	3	97
Unmetered		343	-	359

A6. ESTIMATING LRMC

The marginal cost of an energised connection is typically expressed in terms of the cost per kW (or cost per kVA) of maximum demand. Put another way, the 'cost of the next unit' is assumed to be the cost of supplying one more unit of demand during the system peak.

A6.1 Our approach to estimating LRMC

We have estimated the LRMC of supplying each tariff class using an average incremental cost (AIC) approach.

The AIC approach has been selected over other forms of calculating LRMC as it is reliant on readily available information that is consistent with cost data supplied to the AER as a requirement of the Determination process. As such, Endeavour Energy is of the view that the AIC approach has superior cost and benefit outcomes compared to other LRMC estimation methods at this point in time.

The AIC approach estimates the LRMC of network services as the average change in projected operating and capital expenditure attributable to future increases in demand. In practice it is estimated by:

- projecting future operating and capital costs attributable to expected increases in demand
- forecasting future load growth for the relevant network asset (or assets)
- dividing the present value of projected costs by the present value of expected increases in demand.

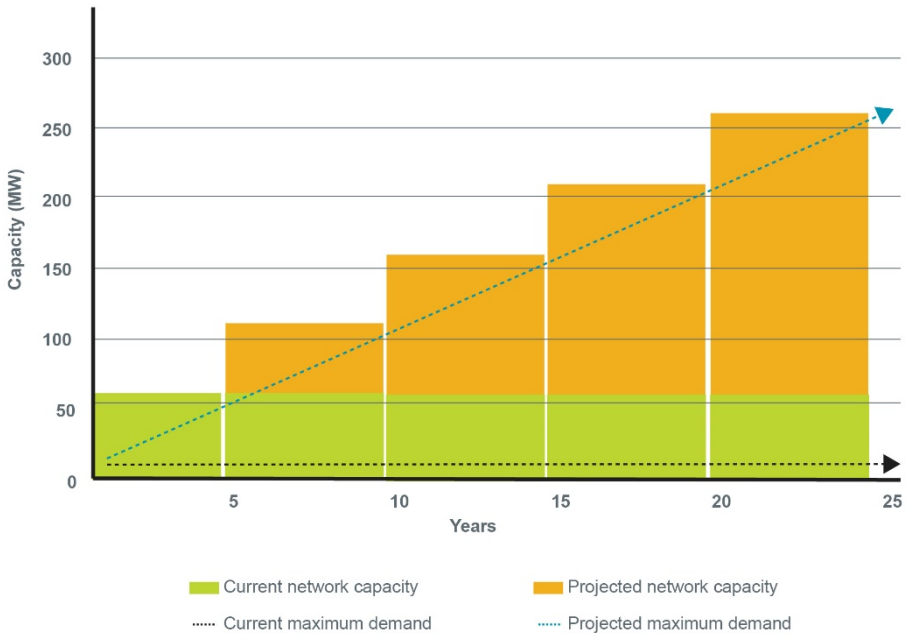
In simple terms, the AIC approach averages the total cost of supplying new growth in demand over that growth in demand. While we would expect that different locations in our network may have different costs associated with their current and future electricity demand, Endeavour Energy does not have sufficiently granular location specific cost data to support location specific tariffs. In addition and as detailed in section 8.4, Endeavour Energy believes that transitioning customers to a more efficient tariff structure should take priority over the introduction of location specific tariffs that the calculation of a location specific LRMC calculation would imply.

An illustrative example of the application of the average incremental cost approach is set out in the figure below. By way of explanation:

- the dashed black line represents the current level of maximum demand
- the green bars represent current network capacity
- the dashed blue line represents projected increases in maximum demand above its current level
- the orange bars represent projected increases in network capacity required to meet the projected increases in demand.

A6. ESTIMATING LRMC

Figure A6.1: Illustration of the average incremental cost approach



Using the projected cost attributable to the increases in capacity, the formula for estimating the average incremental cost is:

$$\text{LRMC} = \frac{\text{PV(expenditure relating to new network capacity)}}{\text{PV(additional demand serviced)}}$$

where PV means taking the present value.

We note that the average incremental cost approach requires that there be a positive increment in peak demand. Put another way, the average incremental cost approach is undefined when peak demand is flat or falling.

Endeavour Energy's estimate of the LRMC for the services provided are illustrated in the table below.

Table A6.1: Estimate of LRMC by service

Service	LRMC Estimate ($/kVA/annum)
Low Voltage	$133
High Voltage	$26
Subtransmission	$17

A6. ESTIMATING LRMC

A6.2 Translation of LRMC estimates into charging parameters

The average incremental cost approach yields an LRMC estimate for each network service expressed in dollars per kVA per annum. However, many customers are not, and indeed cannot, be charged on the basis of their contribution to the network's maximum demand. It is therefore necessary to express these 'dollars per kVA per annum' LRMC estimates (hereafter termed 'base LRMC estimates') in terms of the charging parameters that constitute each tariff.

Translation of LRMC into charging parameters for non-TOU tariffs

Translation of LRMC into charging parameters for non-TOU tariffs involves two steps, ie:

1. Converting the base LRMC estimate using the power factor for a given customer class.

2. Converting the resulting estimate to dollars per kWh by dividing by the number of hours in the year that the variable tariff component can be charged, ie:

$$\text{LRMC estimate (\$ per kWh)} = \frac{\text{LRMC (\$ per kW} \cdot \text{ year)}}{8760 \text{ hours}}$$

The table below illustrates this calculation for our non-TOU residential tariffs.

Table A6.2: Efficient charging parameters for Endeavour Energy's non-TOU residential tariffs

Time Period	LRMC of the service ($ per kVA·year)	Power Factor	LRMC of the service ($ per kW·year)	Number of Hours per annum	LRMC Estimate (c/kWh)
Anytime Energy	133	0.9	148	8,760	1.69

Translation of LRMC into charging parameters for TOU energy tariffs

Expressing the base LRMC estimate in terms of time-of-use tariffs requires an additional term to capture the probability that maximum demand (or 'MD') for the network occurs during a given time period (ie, peak, shoulder or off-peak). After adjusting for the power factor, the LRMC estimate for each time period can be calculated as follows:

$$\text{LRMC estimate (\$ per kWh)} = \frac{\text{LRMC } \times \text{Prob. of MD occurring during time period}}{\text{Total number of hours in time period in the year}}$$

A6. ESTIMATING LRMC

The table below illustrates this calculation for our general supply TOU tariff:

Table A6.3: Efficient charging parameters for Endeavour Energy's N84 TOU energy tariff

Time Period	LRMC of the service ($ per kVA·year)	Power Factor	LRMC of the service ($ per kW·year)	Probability of MD	Number of Hours per annum	LRMC Estimate (c/kWh)
Peak	133	0.9	148	95%	1,764	7.96
Shoulder	133	0.9	148	5%	2,016	0.37
Off-Peak	133	0.9	148	0%	4,980	0.00

Translation of LRMC into charging parameters for TOU demand tariffs

Endeavour Energy's demand tariffs have charging parameters that are more closely aligned with the base LRMC estimate, because they are already expressed in terms of dollars per kVA per annum. The efficient charging parameters can be estimated as follows:

$$\text{LRMC estimate } (\$ \text{ per kVA} \cdot \text{month}) = \frac{\text{LRMC} \times \text{Prob. of MD occurring during time period}}{\text{Number of months in time period in the year}}$$

The table below illustrates this calculation for Endeavour Energy's low voltage TOU demand tariff.

Table A6.4: Efficient charging parameters for Endeavour Energy's LVTOU demand tariff

Time Period	LRMC of the service ($ per kVA·year)	Probability of MD	Number of months	LRMC of the service ($/kVA/month)
High Season	133	70%	8	11.64
Low Season	133	30%	4	9.98

A6.3 Treatment of controlled load

Many of Endeavour Energy's low voltage customers purchase a controlled load service in addition to their standard low voltage service. Endeavour Energy has the capability of interrupting a controlled load during system peak events, and so limiting their contribution to the key driver of LRMC. For this reason, the controlled load service will have a much lower LRMC than its non-controlled equivalent.

Endeavour Energy has two different controlled load services, namely:

- the controlled load 1 service, supplied under the N50 tariff
- the controlled load 2 service, supplied under the N54 tariff.

To account for the differing obligations on the network arising from these services, we note that:

- the controlled load 1 service is almost entirely interruptible

- the controlled load 2 service is largely interruptible, but can nevertheless contribute to a maximum demand event.

Consistent with these observations, Endeavour Energy has assumed that the controlled load 1 service has an LRMC of zero, and the controlled load 2 service has an LRMC equal to 5% of the non-controlled low voltage service.

A6.4 Compliance with the LRMC criteria

A necessary condition of efficient tariffs is that the variable components of each tariff (ie, the block energy, time-of-use energy, or demand components) must be no less than the LRMC of the service so as to not promote inefficient use of the network.

Based on our estimates of LRMC and our proposed translation of these estimates into tariff components, Endeavour Energy believes that, with the exception of the low voltage TOU demand tariff, our tariffs are compliant with the LRMC criteria of the Rules.

It is Endeavour Energy's intention to transition the demand based tariff components of the low voltage TOU demand tariff to LRMC over this TSS period. To mitigate the potential impact on affected customers a corresponding reduction to the fixed and variable energy based tariff components will be made.

The indicative charges for the low voltage TOU tariff are set out in Appendix [A.9].

A6.5 Assessing the timing of network constraints

Our TOU tariffs define a peak, shoulder or off-peak period within any one day. Our demand based tariffs also identify a high or low season of the year.

It is important that Endeavour Energy's TOU and seasonal definitions are monitored to ensure that they continue to accurately reflect times of peak network congestion.

Endeavour Energy calculates the timing of peak, shoulder and off-peak periods and our high and low seasons using historic peak demand at the total network level.

We explain our reasoning for setting our charging windows in section 7.1.

A7. ALLOCATION OF RESIDUAL COSTS

The requirement that a distributor allocate revenues from each tariff in a manner that minimises distortions for efficient use of the network has implications for:

- the manner in which residual costs are recovered from each tariff, ie, from the different charging parameters that make up each tariff
- the manner in which residual costs are recovered from, or allocated to, different tariffs.

A7.1 Allocation of residual costs between tariff parameters

The need to recover a network business' residual costs has critical implications for the charging parameters that it sets. Once a network business has set its charges equal to LRMC, any additional charges levied on the customer have the potential to distort the price signals for efficient usage.

However, the absence of substitutes for the network service means that a customer's decision to purchase an energised connection is highly price inelastic. Put simply, in general it is not feasible for customers to sever their connection to the network in favour of some alternative supply option, even if prices for the service increase.

Given that customers will tend to remain connected, it follows that residual costs can generally be recovered via fixed charges, also called 'network access' charges. Because these charges are independent of customer's usage decisions, they have no effect on the price signals for efficient usage of the network service. When the customer's usage charges (either in the form of charges for energy or demand) are set equal to LRMC, the marginal cost to the customer is equal to the marginal cost to the network, which promotes efficiency.

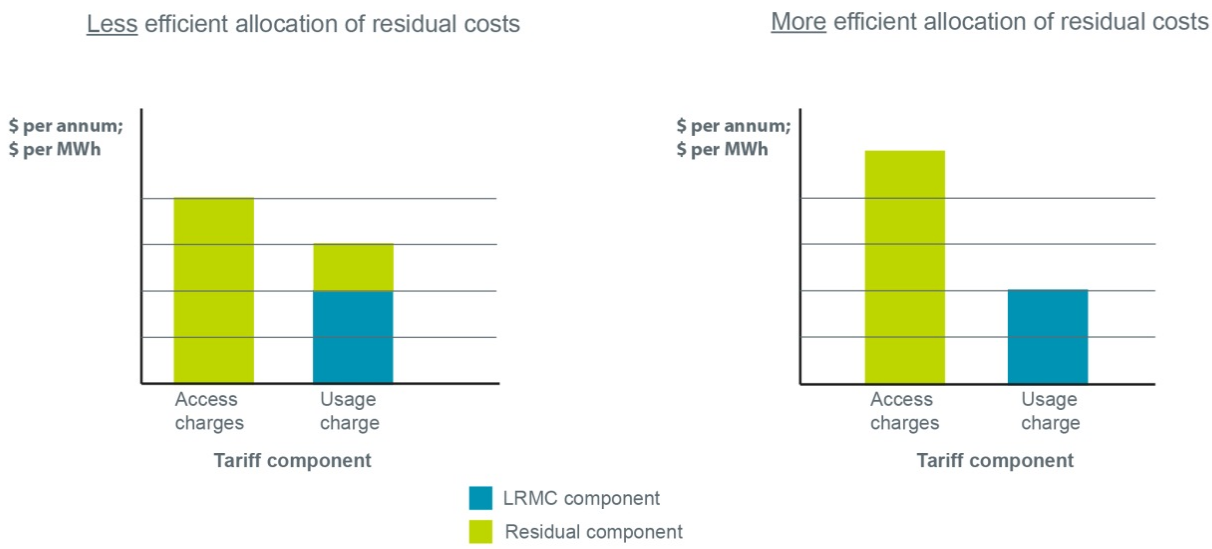
Consider the example of a two-part tariff. Assuming that customers do not have an alternative to the service, a two-part tariff that minimises distortions to price signals comprises:

- an energy charge set at a level equal to LRMC, and
- a fixed charge that recovers any residual costs allocated to the tariff.

A mark-up to usage charges over and above the level of LRMC (see Figure A7.1) has the potential to result in inefficient outcomes. However, this assumes that customers' usage of energy is elastic, ie, that they respond to the signals that they receive for usage of energy.

A7. ALLOCATION OF RESIDUAL COSTS

Figure A7.1: Illustrations of the efficiency of different allocations of residual costs for a two-part tariff



In summary, the approach to the allocation of residual costs to tariff components that will minimise distortions to price signals sees the residual costs recovered exclusively from the network access charge.

An exception to this allocation rule occurs where a substitute exists for the service. For example, consider the case of controlled load for water heating, where a customer has the scope to switch to other sources of energy and so disconnect from the controlled load service.

The existence of a substitute for the service has two implications:

- first, we would expect a smaller quantum of residual costs to be recovered from this tariff than if there were no substitute
- second, for any residual costs that are ultimately allocated to the tariff, there is no 'hard-and-fast rule' as to the manner in which these costs should be allocated across the two charging parameters.

In particular, it is incorrect to assume that residual costs should be simply recovered via the fixed charge. It will often be sensible to mark-up usage charges rather than fixed charges, so as to ensure that customers with low levels of usage do not cease to purchase the service.

As discussed above, from an economic perspective it is important to ensure that mark-up to LRMC-based prices for residual costs is minimised. The easiest way to achieve this is to recover residual costs via the fixed charge. Endeavour Energy believes, however, that recovery all residual costs from the fixed charge tariff component is at odds with the customer impact principle.

In the initial TSS, Endeavour Energy developed an approach that aimed to lessen the need for significant fixed charge increases by recovering a greater proportion of these residual costs from tariff components that are less responsive to increases in prices. However, the AER was not satisfied that our proposed tariff structure contributed towards the achievement of compliance with the distribution pricing principles. Therefore, we have proposing to transition to a flat tariff for the reasons set out in section 7.3.

A7. ALLOCATION OF RESIDUAL COSTS

A7.2 Recovery of residual costs from different tariffs

A second consideration is whether the manner in which residual costs are recovered from distinct tariffs distorts price signals for efficient usage of the network. For example, consider the case where a customer has an option of choosing a flat or a TOU tariff.

Assuming that both tariffs have been set based on LRMC, the time-of-use tariff provides a more efficient price signal than the flat tariff. Provided that the benefits of transitions outweigh the costs, over time a network business should encourage customers moving towards the most efficient tariff structures.

Consistent with the Rules, the allocation of residual costs across these three tariffs should harness, or alternatively minimise distortions to, the price signals for efficient usage that these tariffs provide.

Our approach to allocating residual costs across tariffs involves three considerations, or principles:

- for tariffs where customers have no alternative tariff, or where the structure of alternative tariffs provides the same strength signals for efficient usage, there is no 'hard and fast' rule as to how they should be allocated, so long as the allocation does not violate the customer impact principle
- for tariffs where a customer can switch to a tariff with a different strength price signal, residual costs should be assigned so as to encourage customers to shift to tariffs that have the most efficient price signal. Put another way, residual costs should be allocated to tariffs so that customers on more efficient tariffs pay a smaller quantum of residual costs
- over time charging parameters will need to be rebalanced to ensure that the shifting of customers between tariffs:
    - does not lead to under- or over-recovery of revenue
    - does not result in unacceptable bill shock.

A8. PASS-THROUGH OF SPECIFIED COSTS

Endeavour Energy passes-through a number of costs that we incur in our tariffs including transmission costs and Climate Change Fund jurisdictional scheme costs. Our approach to the pass-through of these costs is set out below.

A8.1 Transmission costs

Endeavour Energy's transmission cost recovery (TCR) tariffs are designed to recover transmission related costs, including TransGrid's transmission use of system (TUOS) charges, avoided transmission payments made to embedded generators, and adjustments to balance Endeavour Energy's transmission overs and unders account. The TCR tariffs comprise part of the overall Network Tariffs.

The TCR amount to be passed on to customers for a particular regulatory year must not exceed the estimated transmission related costs including the overs and unders adjustment amount.

The over and under recovery amount is calculated in a way that:

- ensures that Endeavour Energy is able to recover from customers no more and no less than the transmission related costs it incurs
- adjusts for an appropriate cost of capital that is consistent with the allowed rate of return used in the Endeavour Energy determination for the relevant regulatory year.

The key principles of Endeavour Energy's TCR methodology are:

- Total TUOS allocated to network tariffs are aligned with the total estimated transmission charge to be paid by Endeavour Energy, adjusted for any overs and unders account balance
- Transmission charges are allocated to network tariffs in a manner that reflects the cost drivers present in transmission pricing
- Customers on an individually calculated tariff have transmission charges allocated in a manner that preserves the location and time signals of transmission pricing
- Network tariffs for smaller customer classes have transmission charges allocated on an energy basis, as location signals cannot be preserved in all cases due to metering limitations.

Endeavour Energy currently allocates TransGrid's 'common service', 'non-locational' and fixed BSP charges to individually calculated tariffs on the basis on energy consumption in FY(t-2) which is reflective of TransGrid's method of allocating costs. TransGrid has indicated that they are seeking to change this allocation method from FY(t-2) energy consumption to FY(t-2) demand.

If TransGrid's allocation method does change to demand based allocation, then in order to continue allocating charges in a manner that preserves the location and time signals of transmission pricing, Endeavour Energy will look to move to the demand based allocation method. Customer impacts will need to be taken into consideration in moving towards this allocation method.

A8.2 Climate Change Fund jurisdictional scheme costs

Endeavour Energy is required to contribute to the Climate Change Fund (CCF) scheme which is managed by the NSW Government. Each year Endeavour Energy is notified of the amount that it will be required to pay in the next financial year. This contribution amount, adjusted for over or unders, is recovered from customers through the CCF tariffs. The CCF tariffs comprise part of the overall Network Tariffs.

CCF recovery tariffs have been in place since 1 July 2005 and are levied on the energy (kWh) based charging parameter of tariffs only. Existing tariffs are annually adjusted such that the weighted average price change for the CCF recovery portion of network price is evenly applied to all tariffs to achieve the required recovery amount (subject to the 25% cap placed by the NSW Government on residential tariff contributions to the CCF).

Endeavour Energy does not recover a contribution to the CCF from:

A8. PASS-THROUGH OF SPECIFIED COSTS

- controlled load tariffs as customers contribute to the fund through their primary tariff, or
- inter-distributor transfer tariffs as customers contribute to the fund through the tariffs offered by the destination distributor.

The CCF amount to be passed on to customers for a particular regulatory year must not exceed the CCF contribution amount adjusted for over or under recoveries in previous years.

The over and under recovery amount is calculated in a way that:

- ensures that Endeavour Energy is able to recover from customers no more and no less than the CCF scheme costs it incurs
- adjusts for an appropriate cost of capital that is consistent with the allowed rate of return used in the Endeavour Energy determination for the relevant regulatory year.

A9. INDICATIVE PRICING SCHEDULE

Our placeholder charges for 2017/18 and 2018/19 have been calculated using annual CPI increases applied to our 2015/16 distribution revenue as a base starting position. The actual level of our charges will depend on any adjustments to the AER's final decision made by the Australian Competition Tribunal, any future pass-through amounts, changes in service performance rewards and/or penalties, changes in inflation, changes in transmission costs and changes in jurisdictional scheme costs, including Climate Change Fund costs.

The tables below set out the indicative prices for our standard control services for 2017/18 and 2018/19.

Indicative prices for alternative control services are provided as a supporting document under Appendix [A.13].

A9. INDICATIVE PRICING SCHEDULE

Table A9.1: 2017/2018 Indicative Network Pricing

Tariff Type	Fixed ($/day)	Single and TOU Consumption (c/kWh)				Step Consumption (c/kWh)			Demand ($/kVA/mth)	
	Daily	Non-TOU	Peak	Shoulder	Off-peak	Step 1	Step 2	Step 3	Peak	Off-peak
Residential Block	0.34					9.70	9.41	8.85		
Residential Time of Use	0.39		14.01	9.27	5.56					
General Supply Block	0.49					9.40	9.92	9.92		
General Supply Time of Use	0.56		15.19	10.40	5.10					
Controlled Load 1	0.03	0.59								
Controlled Load 2	0.03	2.75								
LV TOU Demand	18.73		4.28	3.15	1.37				10.64	9.30
LV TOU Demand Transition	18.73		16.94	9.72	1.67					
HV TOU Demand	31.77		3.20	2.60	1.14				8.94	7.73
ST TOU Demand	49.94		2.75	2.23	1.02				6.86	5.94
Unmetered Block						9.40	9.40	9.40		
Unmetered Street Lighting		8.41								
Unmetered Traffic Lights		9.40								
Unmetered Night Watch		6.55								

A9. INDICATIVE PRICING SCHEDULE

Table A9.2: 2018/2019 Indicative Network Pricing

Tariff Type	Fixed ($/day)	Single and TOU Consumption (c/kWh)				Step Consumption (c/kWh)			Demand ($/kVA/mth)	
	Daily	Non-TOU	Peak	Shoulder	Off-peak	Step 1	Step 2	Step 3	Peak	Off-peak
Residential Block	0.35					9.62	9.62	9.62		
Residential Time of Use	0.39		14.53	9.53	5.70					
General Supply Block	0.50					9.82	9.82	10.54		
General Supply Time of Use	0.56		15.48	10.75	5.66					
Controlled Load 1	0.03	0.61								
Controlled Load 2	0.03	2.85								
LV TOU Demand	18.72		4.35	3.20	1.39				10.86	9.48
LV TOU Demand Transition	18.72		17.70	10.11	1.70					
HV TOU Demand	32.56		3.25	2.64	1.15				9.08	7.86
ST TOU Demand	51.19		2.80	2.27	1.04				6.96	6.04
Unmetered Block						9.82	9.82	9.82		
Unmetered Street Lighting		8.54								
Unmetered Traffic Lights		9.82								
Unmetered Night Watch		6.78								

A9. INDICATIVE PRICING SCHEDULE

Table A9.3: Tariff Codes relating to Tariff Type

Tariff Type	Tariff Codes
Residential Block	N70 , NS70 , NG70 , NFTG , NFTH , NFT9 , NFT0
Residential Time of Use	N705 , N706 , NS75 , NG75 , NS76 , NG76 , NFTP , NFTQ , NFT7 , NFT8
General Supply Block	N90 , NS90 , NG90 , NFTJ , NFTK , NFTA , NFTB
General Supply Time of Use	N84 , N845 , NS84 , NG84 , NS85 , NG85 , NFTL , NFTM , NFT5 , NFT6
Controlled Load 1	N50
Controlled Load 2	N54
LV TOU Demand	N19 , NS19
LV TOU Demand Transition	N89 , NS89
HV TOU Demand	N29 , NS29
ST TOU Demand	N39 , NS39
Unmetered Block	N99
Unmetered Street Lighting	ENSL
Unmetered Traffic Lights	ENTL
Unmetered Night Watch	ENNW
Residential Block + Controlled Load 1	NC01 , NFTC
Residential Block + Controlled Load 2	NC02 , NFTD
General Supply Block + Controlled Load 1	NC03 , NFTE
General Supply Block + Controlled Load 2	NC04 , NFTF

Some of the above tariffs codes include generated energy (credit) rate components[57] in addition to the charging parameters. During the TSS period, Endeavour Energy may need to introduce new tariff codes for billing purposes. Any new tariff codes introduced will comply with the tariff structures outlined in this Tariff Structure Statement and the price level for NUOS services will equate to the tariff type under which the new tariff code has been created.

[57] This tariff component is in place solely to ensure that a customer's generation is measured and forwarded to the retailer for their billing purposes. The network "credit" is zero.

A10. BILL IMPACT ANALYSIS

Over 99% of Endeavour Energy's customer base is charged for their use of the electricity network on the basis of either the residential or general supply non-TOU tariff. Using the indicative prices set out in our Indicative Price Schedule at Appendix [A.9], we have estimated below the indicative network bill impact for customers on these tariffs.

Figure A10.1: Indicative price impact – residential non-TOU tariff

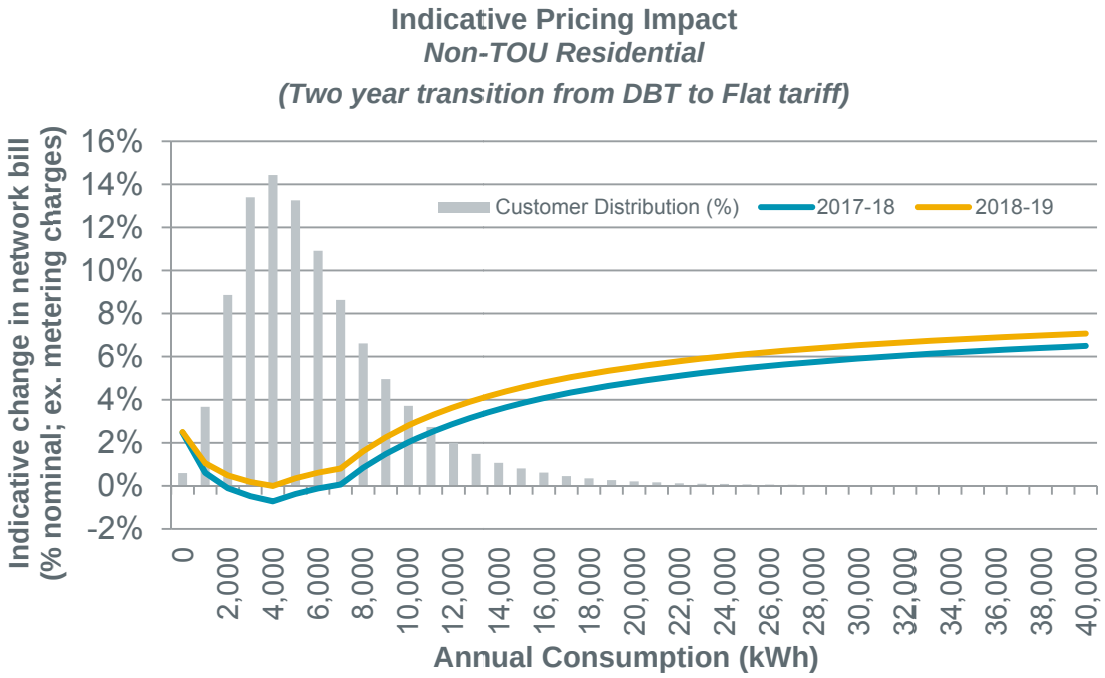
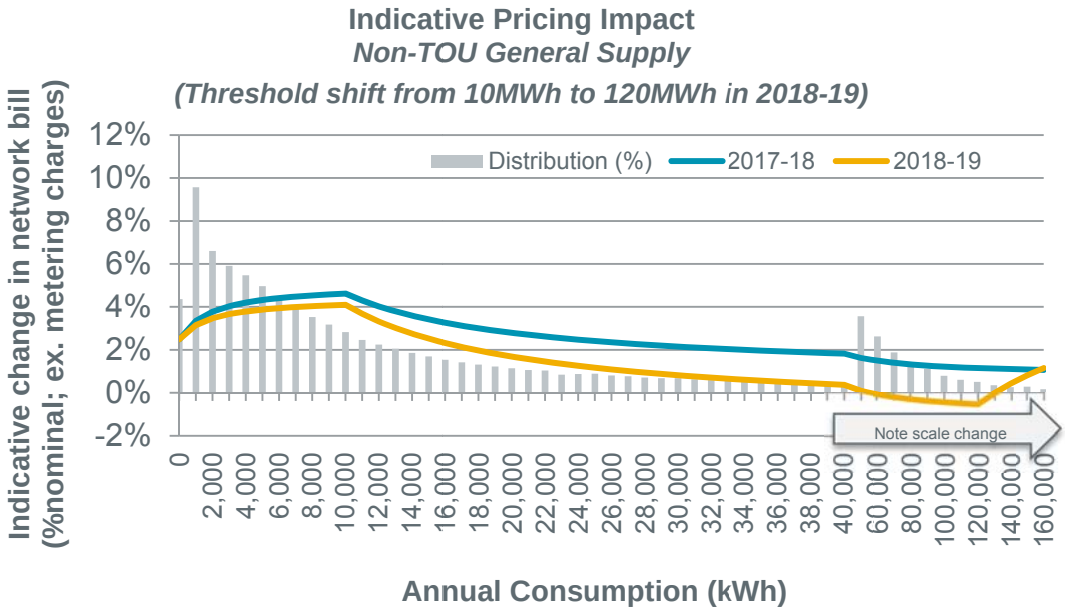


Figure A10.2: Indicative price impact – general supply non-TOU tariff



A11.CSIRO STUDY

In its recent report on likely responses to cost reflecting pricing, the CSIRO surveyed a large sample of Australian households (n=1,181) in an attempt to understand the likelihood of customer uptake of more cost-reflective tariff options.[58] In summary, this study found:

- consumers find all forms of cost-reflective pricing less attractive than traditional flat rate tariffs
- consumers are particularly resistant to real-time and demand based pricing
- simpler cost-reflective tariffs that feature pre-determined peak and off-peak periods, such as critical peak pricing, peak-time rebates and TOU tariffs, have greater consumer appeal, although still significantly less than flat rate pricing.

The CSIRO concludes that these findings reflect consumer preferences for the status quo (flat tariffs) and a strong desire to minimise risk. Ultimately consumers have a clear preference for simplicity and predictability and will avoid the need to make pricing decisions, particularly as the decision-making environment gets more complex.

Taking into account those who will never even respond to such a tariff offer, CSIRO's calculations suggest that the initial voluntary uptake of cost-reflective pricing is unlikely to exceed 5-10% of households.

In the end, CSIRO judges that:

> *"Cost-reflective pricing will be more successful the less it relies on consumers, themselves, responding to changing price signals."*

The CSIRO contends that, ultimately, our collective problem is not how to get consumers to take up cost-reflective pricing, not even how to get them to effectively use cost-reflective pricing, but rather, how best to reduce peak demand – ideally in a manner yielding benefits for consumers and networks alike.

Cost-reflective pricing is just one proposed solution to this problem, and clearly one that has garnered considerable support across the industry. But international experience suggests that cost-reflective tariffs are unlikely to yield the desired benefits without an appropriate suite of supportive mechanisms facilitating their optimal usage.

[58] See Stenner, K., Fredricks, E., Hobman, E. V., and Meikle, S. (2015) Australian Consumers' Likely Response to Cost-Reflective Electricity Pricing. CSIRO, Australia

A12.COMPLIANCE CHECKLIST

This section sets out the TSS Rule requirements and the section in which those requirements have been met within this document.

Rule Provision	Amending Clause	Requirement	Relevant section
Part E: Regulatory proposal and proposed tariff structure statement			
6.8.2		**Submission of tariff structure statement**	
6.8.2(a)	11.73.2(a)	A *Distribution Network Service Provider* must, whenever required to do so under paragraph (b), submit to the *AER* a *regulatory proposal* and a proposed *tariff structure statement* related to the *distribution services* provided by means of, or in connection with, the *Distribution Network Service Provider's distribution system*.	Noted
6.8.2(b)	11.73.2(a)	A *regulatory proposal* and a proposed *tariff structure statement* must be submitted: by 27 November 2015	Noted
6.8.2(c)	11.73.2(a)	A proposed *tariff structure statement* must be accompanied by information that contains a description (with supporting materials) of how the proposed *tariff structure statement* complies with the *pricing principles for direct control services.*	Chapter 7
6.8.2(c1a)	11.73.2(a)	The proposed *tariff structure statement* must be accompanied by an overview paper which includes a description of how the *Distribution Network Service Provider* has engaged with *retail customers* and *retailers* in developing the proposed *tariff structure statement* and has sought to address any relevant concerns identified as a result of that engagement	Overview Paper
6.8.2(d1)		The *tariff structure statement* must be accompanied by an *indicative pricing schedule*.	Appendix A.9 and A.13 (supporting document Indicative Pricing Schedule for Alternative Control Services)
6.8.2(d2)		The *tariff structure statement* must comply with the *pricing principles for direct control services*.	Chapter 7
6.8.2(e)		If more than one *distribution system* is owned, controlled or operated by a *Distribution Network Service Provider*, then, unless the *AER* otherwise determines, a separate *tariff structure statement* are to be submitted for each *distribution system*.	Not applicable

A12.COMPLIANCE CHECKLIST

Rule Provision	Amending Clause	Requirement	Relevant section
6.8.2(f)		If, at the commencement of this Chapter, different parts of the same distribution *system* were separately regulated, then, unless the *AER* otherwise determines, a separate *tariff structure statement* are to be submitted for each part as if it were a separate *distribution system*.	Not applicable
Part I: Distribution Pricing Rules			
6.18.1A		**Tariff Structure Statement**	
6.18.1A(a)(1)		The *tariff structure statement* must include the *tariff classes* into which *retail customers* for *direct control services* will be divided during the relevant *regulatory control period*.	Section 6.2
6.18.1A(a)(2)		The *tariff structure statement* must include the policies and procedures the *Distribution Network Service Provider* will apply for assigning *retail customers* to tariffs or reassigning *retail customers* from one tariff to another (including any applicable restrictions).	Section 6.3, Section 6.4 and Appendix A.2
6.18.1A(a)(3)		The *tariff structure statement* must include the structures for each proposed tariff.	Section 6.4, Appendix A.3 and A.4
6.18.1A(a)(4)		The *tariff structure statement* must include the *charging parameters* for each proposed tariff.	Appendix A.3
6.18.1A(a)(5)		The *tariff structure statement* must include a description of the approach that the *Distribution Network Service Provider* will take in setting each tariff in each *pricing proposal* during the relevant *regulatory control period* in accordance with clause 6.18.5 (pricing principles).	Chapter 7, Appendix A.4, A.5, A.6, A.7 and A.8
6.18.1A(b)		The *tariff structure statement* must comply with the *pricing principles for direct control services*.	Chapter 7
6.18.1A(e)		A *tariff structure statement* must be accompanied by an *indicative pricing schedule* which sets out, for each tariff for each *regulatory year* of the *regulatory control period*, the indicative price levels determined in accordance with the *tariff structure statement*.	Appendix A.9 and A.13 (supporting document Indicative Pricing Schedule for Alternative Control Services)

A12.COMPLIANCE CHECKLIST

Rule Provision	Amending Clause	Requirement	Relevant section
6.18.3		**Tariff Classes**	
6.18.3(b)		Each customer for *direct control services* must be a member of 1 or more *tariff classes*.	Section 6.2 and 6.3
6.18.3(c)		Separate *tariff classes* must be constituted for *retail customers* to whom *standard control services* are supplied and *retail customers* to whom *alternative control services* are supplied (but a customer for both *standard control services* and *alternative control services* may be a member of 2 or more *tariff classes*).	Section 6.2 and 6.3 Appendix A.4
6.18.3(d)		A *tariff class* must be constituted with regard to: (1) the need to group *retail customers* together on an economically efficient basis; and (2) the need to avoid unnecessary transaction costs.	Section 6.2
6.18.4		**Principles governing assignment or re-assignment of retail customers to tariff classes and assessment and review of basis of charging**	
6.18.4(a)		In formulating provisions of a distribution determination governing the assignment of *retail customers* to *tariff classes* or the re-assignment of *retail customers* from one *tariff class* to another, the AER must have regard to the following principles:	Noted
6.18.4(a)(1)		*retail customers* should be assigned to *tariff classes* on the basis of one or more of the following factors: (i) the nature and extent of their usage; (ii) the nature of their connection to the network; (iii) whether remotely-read interval metering or other similar metering technology has been installed at the retail customer's premises as a result of a regulatory obligation or requirement;	Section 6.2 and 6.3
6.18.4(a)(2)		retail customers with a similar connection and usage profile should be treated on an equal basis;	Section 6.2 and 6.3
6.18.4(a)(3)		however, retail customers with micro-generation facilities should be treated no less favourably than retail customers without such facilities but with a similar load profile;	Section 6.2

A12.COMPLIANCE CHECKLIST

Rule Provision	Amending Clause	Requirement	Relevant section
6.18.4(a)(4)		a Distribution Network Service Provider's decision to assign a customer to a particular tariff class, or to re-assign a customer from one tariff class to another should be subject to an effective system of assessment and review. **Note:** If (for example) a customer is assigned (or reassigned) to a tariff class on the basis of the customer's actual or assumed maximum demand, the system of assessment and review should allow for the reassignment of a customer who demonstrates a reduction or increase in maximum demand to a tariff class that is more appropriate to the customer's load profile.	Section 6.2 and 6.3. Appendix A.2
6.18.4(b)		If the *charging parameters* for a particular tariff result in a basis of charge that varies according to the usage or load profile of the customer, a distribution determination must contain provisions for an effective system of assessment and review of the basis on which a customer is charged.	Appendix A.2
6.18.5 Network Pricing Principles **Principles governing assignment or re-assignment of retail customers to tariff classes and assessment and review of basis of charging**			
		Network Pricing Objective	
6.18.5(a)		The *network pricing objective* is that the tariffs that a *Distribution Network Service Provider* charges in respect of its provision of *direct control services* to a *retail customer* should reflect the *Distribution Network Service Provider's* efficient costs of providing those services to the *retail customer*.	Chapter 6 and 7
		Application of the Pricing Principles	
6.18.5(b)		Subject to paragraph (c), a *DNSP's* tariffs must comply with the pricing principles set out in paragraphs (e) to (j).	Chapter 7
6.18.5(c)		A Distribution Network Service Provider's tariffs may vary from tariffs which would result from complying with the pricing principles set out in paragraphs (e) to (g) only: (1) to the extent permitted under paragraph (h); and (2) to the extent necessary to give effect to the pricing principles set out in paragraphs (i) to (j).	Chapter 7 and Appendix A.6.4

A12.COMPLIANCE CHECKLIST

Rule Provision	Amending Clause	Requirement	Relevant section
6.18.5(d)		A *Distribution Network Service Provider* must comply with paragraph (b) in a manner that will contribute to the achievement of the *network pricing objective*.	Chapter 7
		Pricing Principles	
6.18.5(e)		For each tariff class, the revenue expected to be recovered must lie on or between: (1) an upper bound representing the stand alone cost of serving the retail customers who belong to that class; and (2) a lower bound representing the avoidable cost of not serving those retail customers.	Section 7.2 and Appendix A.5
6.18.5(f)		Each tariff must be based on the *long run marginal cost* of providing the service to which it relates to the retail customers assigned to that tariff with the method of calculating such cost and the manner in which that method is applied to be determined having regard to: (1) the costs and benefits associated with calculating, implementing and applying that method as proposed; (2) the additional costs likely to be associated with meeting demand from retail customers that are assigned to that tariff at times of greatest utilisation of the relevant part of the distribution network; and (3) the location of retail customers that are assigned to that tariff and the extent to which costs vary between different locations in the distribution network.	Section 7.3 and Appendix A.6

A12. COMPLIANCE CHECKLIST

Rule Provision	Amending Clause	Requirement	Relevant section
6.18.5(g)		The revenue expected to be recovered from each tariff must: (1) reflect the Distribution Network Service Provider's total efficient costs of serving the retail customers that are assigned to that tariff; (2) when summed with the revenue expected to be received from all other tariffs, permit the Distribution Network Service Provider to recover the expected revenue for the relevant services in accordance with the applicable distribution determination for the Distribution Network Service Provider; and (3) comply with sub-paragraphs (1) and (2) in a way that minimises distortions to the price signals for efficient usage that would result from tariffs that comply with the pricing principle set out in paragraph (f).	Section 7.1, 7.2 and Appendix A.7 and A.8
6.18.5(h)		A Distribution Network Service Provider must consider the impact on retail customers of changes in tariffs from the previous regulatory year and may vary tariffs from those that comply with paragraphs (e) to (g) to the extent the Distribution Network Service Provider considers reasonably necessary having regard to: (1) the desirability for tariffs to comply with the pricing principles referred to in paragraphs (f) and (g), albeit after a reasonable period of transition (which may extend over more than one regulatory control period); (2) the extent to which retail customers can choose the tariff to which they are assigned; and (3) the extent to which retail customers are able to mitigate the impact of changes in tariffs through their usage decisions.	Section 7.4 and Appendix A.9 and A.10
6.18.5(i)		The structure of each tariff must be reasonably capable of being understood by retail customers that are assigned to that tariff, having regard to: (1) the type and nature of those retail customers; and (2) the information provided to, and the consultation undertaken with, those retail customers.	Section 5.8, 5.9 and 6.2
6.18.5(j)		A tariff must comply with the *Rules* and all *applicable regulatory instruments*.	Noted

A13.SUPPORTING DOCUMENTS

Tariff Structure Statement

(October 2016)

Supporting Documentation:

Indicative Pricing Schedule for Alternative Control Services

ANCILLARY NETWORK SERVICES

TSS - Indicative Pricing Schedule (October 2016)

ANS Fees and Charges

	2014–15	2015–16	2016–17	2017–18	2018–19
CPI		2.49%	1.51%	2.50%	2.50%
X Factor		-1.02%	-1.07%	-1.11%	-1.10%
Adjt Factor		0.00%	0.00%	0.00%	0.00%

				Actuals	Actuals	Actuals		
Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Site Establishment Fee	Site Establishment	Per NMI	Fee	$35.88	$37.15	$38.11	$39.50	$40.93

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Off Peak Conversions	Off Peak Conversions	Per Job	Fee	$111.50	$115.44	$118.44	$122.75	$127.20

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Rectification Works	Fitting of Tiger Tails (Labour)	Per Hour	Quote	$133.80	$138.53	$142.13	$147.30	$152.64
	Fitting of Tiger Tails (Material) - Weekly Hire	Per Tiger Tail	Quote	$4.84	$5.01	$5.14	$5.33	$5.52
	High Load Escorts - Per Hour	Per Hour	Quote	$133.80	$138.53	$142.13	$147.30	$152.64
	Rectification of illegal connections	Per Job	Fee	$535.19	$554.11	$568.50	$589.18	$610.55
	Provision of service crew / additional crew (Additional person per crew)	Per Hour	Quote	$133.80	$138.53	$142.13	$147.30	$152.64

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Meter Test Fee	Meter Test Fee - Per Request	Per Job	Fee	$401.39	$415.58	$426.37	$441.88	$457.91

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Reconnections / Disconnections	Disconnections (Meter Box) - Includes Reconnection	Per Disco	Fee	$165.69	$171.55	$176.00	$182.40	$189.02
	Disconnections (Meter Load Tail) - Includes Reconnection	Per Disco	Fee	$252.88	$261.82	$268.62	$278.39	$288.49
	Reconnections (Site Visit)	Per Visit	Fee	$55.02	$56.97	$58.45	$60.58	$62.78
	Disconnections (Site Visit)	Per Visit	Fee	$55.02	$56.97	$58.45	$60.58	$62.78
	Reconnections outside normal business hours	Per Reco	Fee	$62.13	$64.33	$66.00	$68.40	$70.88
	Disconnections (Pole Top / Pillar Box) - Includes Reconnection	Per Disco	Fee	$417.96	$432.74	$443.97	$460.12	$476.81
	Disconnections at Pole Top / Pillar Box - Site Visit	Per Visit	Fee	$190.75	$197.49	$202.62	$209.99	$217.61

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Special Meter Reads	Special Meter Reads	Per Job	Fee	$33.45	$34.63	$35.53	$36.82	$38.16
	Special Meter Reads - Site Visit	Per Job	Fee	$33.45	$34.63	$35.53	$36.82	$38.16

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Move In / Move Out Meter Reads	Move In Meter Reads	Per Job	Fee	$33.45	$34.63	$35.53	$36.82	$38.16
	Move Out Meter Reads	Per Job	Fee	$33.45	$34.63	$35.53	$36.82	$38.16

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Administration Fee	Subdivision - URD - Underground - Number of lots - 1-5	Per Job	Fee	$356.24	$368.83	$378.41	$392.18	$406.41
	Subdivision - URD - Underground - Number of lots - 6-10	Per Job	Fee	$445.30	$461.04	$473.01	$490.22	$508.00
	Subdivision - URD - Underground - Number of lots - 11- 40	Per Job	Fee	$623.42	$645.46	$662.22	$686.31	$711.21
	Subdivision - URD - Underground - Number of lots - 41 +	Per Job	Fee	$712.48	$737.67	$756.82	$784.35	$812.80
	Subdivision - Non Urban - Underground - Number of lots - 1-5	Per Job	Fee	$267.18	$276.63	$283.81	$294.13	$304.80
	Subdivision - Non Urban - Underground - Number of lots - 6-10	Per Job	Fee	$356.24	$368.83	$378.41	$392.18	$406.41
	Subdivision - Non Urban - Underground - Number of lots - 11-40	Per Job	Fee	$445.30	$461.04	$473.01	$490.22	$508.00
	Subdivision - Non Urban - Underground - Number of lots - 41 +	Per Job	Fee	$534.36	$553.25	$567.61	$588.26	$609.60
	Subdivision - Non Urban - Overhead - Number of poles - 1-5	Per Job	Fee	$356.24	$368.83	$378.41	$392.18	$406.41
	Subdivision - Non Urban - Overhead - Number of poles - 6-10	Per Job	Fee	$445.30	$461.04	$473.01	$490.22	$508.00
	Subdivision - Non Urban - Overhead - Number of poles - 11 +	Per Job	Fee	$801.54	$829.88	$851.42	$882.39	$914.40
	Subdivision - Industrial / Commercial - Per Hour	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Connection of Load - URD - Per Hour	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Connection of Load - Industrial / Commercial - Per Hour	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Connection of Load - Non Urban - Underground - Per Hour	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Connection of Load - Non Urban - Overhead - Number of poles - 1-5	Per Job	Fee	$356.24	$368.83	$378.41	$392.18	$406.41
	Connection of Load - Non Urban - Overhead - Number of poles - 6-10	Per Job	Fee	$534.36	$553.25	$567.61	$588.26	$609.60
	Connection of Load - Non Urban - Overhead - Number of poles - 11 +	Per Job	Fee	$712.48	$737.67	$756.82	$784.35	$812.80
	Asset Relocation - Per Hour	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Public Lighting - Per Hour	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Design Information Fee	Subdivision - URD - Underground - Number of lots - 1-5	Per Job	Fee	$428.43	$443.58	$455.10	$471.66	$488.77
	Subdivision - URD - Underground - Number of lots - 6-10	Per Job	Fee	$571.24	$591.44	$606.79	$628.86	$651.67
	Subdivision - URD - Underground - Number of lots - 11-40	Per Job	Fee	$999.66	$1,035.00	$1,061.87	$1,100.50	$1,140.42
	Subdivision - URD - Underground - Number of lots - 41 +	Per Job	Fee	$1,285.28	$1,330.72	$1,365.27	$1,414.94	$1,466.27
	Subdivision - Non Urban - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Subdivision - Industrial / Commercial - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - <= 200A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - <= 700A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - > 700A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - HV Customer	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - Transmission	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Multi-Dwelling - <= 5 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Multi-Dwelling - <= 20 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Multi-Dwelling - <= 40 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Multi-Dwelling - > 40 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - I&C - <= 200A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - I&C - <= 700A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - I&C - > 700A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - I&C - HV Customer	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - I&C - Transmission	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Multi-Dwelling - <= 5 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Multi-Dwelling - <= 20 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Multi-Dwelling - <= 40 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Multi-Dwelling - > 40 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Single Residential - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Asset Relocation - Engineer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Asset Relocation - Designer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Public Lighting - Engineer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Public Lighting - Designer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Design Certification Fee	Subdivision - URD - Underground - Number of lots - 1-5	Per Job	Fee	$285.62	$295.72	$303.40	$314.44	$325.85
	Subdivision - URD - Underground - Number of lots - 6-10	Per Job	Fee	$428.43	$443.58	$455.10	$471.66	$488.77
	Subdivision - URD - Underground - Number of lots - 11-40	Per Job	Fee	$714.04	$739.28	$758.47	$786.06	$814.57
	Subdivision - URD - Underground - Number of lots - 41 +	Per Job	Fee	$856.85	$887.14	$910.17	$943.28	$977.50
	Subdivision - Non Urban - Underground - Number of lots - 1-5	Per Job	Fee	$142.81	$147.86	$151.70	$157.22	$162.92
	Subdivision - Non Urban - Underground - Number of lots - 6-10	Per Job	Fee	$428.43	$443.58	$455.10	$471.66	$488.77
	Subdivision - Non Urban - Underground - Number of lots - 11-40	Per Job	Fee	$571.24	$591.44	$606.79	$628.86	$651.67
	Subdivision - Non Urban - Underground - Number of lots - 41 +	Per Job	Fee	$571.24	$591.44	$606.79	$628.86	$651.67
	Subdivision - Non Urban - Overhead - Number of poles - 1-5	Per Job	Fee	$285.62	$295.72	$303.40	$314.44	$325.85
	Subdivision - Non Urban - Overhead - Number of poles - 6-10	Per Job	Fee	$428.43	$443.58	$455.10	$471.66	$488.77
	Subdivision - Non Urban - Overhead - Number of poles - 11 +	Per Job	Fee	$714.04	$739.28	$758.47	$786.06	$814.57
	Subdivision - Industrial / Commercial - Underground - Number of lots - 1-10	Per Job	Fee	$428.43	$443.58	$455.10	$471.66	$488.77
	Subdivision - Industrial / Commercial - Underground - Number of lots - 11-40	Per Job	Fee	$571.24	$591.44	$606.79	$628.86	$651.67
	Subdivision - Industrial / Commercial - Underground - Number of lots - 41 +	Per Job	Fee	$856.85	$887.14	$910.17	$943.28	$977.50
	Subdivision - Industrial / Commercial - Overhead - Number of poles - 1-5	Per Job	Fee	$285.62	$295.72	$303.40	$314.44	$325.85
	Subdivision - Industrial / Commercial - Overhead - Number of poles - 6-10	Per Job	Fee	$428.43	$443.58	$455.10	$471.66	$488.77
	Subdivision - Industrial / Commercial - Overhead - Number of poles - 11 +	Per Job	Fee	$714.04	$739.28	$758.47	$786.06	$814.57
	Connection of Load - Industrial / Commercial - <= 200A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - <= 700A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - > 700A/Phase (LV)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - HV Customer	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial / Commercial - Transmission	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Multi-Dwelling - <= 5 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Multi-Dwelling - <= 20 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Multi-Dwelling - <= 40 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Multi-Dwelling - > 40 units	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Underground - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Underground - Number of poles - 1-5	Per Job	Fee	$285.62	$295.72	$303.40	$314.44	$325.85
	Connection of Load - Non Urban - Underground - Number of poles - 6-10	Per Job	Fee	$428.43	$443.58	$455.10	$471.66	$488.77
	Connection of Load - Non Urban - Underground - Number of poles - 11 +	Per Job	Fee	$714.04	$739.28	$758.47	$786.06	$814.57
	Connection of Load - Indoor Substation - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Asset Relocation - Engineer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Asset Relocation - Designer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Public Lighting - Engineer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Public Lighting - Designer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Design Re-certification Fee	Subdivision - Industrial & Commercial - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Subdivision - Non Urban - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Subdivision - URD - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial & Commercial - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - URD - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Other - Asset Relocation - Engineer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Other - Asset Relocation - Designer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Other - Public Lighting - Engineer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Other - Public Lighting - Designer - Per Hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Notification of Arrangement	Subdivision - Industrial & Commercial - Per Request	Per Job	Fee	$178.12	$184.42	$189.21	$196.09	$203.20
	Subdivision - Non Urban - Per Request	Per Job	Fee	$178.12	$184.42	$189.21	$196.09	$203.20
	Subdivision - URD - Per Request	Per Job	Fee	$178.12	$184.42	$189.21	$196.09	$203.20
	Subdivision - Industrial & Commercial - per hour for early notification of arrangement	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Subdivision - Non Urban - per hour for early notification of arrangement	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Subdivision - URD - per hour for early notification of arrangement	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Compliance Certificate	Connection of Load - Industrial & Commercial - Per Request	Per Job	Fee	$178.12	$184.42	$189.21	$196.09	$203.20
	Connection of Load - Non Urban - Per Request	Per Job	Fee	$267.18	$276.63	$283.81	$294.13	$304.80
	Connection of Load - URD - Per Request	Per Job	Fee	$178.12	$184.42	$189.21	$196.09	$203.20
	Connection of Load - Industrial & Commercial - per hour for early compliance certificate	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Connection of Load - Non Urban - per hour for early compliance certificate	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Connection of Load - URD - per hour for early compliance certificate	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Inspection Fee	Subdivision - URD - Underground - Per Lot (1 - 10) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Subdivision - URD - Underground - Per Lot (11 - 50) - Grade A	Per Job	Fee	$42.84	$44.35	$45.50	$47.16	$48.87
	Subdivision - URD - Underground - Per Lot (51 +) - Grade A	Per Job	Fee	$14.28	$14.78	$15.16	$15.71	$16.28
	Subdivision - URD - Underground - Per Lot (1 - 10) - Grade B	Per Job	Fee	$164.23	$170.04	$174.45	$180.80	$187.36
	Subdivision - URD - Underground - Per Lot (11 - 50) - Grade B	Per Job	Fee	$99.97	$103.50	$106.19	$110.05	$114.04
	Subdivision - URD - Underground - Per Lot (51 +) - Grade B	Per Job	Fee	$57.12	$59.14	$60.68	$62.89	$65.17
	Subdivision - URD - Underground - Per Lot (1 - 10) - Grade C	Per Job	Fee	$357.03	$369.65	$379.25	$393.05	$407.31
	Subdivision - URD - Underground - Per Lot (11 - 50) - Grade C	Per Job	Fee	$199.93	$207.00	$212.37	$220.10	$228.08
	Subdivision - URD - Underground - Per Lot (51 +) - Grade C	Per Job	Fee	$92.83	$96.11	$98.61	$102.20	$105.91
	Subdivision - URD - Underground - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Subdivision - Non Urban - Underground - Per Lot (1 - 10) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Subdivision - Non Urban - Underground - Per Lot (11 - 50) - Grade A	Per Job	Fee	$42.84	$44.35	$45.50	$47.16	$48.87
	Subdivision - Non Urban - Underground - Per Lot (51+) - Grade A	Per Job	Fee	$14.28	$14.78	$15.16	$15.71	$16.28
	Subdivision - Non Urban - Underground - Per Lot (1 - 10) - Grade B	Per Job	Fee	$171.37	$177.43	$182.04	$188.66	$195.50
	Subdivision - Non Urban - Underground - Per Lot (11 - 50) - Grade B	Per Job	Fee	$92.83	$96.11	$98.61	$102.20	$105.91
	Subdivision - Non Urban - Underground - Per Lot (51+) - Grade B	Per Job	Fee	$57.12	$59.14	$60.68	$62.89	$65.17
	Subdivision - Non Urban - Underground - Per Lot (1 - 10) - Grade C	Per Job	Fee	$364.17	$377.04	$386.83	$400.90	$415.44
	Subdivision - Non Urban - Underground - Per Lot (11 - 50) - Grade C	Per Job	Fee	$214.22	$221.79	$227.55	$235.83	$244.38
	Subdivision - Non Urban - Underground - Per Lot (51+) - Grade C	Per Job	Fee	$99.97	$103.50	$106.19	$110.05	$114.04
	Subdivision - Non Urban - Overhead - Per Pole (1 - 5) - Grade A	Per Job	Fee	$85.69	$88.72	$91.02	$94.33	$97.75
	Subdivision - Non Urban - Overhead - Per Pole (6 - 10) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Subdivision - Non Urban - Overhead - Per Pole (11 +) - Grade A	Per Job	Fee	$57.12	$59.14	$60.68	$62.89	$65.17
	Subdivision - Non Urban - Overhead - Per Pole Sub - Grade A	Per Job	Fee	$485.55	$502.72	$515.77	$534.53	$553.92
	Subdivision - Non Urban - Overhead - Per Pole (1 - 5) - Grade B	Per Job	Fee	$171.37	$177.43	$182.04	$188.66	$195.50
	Subdivision - Non Urban - Overhead - Per Pole (6 - 10) - Grade B	Per Job	Fee	$142.81	$147.86	$151.70	$157.22	$162.92
	Subdivision - Non Urban - Overhead - Per Pole (11 +) - Grade B	Per Job	Fee	$92.83	$96.11	$98.61	$102.20	$105.91
	Subdivision - Non Urban - Overhead - Per Pole Sub - Grade B	Per Job	Fee	$999.67	$1,035.01	$1,061.88	$1,100.51	$1,140.43
	Subdivision - Non Urban - Overhead - Per Pole (1 - 5) - Grade C	Per Job	Fee	$285.62	$295.72	$303.40	$314.44	$325.85
	Subdivision - Non Urban - Overhead - Per Pole (6 - 10) - Grade C	Per Job	Fee	$264.20	$273.54	$280.64	$290.85	$301.40
	Subdivision - Non Urban - Overhead - Per Pole (11 +) - Grade C	Per Job	Fee	$199.93	$207.00	$212.37	$220.10	$228.08
	Subdivision - Non Urban - Overhead - Per Pole Sub - Grade C	Per Job	Fee	$1,213.89	$1,256.81	$1,289.44	$1,336.35	$1,384.83
	Subdivision - Industrial & Commercial - Overhead - Per Pole (1 - 5) - Grade A	Per Job	Fee	$85.69	$88.72	$91.02	$94.33	$97.75
	Subdivision - Industrial & Commercial - Overhead - Per Pole (6 - 10) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Subdivision - Industrial & Commercial - Overhead - Per Pole (11 +) - Grade A	Per Job	Fee	$57.12	$59.14	$60.68	$62.89	$65.17
	Subdivision - Industrial & Commercial - Overhead - Per Pole Sub - Grade A	Per Job	Fee	$499.84	$517.51	$530.95	$550.26	$570.22
	Subdivision - Industrial & Commercial - Overhead - Per Pole (1 - 5) - Grade B	Per Job	Fee	$157.09	$162.64	$166.86	$172.93	$179.20
	Subdivision - Industrial & Commercial - Overhead - Per Pole (6 - 10) - Grade B	Per Job	Fee	$142.81	$147.86	$151.70	$157.22	$162.92
	Subdivision - Industrial & Commercial - Overhead - Per Pole (11 +) - Grade B	Per Job	Fee	$99.97	$103.50	$106.19	$110.05	$114.04
	Subdivision - Industrial & Commercial - Overhead - Per Pole Sub - Grade B	Per Job	Fee	$999.67	$1,035.01	$1,061.88	$1,100.51	$1,140.43
	Subdivision - Industrial & Commercial - Overhead - Per Pole (1 - 5) - Grade C	Per Job	Fee	$314.18	$325.29	$333.74	$345.88	$358.43
	Subdivision - Industrial & Commercial - Overhead - Per Pole (6 - 10) - Grade C	Per Job	Fee	$284.19	$294.24	$301.88	$312.86	$324.21
	Subdivision - Industrial & Commercial - Overhead - Per Pole (11 +) - Grade C	Per Job	Fee	$214.22	$221.79	$227.55	$235.83	$244.38
	Subdivision - Industrial & Commercial - Overhead - Per Pole Sub - Grade C	Per Job	Fee	$1,256.73	$1,301.16	$1,334.94	$1,383.50	$1,433.69
	Subdivision - Industrial & Commercial - Underground - Per Lot (1 - 10) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Subdivision - Industrial & Commercial - Underground - Per Lot (11 - 50) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Subdivision - Industrial & Commercial - Underground - Per Lot (51+) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Subdivision - Industrial & Commercial - Underground - Per Lot (1 - 10) - Grade B	Per Job	Fee	$171.37	$177.43	$182.04	$188.66	$195.50
	Subdivision - Industrial & Commercial - Underground - Per Lot (11 - 50) - Grade B	Per Job	Fee	$171.37	$177.43	$182.04	$188.66	$195.50
	Subdivision - Industrial & Commercial - Underground - Per Lot (51+) - Grade B	Per Job	Fee	$171.37	$177.43	$182.04	$188.66	$195.50
	Subdivision - Industrial & Commercial - Underground - Per Lot (1 - 10) - Grade C	Per Job	Fee	$357.03	$369.65	$379.25	$393.05	$407.31
	Subdivision - Industrial & Commercial - Underground - Per Lot (11 - 50) - Grade C	Per Job	Fee	$357.03	$369.65	$379.25	$393.05	$407.31
	Subdivision - Industrial & Commercial - Underground - Per Lot (51+) - Grade C	Per Job	Fee	$357.03	$369.65	$379.25	$393.05	$407.31
	Connection of Load - URD - Underground - Inspector - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - URD - Underground - Engineer - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Underground - Inspector - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Underground - Engineer - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Overhead - Per Pole (1 - 5) - Grade A	Per Job	Fee	$85.69	$88.72	$91.02	$94.33	$97.75
	Connection of Load - Non Urban - Overhead - Per Pole (1 - 5) - Grade B	Per Job	Fee	$171.37	$177.43	$182.04	$188.66	$195.50
	Connection of Load - Non Urban - Overhead - Per Pole (1 - 5) - Grade C	Per Job	Fee	$314.18	$325.29	$333.74	$345.88	$358.43
	Connection of Load - Non Urban - Overhead - Per Pole (6 - 10) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Connection of Load - Non Urban - Overhead - Per Pole (6 - 10) - Grade B	Per Job	Fee	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Non Urban - Overhead - Per Pole (6 - 10) - Grade C	Per Job	Fee	$284.19	$294.24	$301.88	$312.86	$324.21
	Connection of Load - Non Urban - Overhead - Per Pole (11 +) - Grade A	Per Job	Fee	$57.12	$59.14	$60.68	$62.89	$65.17
	Connection of Load - Non Urban - Overhead - Per Pole (11 +) - Grade B	Per Job	Fee	$99.97	$103.50	$106.19	$110.05	$114.04
	Connection of Load - Non Urban - Overhead - Per Pole (11 +) - Grade C	Per Job	Fee	$214.22	$221.79	$227.55	$235.83	$244.38
	Connection of Load - Non Urban - Overhead - Per Pole Sub - Grade A	Per Job	Fee	$485.55	$502.72	$515.77	$534.53	$553.92
	Connection of Load - Non Urban - Overhead - Per Pole Sub - Grade B	Per Job	Fee	$999.67	$1,035.01	$1,061.88	$1,100.51	$1,140.43
	Connection of Load - Non Urban - Overhead - Per Pole Sub - Grade C	Per Job	Fee	$1,213.89	$1,256.81	$1,289.44	$1,336.35	$1,384.83
	Connection of Load - Industrial & Commercial - Underground - Inspector - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial & Commercial - Underground - Engineer - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (1 - 5) - Grade A	Per Job	Fee	$85.69	$88.72	$91.02	$94.33	$97.75
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (1 - 5) - Grade B	Per Job	Fee	$164.23	$170.04	$174.45	$180.80	$187.36
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (1 - 5) - Grade C	Per Job	Fee	$314.18	$325.29	$333.74	$345.88	$358.43
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (6 - 10) - Grade A	Per Job	Fee	$71.41	$73.93	$75.85	$78.61	$81.46
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (6 - 10) - Grade B	Per Job	Fee	$142.81	$147.86	$151.70	$157.22	$162.92
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (6 - 10) - Grade C	Per Job	Fee	$284.19	$294.24	$301.88	$312.86	$324.21
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (11+) - Grade A	Per Job	Fee	$57.12	$59.14	$60.68	$62.89	$65.17
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (11+) - Grade B	Per Job	Fee	$99.97	$103.50	$106.19	$110.05	$114.04
	Connection of Load - Industrial & Commercial - Overhead - Per Pole (11+) - Grade C	Per Job	Fee	$214.22	$221.79	$227.55	$235.83	$244.38
	Connection of Load - Industrial & Commercial - Overhead - Per Pole Sub - Grade A	Per Job	Fee	$499.84	$517.51	$530.95	$550.26	$570.22
	Connection of Load - Industrial & Commercial - Overhead - Per Pole Sub - Grade B	Per Job	Fee	$999.67	$1,035.01	$1,061.88	$1,100.51	$1,140.43
	Connection of Load - Industrial & Commercial - Overhead - Per Pole Sub - Grade C	Per Job	Fee	$1,256.73	$1,301.16	$1,334.94	$1,383.50	$1,433.69
	Asset Relocation - Underground - Inspector - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Asset Relocation - Underground - Engineer - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Public Lighting - Underground - Inspector - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
	Public Lighting - Underground - Engineer - Per hour	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Inspection of works outside normal working hours	Administration Fee			$47.61	$49.29	$50.57	$52.41	$54.31
	Overtime Hours Rate			$71.42	$73.94	$75.86	$78.62	$81.47
	Access Permits			$2,377.81	$2,461.88	$2,525.79	$2,617.67	$2,712.63

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Reinspection Fee (Level 1 & Level 2 work)	Reinspection Fee (Level 1 & Level 2 work)	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Inspection of service work (Level 2 work)	Per NOSW - A Grade	Per NOSW	Fee	$49.98	$51.75	$53.09	$55.02	$57.02
	Per NOSW - B Grade	Per NOSW	Fee	$85.69	$88.72	$91.02	$94.33	$97.75
	Per NOSW - C Grade	Per NOSW	Fee	$285.62	$295.72	$303.40	$314.44	$325.85

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Provision of Access Fee (Standby)	Normal Time - 1 x Visit - Open / Close - 1 hour - Per Job	Per Job	Fee	$143.06	$148.12	$151.97	$157.50	$163.21
	Normal Time - 1 x Visit - Open / Isolate & CSO to close - 1 hour - Per Job	Per Job	Fee	$295.75	$306.21	$314.16	$325.59	$337.40
	Normal Time - 2 x Visit - Open / Close & no isolation - 2 hours - Per Job	Per Job	Fee	$286.12	$296.24	$303.93	$314.99	$326.42
	Normal Time - 2 x Visit - Open / Isolate / Close - 2 hours - Per Job	Per Job	Fee	$591.51	$612.42	$628.32	$651.18	$674.80
	Overtime - 1 x Visit - Open / Close - 1 hour - Per Job	Per Job	Fee	$250.35	$259.20	$265.93	$275.60	$285.60
	Overtime - 1 x Visit - Open / Isolate & CSO to close - 1 hour - Per Job	Per Job	Fee	$517.57	$535.87	$549.78	$569.78	$590.45
	Overtime - 2 x Visit - Open / Close & no isolation - 2 hours - Per Job	Per Job	Fee	$500.71	$518.41	$531.87	$551.22	$571.22
	Overtime - 2 x Visit - Open / Isolate / Close - 2 hours - Per Job	Per Job	Fee	$1,035.14	$1,071.74	$1,099.56	$1,139.56	$1,180.90

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Access Permits	Subdivision - URD - Per Lot	Per Lot	Fee	$54.91	$56.85	$58.33	$60.45	$62.64
	All Other - Industrial & Commercial	Per AA or ATW	Fee	$2,377.81	$2,461.88	$2,525.79	$2,617.67	$2,712.63
	All Other - Non Urban	Per AA or ATW	Fee	$2,377.81	$2,461.88	$2,525.79	$2,617.67	$2,712.63
	All Other - URD	Per AA or ATW	Fee	$2,377.81	$2,461.88	$2,525.79	$2,617.67	$2,712.63
	All Other - Asset Relocation	Per AA or ATW	Fee	$2,377.81	$2,461.88	$2,525.79	$2,617.67	$2,712.63
	All Other - Public Lighting	Per AA or ATW	Fee	$2,377.81	$2,461.88	$2,525.79	$2,617.67	$2,712.63

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Substation Commission Fee	Subdivision - URD - Per Lot	Per Lot	Fee	$57.53	$59.56	$61.11	$63.33	$65.63
	All Other - Industrial & Commercial - Per Substation	Per Substation	Fee	$1,668.40	$1,727.38	$1,772.23	$1,836.70	$1,903.33
	All Other - Non Urban - Per Substation	Per Substation	Fee	$1,668.40	$1,727.38	$1,772.23	$1,836.70	$1,903.33
	All Other - URD - Per Substation	Per Substation	Fee	$1,668.40	$1,727.38	$1,772.23	$1,836.70	$1,903.33
	All Other - Asset Relocation - Per Substation	Per Substation	Fee	$1,668.40	$1,727.38	$1,772.23	$1,836.70	$1,903.33
	All Other - Public Lighting - Per Substation	Per Substation	Fee	$1,668.40	$1,727.38	$1,772.23	$1,836.70	$1,903.33

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Excluded Distribution Services	**Cost of excluded distribution services for interruption avoidance measures for contestable work planned electricity supply interruptions**							
	Install & remove HV live line links - One set	Per Job	Fee	$4,132.93	$4,279.05	$4,390.14	$4,549.84	$4,714.89
	Install & remove HV live line links - Each additional set	Per Job	Fee	$2,644.92	$2,738.43	$2,809.52	$2,911.72	$3,017.34
	Break & remake HV bonds - One set	Per Job	Fee	$3,204.71	$3,318.01	$3,404.15	$3,527.98	$3,655.96
	Break & remake HV bonds - Each additional set	Per Job	Fee	$1,771.80	$1,834.44	$1,882.06	$1,950.52	$2,021.28
	Break & remake LV bonds - One set	Per Job	Fee	$1,981.00	$2,051.04	$2,104.29	$2,180.84	$2,259.95
	Break & remake LV bonds - Each additional set	Per Job	Fee	$931.81	$964.75	$989.80	$1,025.81	$1,063.02
	Install & remove LV live line links - One set	Per Job	Fee	$1,955.71	$2,024.85	$2,077.42	$2,152.99	$2,231.09
	Install & remove LV live line links - Each additional set	Per Job	Fee	$906.51	$938.56	$962.93	$997.96	$1,034.16
	Connect & disconnect generator to LV OH mains - One generator	Per Job	Fee	$1,907.55	$1,974.99	$2,026.26	$2,099.97	$2,176.15
	Connect & disconnect generator to LV OH mains - Each additional generator	Per Job	Fee	$858.35	$888.70	$911.77	$944.94	$979.22
	Connect & disconnect generator to a padmount / indoor substation - One generator	Per Job	Fee	$1,907.55	$1,974.99	$2,026.26	$2,099.97	$2,176.15
	Connect & disconnect generator to a padmount / indoor substation - Each additional gen	Per Job	Fee	$858.35	$888.70	$911.77	$944.94	$979.22
	Cost of excluded distribution services to terminate cable at zone substations and first joint out from the zone substation							
	Zone substation access and supervision for installation of cable(s) for one feeder	Per Job	Fee	$3,061.65	$3,169.89	$3,252.19	$3,370.50	$3,492.76
	Protection setting	Per Job	Fee	$3,984.69	$4,125.56	$4,232.67	$4,386.64	$4,545.77
	Testing cable prior to commissioning	Per Job	Fee	$4,523.37	$4,683.29	$4,804.88	$4,979.67	$5,160.31
	11kV Zone substation circuit breaker cable termination	Per Job	Fee	$3,593.88	$3,720.94	$3,817.54	$3,956.41	$4,099.93
	22kV Zone substation circuit breaker cable termination	Per Job	Fee	$3,718.65	$3,850.12	$3,950.08	$4,093.77	$4,242.27
	11kV Padmount/Indoor substation cable termination	Per Job	Fee	$3,877.52	$4,014.61	$4,118.84	$4,268.67	$4,423.52
	22kV Padmount/Indoor substation cable termination	Per Job	Fee	$4,653.86	$4,818.39	$4,943.48	$5,123.31	$5,309.16
	11kV Pole top termination (UGOH) and bonding to OH	Per Job	Fee	$4,551.63	$4,712.55	$4,834.90	$5,010.78	$5,192.55
	22kV Pole top termination (UGOH) and bonding to OH	Per Job	Fee	$5,070.39	$5,249.65	$5,385.94	$5,581.87	$5,784.35
	11kV Straight through joint	Per Job	Fee	$3,820.64	$3,955.71	$4,058.41	$4,206.04	$4,358.61
	22kV Straight through joint	Per Job	Fee	$3,978.96	$4,119.63	$4,226.58	$4,380.33	$4,539.23
	Traffic Control							
	Traffic Management to install & remove, break & remake, connect & disconnect excluded distribution services	Per Job	Fee	$3,731.33	$3,863.25	$3,963.55	$4,107.73	$4,256.74
	Traffic Management to test, terminate and joint excluded distribution services	Per Job	Fee	$3,420.83	$3,541.77	$3,633.72	$3,765.91	$3,902.52

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Authorisation	Authorisation - Renewal	Per Authorisation	Fee	$376.14	$389.44	$399.55	$414.08	$429.10
	Authorisation - New	Per Authorisation	Fee	$419.06	$433.88	$445.14	$461.33	$478.06

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Conveyancing Information	Supply of conveyancing information	Per Inquiry	Fee	$59.27	$61.37	$62.96	$65.25	$67.62

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Planning Studies	Carrying out planning studies and analysis relating to distribution (including sub transmission and dual function assets) connection applications - (Simple Jobs)	Per Hour	Quote	$177.52	$183.80	$188.57	$195.43	$202.52
	Carrying out planning studies and analysis relating to distribution (including sub transmission and dual function assets) connection applications - (Complex Jobs)	Per Hour	Quote	$210.96	$218.42	$224.09	$232.24	$240.66

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Connection Offer Service	Connection Offer Service (Basic)	Per Job	Fee	$23.81	$24.65	$25.29	$26.21	$27.16
	Connection Offer Service (Standard)	Per Job	Fee	$229.04	$237.14	$243.30	$252.15	$261.30

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Customer Interface co-ordination	Customer Interface co-ordination for contestable works	Per Hour	Quote	$177.52	$183.80	$188.57	$195.43	$202.52

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Investigation, review & implementation of	Investigation, review & implementation of remedial actions associated with ASP's connection work	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Preliminary Enquiry Service	Preliminary Enquiry Service (Simple Jobs)	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
	Preliminary Enquiry Service (Complex Jobs)	Per Hour	Quote	$210.96	$218.42	$224.09	$232.24	$240.66

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Services involved in obtaining deeds of agreement	Services involved in obtaining deeds of agreement in relation to property rights associated with contestable connections work	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Clearance to Work	Clearance to Work	Per Job	Fee	$1,981.50	$2,051.55	$2,104.81	$2,181.38	$2,260.51

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Recovery of debt collection costs	Recovery of debt collection costs - dishonoured transactions	Per Job	Fee	$16.02	$16.59	$17.02	$17.64	$18.28

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Type 5-7 Non Standard Meter data Services	Type 5-7 Non Standard Meter data Services	Per Job	Fee	$15.87	$16.43	$16.86	$17.47	$18.10

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Franchise CT Meter Install	Franchise CT Meter Install	Per Job	Fee	$500.71	$518.41	$531.87	$551.22	$571.22

Fee Type	Fee Category	Driver	Fee Type	2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
ROLR	Services provided in relation to a Retailer of Last Resort (ROLR) event	Per Job	Quote	Quote Basis	Quote Basis	Quote Basis	Quote Basis	Quote Basis

Maximum hourly labour rates (including on-costs and overhead) for quoted services

Classification	Maximum labour rate - includes on-cost and overhead		2014/15 Excluding GST	2015/16 Excluding GST	2016/17 Excluding GST	2017/18 Excluding GST	2018/19 Excluding GST
Admin	Per Hour	Quote	$89.06	$92.21	$94.60	$98.04	$101.60
Technical specialist	Per Hour	Quote	$142.81	$147.86	$151.70	$157.22	$162.92
EO 7/Engineer	Per Hour	Quote	$177.52	$183.80	$188.57	$195.43	$202.52
Field worker R4	Per Hour	Quote	$133.80	$138.53	$142.13	$147.30	$152.64
Senior Engineer	Per Hour	Quote	$210.96	$218.42	$224.09	$232.24	$240.66

Endeavour Energy

TSS - Indicative Pricing Schedule (October 2016)

Metering Services Prices

	2016–17	2017–18	2018–19
Estimated CPI	1.51%	2.50%	2.50%
X Factor (Annual Charge)	-2.25%	-2.25%	-2.25%
X Factor (Upfront Capital)	0.00%	0.00%	0.00%

Annual Metering Charges

Tariff class	Costs	Actuals 2015–16 (ex GST)	Actuals 2016–17 (ex GST)	2017–18 (ex GST)	2018–19 (ex GST)
Residential anytime	Non–capital	13.35	13.86	14.53	15.23
	Capital	1.45	1.51	1.58	1.66
Residential TOU – Type 6 meter	Non–capital	29.12	30.22	31.67	33.19
	Capital	1.45	1.51	1.58	1.66
Residential TOU - Type 5 meter	Non–capital	122.11	126.74	132.83	139.21
	Capital	1.45	1.51	1.58	1.66
Small business anytime	Non–capital	20.24	21.01	22.02	23.08
	Capital	1.45	1.51	1.58	1.66
Small business TOU - Type 6 meter	Non–capital	49.77	51.66	54.14	56.74
	Capital	1.45	1.51	1.58	1.66
Small business TOU – Type 5 meter	Non–capital	142.75	148.17	155.29	162.75
	Capital	1.45	1.51	1.58	1.66
Controlled load	Non–capital	3.40	3.53	3.70	3.88
	Capital	1.45	1.51	1.58	1.66
Solar	Non–capital	3.40	3.53	3.70	3.88
	Capital	1.45	1.51	1.58	1.66

Upfront Capital Charge

		Actuals Interval (3G modem) 2015-16 ex GST	Actuals Interval (3G modem) 2016-17 ex GST	Interval (3G modem) 2017-18 ex GST	Interval (3G modem) 2018-19 ex GST
Whole current single element meter	Single phase	659.42	669.38	686.11	703.26
	Single phase import/export	659.42	669.38	686.11	703.26
	Poly phase	469.33	476.42	488.33	500.54
	Poly phase import/export	469.33	476.42	488.33	500.54
Current transformer meter	Single phase	N/A	N/A	N/A	N/A
	Single phase import/export	N/A	N/A	N/A	N/A
	Poly phase	567.98	576.56	590.97	605.74
	Poly phase import/export	567.98	576.56	590.97	605.74
Whole current dual element meter	Single phase	751.68	763.03	782.11	801.66
	Single phase import/export	751.68	763.03	782.11	801.66
	Poly phase	N/A	N/A	N/A	N/A
	Poly phase import/export	N/A	N/A	N/A	N/A

		Interval (without 3G modem) 2015-16 ex GST	Interval (without 3G modem) 2016-17 ex GST	Interval (without 3G modem) 2017-18 ex GST	Interval (without 3G modem) 2018-19 ex GST
Whole current single element meter	Single phase	87.38	88.70	90.92	93.19
	Single phase import/export	87.38	88.70	90.92	93.19
	Poly phase	269.91	273.98	280.83	287.85
	Poly phase import/export	269.91	273.98	280.83	287.85
Current transformer meter	Single phase	N/A	N/A	N/A	N/A
	Single phase import/export	N/A	N/A	N/A	N/A
	Poly phase	368.55	374.12	383.47	393.06
	Poly phase import/export	368.55	374.12	383.47	393.06
Whole current dual element meter	Single phase	179.64	182.36	186.92	191.59
	Single phase import/export	179.64	182.36	186.92	191.59
	Poly phase	N/A	N/A	N/A	N/A
	Poly phase import/export	N/A	N/A	N/A	N/A

		Accumulation 2015-16 ex GST	Accumulation 2016-17 ex GST	Accumulation 2017-18 ex GST	Accumulation 2018-19 ex GST
Whole current single element meter	Single phase	41.62	42.25	43.31	44.39
	Single phase import/export	87.38	88.70	90.92	93.19
	Poly phase	112.14	113.84	116.69	119.61
	Poly phase import/export	113.89	115.61	118.50	121.46
Current transformer meter	Single phase	N/A	N/A	N/A	N/A
	Single phase import/export	N/A	N/A	N/A	N/A
	Poly phase	368.55	374.12	383.47	393.06
	Poly phase import/export	368.55	374.12	383.47	393.06
Whole current dual element meter	Single phase	179.64	182.36	186.92	191.59
	Single phase import/export	179.64	182.36	186.92	191.59
	Poly phase	N/A	N/A	N/A	N/A
	Poly phase import/export	N/A	N/A	N/A	N/A

Endeavour Energy

TSS - Indicative Pricing Schedule (October 2016)

Public Lighting Prices

	2016–17	2017–18	2018–19
Estimated CPI	1.51%	2.50%	2.50%
X Factor	0.00%	0.00%	0.00%

Public Lighting Prices (Class 1 & 2)

	Actuals	Actuals			Actuals	Actuals		
	Tariff Class 1 (ex GST) 2015-16	Tariff Class 1 (ex GST) 2016-17	Tariff Class 1 (ex GST) 2017-18	Tariff Class 1 (ex GST) 2018-19	Tariff Class 2 (ex GST) 2015-16	Tariff Class 2 (ex GST) 2016-17	Tariff Class 2 (ex GST) 2017-18	Tariff Class 2 (ex GST) 2018-19
1 x 20 W Fluorescent	50.17	50.93	52.20	53.51	49.57	50.32	51.58	52.87
2 x 20 W Fluorescent	52.71	53.51	54.85	56.22	52.50	53.29	54.62	55.99
4 x 20 W Fluorescent	58.38	59.26	60.74	62.26	58.38	59.26	60.74	62.26
2 x 14 W Fluorescent	48.25	48.98	50.20	51.46	48.20	48.93	50.15	51.40
2 x 24 W Fluorescent	49.57	50.32	51.58	52.87	49.57	50.32	51.58	52.87
1 x 40 W Fluorescent	48.27	49.00	50.23	51.49	48.21	48.94	50.16	51.41
2 x 40 W Fluorescent	49.79	50.54	51.80	53.10	49.79	50.54	51.80	53.10
1 x 42 W Fluorescent	48.21	48.94	50.16	51.41	48.21	48.94	50.16	51.41
50W Mercury	56.47	57.32	58.75	60.22	47.31	48.02	49.22	50.45
80W Mercury	50.20	50.96	52.23	53.54	47.81	48.53	49.74	50.98
125W Mercury	48.11	48.84	50.06	51.31	47.81	48.53	49.74	50.98
250W Mercury	52.20	52.99	54.31	55.67	47.81	48.53	49.74	50.98
2 x 250W Mercury	48.98	49.72	50.96	52.23	48.98	49.72	50.96	52.23
400 W Mercury	52.89	53.69	55.03	56.41	47.81	48.53	49.74	50.98
50W Sodium	48.79	49.53	50.77	52.04	48.79	49.53	50.77	52.04
70W Sodium	48.79	49.53	50.77	52.04	48.79	49.53	50.77	52.04
90W Sodium	49.52	50.27	51.53	52.82	49.52	50.27	51.53	52.82
100W Sodium	76.47	77.62	79.56	81.55	49.52	50.27	51.53	52.82
120W Sodium	177.36	180.04	184.54	189.15	48.61	49.34	50.57	51.83
150W Sodium	54.95	55.78	57.17	58.60	48.61	49.34	50.57	51.83
250W Sodium	54.85	55.68	57.07	58.50	48.85	49.59	50.83	52.10
2 x 250W Sodium	51.08	51.85	53.15	54.48	51.08	51.85	53.15	54.48
310W Sodium	48.85	49.59	50.83	52.10	48.85	49.59	50.83	52.10
400 W Sodium	51.02	51.79	53.08	54.41	49.09	49.83	51.08	52.36
2 x 400 W Sodium	62.39	63.33	64.91	66.53	51.55	52.33	53.64	54.98
4 x 600W Sodium	56.47	57.32	58.75	60.22	56.47	57.32	58.75	60.22
60 W Incandescent	46.63	47.33	48.51	49.72	46.63	47.33	48.51	49.72
100 W Incandescent	46.63	47.33	48.51	49.72	46.63	47.33	48.51	49.72
500 W Incandescent	46.65	47.35	48.53	49.74	46.63	47.33	48.51	49.72
100 W Metal Halide	57.25	58.11	59.56	61.05	56.30	57.15	58.58	60.04
150 W Metal Halide	65.54	66.53	68.19	69.89	63.15	64.10	65.70	67.34
250 W Metal Halide	57.78	58.65	60.12	61.62	52.05	52.84	54.16	55.51
2 x 250 W Metal Halide	73.16	74.26	76.12	78.02	57.46	58.33	59.79	61.28
400 W Metal Halide	49.43	50.18	51.43	52.72	49.09	49.83	51.08	52.36
2 x 400 W Metal Halide	72.26	73.35	75.18	77.06	51.55	52.33	53.64	54.98
1000 W Metal Halide	48.78	49.52	50.76	52.03	49.09	49.83	51.08	52.36
600 W Sodium	71.38	72.46	74.27	76.13	49.09	49.83	51.08	52.36
Pole mounting bracket minor (<=3m)	12.81	13.00	13.33	13.66	11.66	11.84	12.14	12.44
Pole mounting bracket major (>3m)	17.61	17.88	18.33	18.79	11.66	11.84	12.14	12.44
Outreach Minor (<=2m)	14.64	14.86	15.23	15.61	11.66	11.84	12.14	12.44
Outreach Major (>2m)	13.86	14.07	14.42	14.78	11.66	11.84	12.14	12.44
Minor Column (<=9)	44.94	45.62	46.76	47.93	12.23	12.41	12.72	13.04
Major Column (>=9)	93.53	94.94	97.31	99.74	12.23	12.41	12.72	13.04

Public Lighting Prices (Class 3 & 4)

	Actuals	Actuals			Actuals	Actuals		
	Tariff Class 3 (ex GST) 2015-16	Tariff Class 3 (ex GST) 2016-17	Tariff Class 3 (ex GST) 2017-18	Tariff Class 3 (ex GST) 2018-19	Tariff Class 4 (ex GST) 2015-16	Tariff Class 4 (ex GST) 2016-17	Tariff Class 4 (ex GST) 2017-18	Tariff Class 4 (ex GST) 2018-19
2x14W Energy Efficient Fluro - STD	98.26	99.74	102.23	104.79	60.89	61.81	63.36	64.94
2x24W Energy Efficient Fluro - STD	102.44	103.99	106.59	109.25	62.82	63.77	65.36	66.99
1x42W Compact Fluorescent - STD	92.25	93.64	95.98	98.38	60.08	60.99	62.51	64.07
50W Mercury - STANDARD	87.18	88.50	90.71	92.98	58.49	59.37	60.85	62.37
80W Mercury - STANDARD	84.49	85.77	87.91	90.11	58.61	59.50	60.99	62.51
70W Sodium - STANDARD	90.23	91.59	93.88	96.23	60.36	61.27	62.80	64.37
100W Sodium - STANDARD	96.28	97.73	100.17	102.67	61.92	62.85	64.42	66.03
100W Metal Halide - STANDARD	105.61	107.20	109.88	112.63	69.86	70.91	72.68	74.50
25W LED (StreetLED25)	121.42	123.25	126.33	129.49	60.32	61.23	62.76	64.33
22W LED (StreetLED18)	121.42	123.25	126.33	129.49	60.32	61.23	62.76	64.33
Suburban 70W HPS c/w D2 PECB - STI	83.83	85.10	87.23	89.41	57.37	58.24	59.70	61.19
150W Sodium - STANDARD	98.22	99.70	102.19	104.74	61.29	62.22	63.78	65.37
150W Metal Halide - STANDARD	99.79	101.30	103.83	106.43	59.57	60.47	61.98	63.53
250W Sodium - STANDARD	99.13	100.63	103.15	105.73	61.66	62.59	64.15	65.75
250W Metal Halide - STANDARD	103.44	105.00	107.63	110.32	65.39	66.38	68.04	69.74
400W Sodium - STANDARD	102.69	104.24	106.85	109.52	62.38	63.32	64.90	66.52
80W Mercury - AEROSCREEN	89.36	90.71	92.98	95.30	59.28	60.18	61.68	63.22
Urban A/Screen 42W CFL c/w D2 PECE	100.19	101.70	104.24	106.85	61.17	62.09	63.64	65.23
150W Sodium - AEROSCREEN	101.31	102.84	105.41	108.05	61.72	62.65	64.22	65.83
150W Metal Halide - AEROSCREEN	121.70	123.54	126.63	129.80	78.81	80.00	82.00	84.05
250W Sodium (w/o PECB) - AEROSCR	101.59	103.12	105.70	108.34	62.00	62.94	64.51	66.12
250W Metal Halide - AEROSCREEN	105.90	107.50	110.19	112.94	65.73	66.72	68.39	70.10
400W Sodium - AEROSCREEN	105.39	106.98	109.65	112.39	62.75	63.70	65.29	66.92
400W Metal Halide - AEROSCREEN	109.35	111.00	113.78	116.62	66.20	67.20	68.88	70.60
Roadster A/Screen 100W HPS c/w PEC	98.87	100.36	102.87	105.44	62.28	63.22	64.80	66.42
80W Mercury - POST TOP	95.70	97.15	99.58	102.07	60.16	61.07	62.60	64.17
B2001 42WCFL c/w D2 PECB green - F	119.01	120.81	123.83	126.93	62.22	63.16	64.74	66.36
250W Sodium - FLOODLIGHT	118.30	120.09	123.09	126.17	64.30	65.27	66.90	68.57
250W Metal Halide - FLOODLIGHT	122.61	124.46	127.57	130.76	68.03	69.06	70.79	72.56
400W Sodium - FLOODLIGHT	120.85	122.67	125.74	128.88	64.89	65.87	67.52	69.21
400W Metal Halide - FLOODLIGHT	124.81	126.69	129.86	133.11	68.34	69.37	71.10	72.88
150W Sodium - FLOODLIGHT	117.45	119.22	122.20	125.26	63.94	64.91	66.53	68.19
150W Metal Halide - FLOODLIGHT	137.84	139.92	143.42	147.01	81.04	82.26	84.32	86.43
Bracket - Minor <=3m	20.85	21.16	21.69	22.23	14.69	14.91	15.28	15.66
Bracket - Major >3m	58.90	59.79	61.28	62.81	21.80	22.13	22.68	23.25
Outreach - Minor <=2m	22.53	22.87	23.44	24.03	15.01	15.24	15.62	16.01
Outreach - Major >2m	34.35	34.87	35.74	36.63	17.21	17.47	17.91	18.36
Pole (Wood) - Minor - DEDICATED SL <	80.11	81.32	83.35	85.43	26.29	26.69	27.36	28.04
Pole (Wood) - Major - DEDICATED SL >	142.36	144.51	148.12	151.82	37.90	38.47	39.43	40.42
Column (Steel) - Minor <=9m	233.83	237.36	243.29	249.37	26.78	27.18	27.86	28.56
Column (Steel) - Major >9m	475.38	482.56	494.62	506.99	38.05	38.62	39.59	40.58