

TARIFF STRUCTURE STATEMENT



Your power, your say

4 October 2016

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3. IPSOS Public Affairs stakeholder engagement report
4. Assigning customers to tariffs - Policies and procedures for assignment and reassignment of tariffs
5. Alternative Control Pricing Schedule
6. Compliance report from Farrier Swier Consulting
7. Updated Long Run Marginal Cost model
8. Addendum to our Tariff Structure Statement: Explanations & Reasoning

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GLOSSARY

Term	Meaning
2014-19 Determination	Our current regulatory control period running from 1 July 2014 through to 30 June 2019.
AEMC	Australian Energy Market Commission – the rule makers for Australian electricity and gas markets.
AER	Australian Energy Regulator – the national regulator that oversees the electricity industry.
Alternative Control Services	These are specific user requested services. They comprise: <i>Public Lighting</i> ; <i>Type 5 & 6 Metering</i> (generally residential and small business customer meters); and <i>Ancillary Network Services</i> .
Charging parameters	The specific charge characteristics for a component within the tariff structure. For example, the energy charge component may vary with the time of day in which electricity is consumed.
CPI	Consumer Price Index.
DBT / Declining block tariff	A tariff whereby the network charge becomes progressively cheaper as customer consumption increases.
Direct control services	Services regulated by the AER under the National Electricity Rules. Direct control services comprise Standard Control Services and Alternative Control Services.
DNISP	Distribution Network Service Provider.
Financial year	The year running from 1 July in any year to 30 June the following year.
HV	High voltage.
IDT	Inter distributor transfer – a type of customer.
kVA	Kilovolt ampere.
kW	Kilowatt.
kWh	Kilowatt hour.
LRMC	Long run marginal cost – economic term for the cost of adding one more unit of demand to the network.
LV	Low voltage.
NEL	National Electricity Law.
NEO	National Electricity Objective.
NMI	National Meter Identifier – each meter installation has a unique NMI.
NUOS	Network Use of System – this is the charge for using Essential Energy’s distribution network, as well as the pass through of transmission type costs and jurisdictional scheme amounts such as the climate Change Fund.
Peak demand / peak load	The maximum electricity demand customers place on the electricity network.
Standard Control Services	Comprise Essential Energy’s core activities from access to, and supply of, electricity to customers.
Tariff	A cost charged to network customers to recover the efficient costs of providing network services.
Tariff class	A group of customers that share a common set of characteristics that allows them to be grouped together to ensure that similar customers pay similar prices.
Tariff component	Tariffs comprise one to three tariff components that work together to reflect the efficient costs of providing network services to customers. The three components are: Fixed charge, Energy charge and Demand charge.
Tariff schedule	The list of prices and tariff structures for each of our tariffs, published annually. Also referred to as Network Price List and Explanatory Notes.
Tariff structure	How tariff components are combined to give the tariff structure.
The Rules	The National Electricity Rules.
TOU	Time of Use – a meter or tariff that varies with when electricity is consumed in either a: peak; shoulder; or off-peak period.
TSS	Tariff Structure Statement.

ABOUT THIS TARIFF STRUCTURE STATEMENT

Essential Energy's initial Tariff Structure Statement (TSS) for the period 1 July 2017 to 30 June 2019 was submitted to the Australian Energy Regulator (AER) on 27 November 2015.

In its draft decision, released on 2 August 2016, the AER did not approve this TSS as it was not considered to be fully compliant with the Rules.

Essential Energy submitted this revised TSS, which addresses those areas of non-compliance and, in particular, demonstrates how we have adopted the new network pricing objective and complied with the associated pricing principles set out in Section 6.18 of the National Electricity Rules (NER), to the AER on 4 October 2016. The AER will assess this revised TSS and make a final decision before any tariff structures and associated pricing apply from on 1 July 2017.

Our revised TSS seeks to provide a clear explanation and facilitate a greater level of understanding of our network tariffs to enable customers to make more informed choices about how they use electricity.

As requested by the AER, this revised TSS specifically addresses only the requirements of section 6.18.1(A) of the Rules. An addendum to this TSS provides explanations and reasons for changes from our initial TSS. The addendum, Attachment 8 to the TSS, is to be read in conjunction with this TSS and contains:

- > results of stakeholder consultation undertaken following the AER draft decision
- > explanations of any changes made to our TSS following the AER's draft decision and our recent stakeholder consultation
- > reasons why some changes to our TSS proposed by the AER in its draft decision have not been adopted
- > a summary of the strategy and enhancements we are considering for our next TSS and future pricing directions.

Requirements of a Tariff Structure Statement

As set out in the final Rule, the network prices that a distribution network service provider (DNSP) charges each customer should reflect the business's efficient costs of providing network services to that customer.

Essential Energy must demonstrate compliance with the following pricing principles:

- > Each network tariff must be based on the long run marginal cost (LRMC) of providing the service. LRMC is a measure of the future network costs that are incurred by using one more unit of energy, adding one more customer to the network, or the costs that could be saved by using less energy.
- > The revenue to be recovered from each network tariff must reflect the DNSP's total efficient costs of providing services to the customers assigned to that tariff.
- > DNSPs must consider the impact on consumers of changes in network tariffs and must develop tariffs which are reasonably capable of being understood by customers.
- > Network tariffs must also comply with any jurisdictional pricing obligations imposed by state or territory governments.
- > The revenue expected to be recovered from a tariff class must lie between the stand-alone cost of providing the service to the relevant customers and the avoidable cost of not providing the services.
- > Side constraints which limit annual price movements within a tariff class are to be adhered to.

Table A-1-1 on the following page will help customers navigate to where Essential Energy has addressed each of the Rule requirements in clause 6.18.1(A) of the NER in this TSS.

Feedback on this TSS

A key objective of this TSS is to reflect the views of our customers and stakeholders. Essential Energy's customers and stakeholders can provide feedback and comments on Essential Energy's TSS either to the AER at www.aer.gov.au or through the following channels:

Channel	Contact details
Email	ourplans@essentialenergy.com.au
Post	Manager Network Regulation Essential Energy PO Box 5730 Port Macquarie NSW 2444
Phone	13 23 91
Twitter	twitter.com/essentialenergy

Table A-1-1: How to find where Essential Energy has addressed the TSS Rule requirements

Relevant requirement	Rule reference	Location within the TSS
The TSS must include tariff classes.	6.18.1A(a)(1)	Section 3 - Our proposed tariff classes
The TSS must include the policies and procedures for assigning customers to tariffs and reassigning from one tariff to another.	6.18.1A(a)(2)	Section 2 - Assigning customers to tariffs and Attachment 4 - <i>Assigning customers to tariffs - Policies and procedures</i> for assignment and reassignment of tariffs
The TSS must include the structures for each tariff.	6.18.1A(a)(3)	Section 4 - Our proposed tariff structures
The TSS must include the charging parameters for each tariff.	6.18.1A(a)(4)	Section 4 - Our proposed tariff structures
The TSS must include a description of the approach we will take in setting each tariff in each pricing proposal during the regulatory period.	6.18.1A(a)(5)	Section 5.2 - Approach to setting tariffs
The TSS must comply with the pricing principles for direct control services	6.18.1(A)(b)	Section 5 - Our Tariff Setting Methodology
A DNSP must comply with the TSS approved by the AER and any other applicable requirements in the Rules, when the provider is setting the prices that may be charged for direct control services	6.18.1(A)(c)	Not applicable
Subject to clause 6.18.1B, a TSS may not be amended during a regulatory control period	6.18.1(a)(d)	Not applicable
The TSS must be accompanied by an indicative pricing schedule.	6.18.1A(e)	Attachment 2 - <i>Indicative NUOS Pricing Schedule</i> (for Standard Control Services); and Attachment 5 - <i>Alternative Control Pricing Schedule</i>

1. EXECUTIVE SUMMARY

On 27 November 2014, the Australian Energy Market Commission (AEMC) made a new Rule that requires distribution network service providers (DNSPs) to develop prices that better reflect the costs of providing network services to customers. This document is our revised Tariff Structure Statement (TSS), a requirement of the new Rule. It covers the two-year period commencing 1 July 2017.

This TSS outlines the overall structure of our proposed network tariffs and how we aim to transition our customers to more efficient pricing. Our proposed tariffs have been developed to meet the network pricing objective and principles set out in the National Electricity Rules (the Rules). This TSS should be read in conjunction with our Explanations and Reasoning addendum (Attachment 8) which outlines:

- > stakeholder consultation we have undertaken following the Australian Energy Regulator's (AER's) draft decision
- > how that consultation has helped shape our revised TSS
- > changes we have made to our initial TSS put forward to the AER on 27 November 2015 and the reasons for those changes
- > reasons why we have not proceeded with some of the suggestions the AER put forward in its draft decision
- > our future tariff setting methodology and the enhancements we plan to incorporate in our next TSS and future regulatory periods.

Network tariffs form a key component of our overall demand management strategy. In developing our tariffs, we aim to reduce long-term average prices by promoting efficient network investment and utilisation.

We have identified that some of our existing tariff components do not currently comply with our estimate of the long run marginal cost (LRMC) concept required by the Rules. In accordance with the Rules, we will progressively transition our customers to these more efficient price structures and price levels over time, recognising that as an estimate –based on methodological and input choices – it is more of a guide than a fixed constraint.

As metering technology in our network area continues to improve – assisted by the introduction of metering contestability from 1 December 2017 – we will be better able to develop more cost-reflective tariff structures for our customers. As such, this TSS should be seen as a stepping stone towards this goal.

We have developed our revised TSS utilising feedback from the AER in its draft decision and in conjunction with our stakeholders. Throughout August 2016, we held numerous face-to-face and one-on-one discussions based around topics raised in the AER's draft decision with members of our customer advocacy and other stakeholder groups, as well as Essential Energy's Customer Advocacy Group. These targeted sessions provided a direct means of gauging stakeholder views and allowed us to engage with all relevant groups in the limited amount of time allowed between publication of the AER's draft decision and our resubmission. Written responses were also encouraged as a follow-up to each session.

IPSOS Public Affairs was also engaged to consult directly with those business customers who no longer meet eligibility requirements for the tariff to which they are currently assigned and need to move to a new tariff structure. The majority of these customers are likely to experience material increases in their bills and we are working with them to determine an appropriate transition pathway towards cost-reflective network pricing.

Managing suitable transition paths for all our customers has been a priority for this TSS. As such, many of our proposed tariff structures are largely identical to our existing tariff structures and will have no, or minimal, impact on the majority of our customers. However, in response to stakeholder feedback, we have made some refinements and additions to our initial TSS to provide the majority of customers with more tariff choices and facilitate transition towards cost-reflective pricing in our network area.

Essential Energy operates under a revenue cap control mechanism which prevents us earning more over time than the revenue the AER has determined is reasonable and efficient.

We set our tariff prices based on estimated demand levels to recover our revenue allowance. However, since the level of revenue we receive is driven by actual demand levels, we tend to collect a level of revenue that differs to our regulated allowance in any year. To correct this, we adjust a following years' prices to either pay back any over-recovery, or collect any under-recovery.

Additionally, our tariff prices are aimed at ensuring that the revenue earned from each customer reflects how their consumption choices impact our actual network costs. While actual network tariffs for each year will be determined

through the AER's annual pricing proposal process, they must comply with the structures set out in our approved TSS.

1.1 Changes from our initial TSS published in November 2015

- > We will offer a flat rate tariff structure for our existing small residential and business customers instead of the current declining block tariff (DBT) structure.
- > We will introduce more cost-reflective charging windows and associated pricing to customers on time of use (TOU) and demand tariffs with an interval (or higher capability) meter. These charging windows are similar to our existing windows, but with the morning peak window being replaced with an extension of the day-time shoulder window.
- > We will introduce a new TOU tariff structure for residential and small business customers with interval meters. These TOU tariffs will adopt the more cost-reflective charging windows noted above, rather than the legacy charging windows that are available to our customers with basic accumulation meters with TOU capability, or Type 5 meters.
- > We will introduce opt-in demand tariffs for residential and small business customers.
- > From 1 July 2018 all new connections, meter upgrades and new solar PV installations for residential and small business customers will be assigned to the TOU tariff appropriate to their metering technology in the first instance, with the option to opt-out to an alternative tariff.
- > We will implement a specific transitional tariff for approximately 1,000 low voltage business customers currently assigned to an incorrect tariff who need to move to a demand based tariff and, in doing so, will experience an increase in their bills.

1.2 What has not changed following the AER's draft decision

- > Given the cost imposition for customers and the introduction of meter contestability from 1 December 2017, we have not altered the proposed charging windows for existing TOU customers with basic accumulation meters.
- > Since some areas of our network peak in winter, others in summer and many in both seasons, we have not implemented seasonal TOU windows. This decision is supported by most of our customers and stakeholders, who have stated that they favour simplicity in tariff design. On review, seasonal tariffs were seen as adding increased potential for significant seasonal price fluctuations to customer bills, and a layer of complexity that should be avoided if possible. Implementing seasonal tariffs for our accumulation meters with TOU capability would also involve a significant annual cost to customers that was not clearly outweighed by the benefits.

2. ASSIGNING CUSTOMERS TO TARIFFS

2.1 Default tariff assignment

Customers are assigned to tariffs based on their technical properties, such as their load (demand and/or usage), the voltage level at which they are connected to the network and their metering characteristics (meter type).

Essential Energy uses the following system of assessment to assign or reassign customers to an appropriate tariff:

1. Assign the customer to the appropriate tariff class based on the tariff class criteria.
2. Assign the customer to the appropriate tariff within the tariff class. This is based on the customer's connection, load and metering characteristics, as well as the customer type; for example, residential or business. Such an assignment might be the result of an Essential Energy review or a customer request through their Retailer.

Tariff assignment occurs when a customer starts consuming electricity from a new connection point. Essential Energy uses the estimated information collected from the Retailer's service order in conjunction with the system of assessment outlined above to assign the new customer to the appropriate tariff. For a change of occupancy, Essential Energy will normally assign the customer to the tariff that previously existed at the premises.

2.2 Tariff reassignment

When a customer is assigned to a tariff, that tariff will continue to apply until such time as:

- > Essential Energy receives a request from the customer's *Retailer* to review the *tariff* to which the existing *customer* is assigned as a result of:
 - A customer request, for example a customer wants to move to an opt-in demand tariff, or
 - A change in the *customer's load, connection and/or metering characteristics* (i.e. *Retailer* applies for a *tariff* reassignment on behalf of the *customer*), or
- > Essential Energy, through its own review process, believes that an existing *customer's load, connection and/or metering characteristics* have changed such that it is no longer appropriate for that *customer* to be assigned to the *tariff* to which the *customer* is currently assigned. Essential Energy initiates the *tariff* reassignment by providing a notice to the customer's *Retailer* prior to the actual *tariff* reassignment.

As part of its notification procedures, Essential Energy advises the Retailer that they can request further information from Essential Energy and that they may object to the tariff reassignment decision made. The objection procedure allows Retailers to formally request a review of the tariff reassignment decision.

Should the customer or Retailer not be satisfied with the response from Essential Energy, they may escalate the matter to the Energy and Water Ombudsman (NSW) or any other relevant external dispute resolution body to the extent it has jurisdiction over such matters. If the customer or Retailer is still not satisfied with the external party's assessment, they can seek a decision from the AER using the dispute resolution process available under Part 10 of the National Electricity Law (the NEL).

2.3 Changes to tariff assignment from our initial TSS

In contrast to our initial TSS, new connections, meter upgrades and new solar PV installations for residential and small business customers will, from 1 July 2018, be allocated to the TOU tariff relevant to their metering technology. Customers will have the choice to opt out to an alternative tariff if they satisfy the necessary eligibility requirements.

Full details of our proposed customer tariff assignment and reassignment policy and procedures to accompany the introduction of more efficient pricing can be found in Attachment 4 - *Assigning customers to tariffs - Policies and procedures for assignment and reassignment of tariffs* to this TSS.

4. OUR PROPOSED TARIFF STRUCTURES

Our revised TSS for 2017-19 differs from our initial TSS in only five areas. Our changes are summarised below, under the customer class to which they relate.

Eligibility requirements, tariff structures and tariff components for each customer type are outlined in the following sections.

4.1 Changes to tariff structures from our initial TSS

Residential and Small Business customer changes

1. We have changed the declining block tariff (DBT) structure for our residential and small business customers to a flat rate tariff structure. This change aligns with the AER draft decision and customer feedback that strongly supported a flat rate tariff structure over a DBT structure.
2. We have added new TOU tariffs for our residential and small business customers with an interval or higher capability meter. The charging windows for these tariffs are aligned with our network demand pressures, rather than our legacy metering technology, and will provide customers with a more cost-reflective tariff.
3. We have introduced opt-in demand tariffs for residential and small business customers with appropriate meters. Demand charging was a consistent request from many of our stakeholders during TSS consultation.

Business, Large Business and Sub-transmission customers

1. We have altered the charging windows for the energy and demand tariff components of our business, large business and sub-transmission customer tariffs. The charging windows are aligned with actual network demand pressures, rather than legacy metering technology, and will provide more cost-reflective tariffs for these customers.
2. We have introduced a specific transitional tariff for approximately 1,000 business customers currently on a DBT or TOU tariff who need to transition to a demand based tariff and who will be worse off following this move. (Establishing a specific tariff for these customers will reduce the potential for transitional pricing errors, as it will eliminate the need for any manual intervention in the billing process.)

The structure of this tariff is consistent with the TOU three rate demand tariff available to other Business customers; however, component weighting varies.

This tariff will enable these customers to manage bill shock as they transition to the full demand based tariff over five years, and at the same time ensure adherence to the pricing principles in the Rules.

Customers who are assigned to this tariff on 1 July 2017 will be able to opt out from this tariff at any time thereafter for up to five-years.

4.2 Residential customers' network tariffs and charging parameters

We propose offering four residential tariffs under the 'Low voltage residential and small business' tariff class – two more than presently available. The Residential Anytime tariff replaces the current DBT and both the Residential Time of Use – Interval tariff and Residential – Demand tariff are new tariffs for customers with the appropriate metering technology. These tariffs and the associated eligibility criteria are shown below in Table 4-1. Associated tariff structures and charging parameters are shown further below in Table 4-2.

Table 4-1: Eligibility for Residential customer tariffs

Tariff	Eligibility
Residential Anytime	<ul style="list-style-type: none"> > Low voltage connection > Premises wholly used as a private dwelling where consumption does not exceed 160 MWh per year > Default network tariff for residential customers until 30 June 2018 > Optional tariff for residential customers from 1 July 2018
Residential Time of Use	<ul style="list-style-type: none"> > Low voltage connection > Premises wholly used as a private dwelling where consumption does not exceed 160 MWh per year > Basic accumulation meter with Time of Use capability or a Type 5 meter > Optional network tariff for residential customers until 30 June 2018 > Default network tariff for residential customers with the appropriate meter from 1 July 2018
Residential Time of Use - Interval	<ul style="list-style-type: none"> > Low voltage connection > Premises wholly used as a private dwelling where consumption does not exceed 160 MWh per year > Interval or higher capability meter > Default network tariff for residential customers with the appropriate meter from 1 July 2018
Residential – Demand	<ul style="list-style-type: none"> > Low voltage connection > Premises wholly used as a private dwelling where consumption does not exceed 160 MWh per year > Interval or higher capability meter > Optional tariff for residential customers with the appropriate meter

Table 4-2: Residential network tariff structures and charging parameters

Tariff	Tariff structure	Measure	Charging parameter
Residential Anytime	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Fixed rate per kw/h
Residential Time of Use	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 7am to 9am and 5pm to 8pm on weekdays > Shoulder period is from 9am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
Residential Time of Use - Interval	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
Residential – Demand	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
	Demand	\$/kVA	Maximum demand charge based on the highest measured half-hour kVA demand registered in either the peak or shoulder periods during the month.

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4.3 Small Business customers' network tariffs and charging parameters

We propose four tariffs for Small Business customers under the 'Low voltage residential and small business' tariff class - two more than presently available. The Business Anytime tariff replaces the current DBT and both the Business Time of Use – Interval tariff and Business – Demand tariff are new tariffs for customers with the appropriate metering technology. These tariffs and the associated eligibility criteria are shown below in Table 4-3. Associated tariff structures and charging parameters are shown further below in Table 4-4.

Table 4-3: Eligibility for Small Business customer tariffs

Tariff	Eligibility
Business Anytime	<ul style="list-style-type: none"> > Low voltage connection > Business premises where consumption does not exceed 100 MWh per year > Default network tariff for small business customers until 30 June 2018 > Optional tariff for small business customers from 1 July 2018
Business Time of Use	<ul style="list-style-type: none"> > Low voltage connection > Business premises where consumption does not exceed 160 MWh per year > Basic accumulation meter with Time of Use capability or a Type 5 meter > Optional tariff for small business customers until 30 June 2018 > Default network tariff for small business customers with the appropriate meter from 1 July 2018
Business Time of Use - Interval	<ul style="list-style-type: none"> > Low voltage connection > Business premises where consumption does not exceed 160 MWh per year > Interval or higher capability meter > Optional tariff for small business customers until 30 June 2018 > Default network tariff for small business customers with the appropriate meter from 1 July 2018
Business – Demand	<ul style="list-style-type: none"> > Low voltage connection > Business premises where consumption does not exceed 160 MWh per year > Interval or higher capability meter > Optional tariff for small business customers with the appropriate meter

Table 4-4: Small Business customers proposed network tariff structures and charging parameters

Tariff	Tariff structure	Measure	Charging parameter
Business Anytime	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Fixed rate per kw/h
Business Time of Use	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 7am to 9am and 5pm to 8pm on weekdays > Shoulder period is from 9am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
Business Time of Use - Interval	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
Business – Demand	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times

Tariff	Tariff structure	Measure	Charging parameter
	Demand	\$/kVA	Maximum demand charge based on the highest measured half-hour kVA demand registered in either the peak or shoulder periods during the month.

4.4 Controlled Load customers' network tariffs and charging parameters

We propose continuing to offer two tariffs to Controlled Load customers under the 'Low voltage energy' tariff class. These tariffs and the associated eligibility criteria are shown in Table 4-5 below.

Table 4-5: Eligibility for Controlled Load customer tariffs

Tariff	Eligibility
Controlled load 1	<ul style="list-style-type: none"> > Low voltage connection > Premises where consumption does not exceed 160 MWh per year > Premise has another primary metering point present at the same metering point as the secondary load and the load is remotely controlled > Load is permanently connected or on a dedicated power circuit with indicators to show when supply is available. > This tariff is not available for the top boost element of a two element water heater for new connections.
Controlled load 2	<ul style="list-style-type: none"> > Low voltage connection > Premises where consumption does not exceed 160 MWh per year > Premise has another primary metering point present at the same metering point as the secondary load and the load is remotely controlled > Load is permanently connected or on a dedicated power circuit with indicators to show when supply is available.

The associated tariff structures and charging parameters for our Controlled Load customer tariffs are shown in Table 4-6 below. The structures are identical to our existing tariffs for Controlled Load customers.

Table 4-6: Controlled Load customers proposed network tariff structures and charging parameters

Tariff	Tariff structure	Measure	Charging parameter
Controlled load 1	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Flat rate based on usage between five to nine hours overnight on weekdays and extra hours on weekends except where the load is controlled by a time clock
Controlled load 2	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Flat rate based on usage between 10 to 18 hours per day on weekdays and all hours on weekends except where the load is controlled by a time clock

4.5 Business customers’ network tariffs and charging parameters

We propose continuing to offer three network tariffs for Business customers under the ‘Low voltage demand’ tariff class. A further Transitional - Demand network tariff will be offered to the approximately 1,000 businesses currently on a DBT or TOU tariff that need to transition to a demand based tariff (see section 5.3). The tariffs and the associated eligibility criteria are shown in Table 4-7 below.

Table 4-7: Eligibility for Business customer tariffs

Tariff	Eligibility
Low voltage – Time of Use average daily demand	<ul style="list-style-type: none"> > Low voltage connection > Business premises where consumption exceeds 160 MWh per year > Monthly load factor greater than 60% for at least four of the most recent 12 months coinciding with a minimum on season anytime monthly demand of 1500 kVA. > Intended for customers with a seasonal demand > Interval capable meter
Low voltage – Time of Use three rate demand	<ul style="list-style-type: none"> > Low voltage connection > Business premises where consumption exceeds 160 MWh per year
Low voltage – Time of Use demand alternative	<ul style="list-style-type: none"> > Interval capable meter
<i>Transitional – Demand</i>	<ul style="list-style-type: none"> > Customer on a declining block tariff or time-of-use tariff at 30 June 2017, but no longer meets the associated eligibility requirements for that tariff from 1 July 2017 and is worse off under the applicable Low voltage – time of use demand three rate demand tariff at that date. > Low voltage connection > Business premises where consumption exceeds 160 MWh per year > Interval capable meter

The associated tariff structures and charging parameters for our Business customer tariffs are shown in Table 4-8 on the following page. The structures are identical to our existing tariffs for Business customers, except for the change in charging windows. The morning peak has been removed and replaced with an extension of the day-time shoulder window, in line with our network use analysis and the AER’s feedback in its draft decision.

As mentioned in section 4.1, the Transitional – Demand tariff has the same structure as the associated TOU three rate demand Business tariff; however, the weighting of the tariff components differs.

Table 4-8: Business customers proposed network tariff structures and charging parameters

Tariff	Tariff structure	Measure	Charging parameter
Low voltage – Time of Use average daily demand	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
	Demand	\$/kVA	Demand charge calculated on the average daily time of use demand for peak, shoulder and off-peak periods for the month.
Low voltage – Time of Use three rate demand	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
	Demand	\$/kVA	Maximum demand charge based on the highest measured half-hour kVA demand registered in each of the peak, shoulder and off-peak periods during the month.
Low voltage – Time of Use demand alternative	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
	Demand	\$/kVA	Maximum demand charge based on the highest measured half-hour kVA demand registered in either the peak or shoulder periods during the month.
Transitional – Demand <i>(Runs only for five years from 1 July 2017 to 30 June 2022 for eligible customers)</i>	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
	Demand	\$/kVA	Maximum demand charge based on the highest measured half-hour kVA demand registered in each of the peak, shoulder and off-peak periods during the month.

4.6 Large Business customers' network tariffs and charging parameters

We propose continuing to offer two network tariffs for Large Business customers under the 'High voltage demand' tariff class. The tariffs and the associated eligibility criteria are shown in Table 4-9 below.

Table 4-9: Eligibility for Large Business customer tariffs

Tariff	Eligibility
High voltage – Time of Use average daily demand	<ul style="list-style-type: none"> > High voltage connection and metering point > Business premises where consumption exceeds 160 MWh per year > Monthly load factors >60% for at least four of the most recent 12 months coinciding with a minimum on season anytime monthly demand of 1500 kVA. The minimum demand and load factor requirements will be waived where a generator supports a substantial part of the load on the load side of the meter. > Intended for customers with a seasonal demand > Interval capable meter
High voltage – Time of Use monthly demand	<ul style="list-style-type: none"> > High voltage connection and metering point > Business premises where consumption exceeds 160 MWh per year > Interval capable meter

The associated tariff structures and charging parameters for Large Business customer tariffs are shown in Table 4-10 below. The structures are identical to our existing tariffs for Large Business customers except for the change in charging windows. The morning peak has been removed and replaced with an extension of the day-time shoulder window, in line with our network use analysis and the AER's feedback in its draft decision.

Table 4-10: Large Business customers proposed network tariff structures

Tariff	Tariff structure	Measure	Charging parameter
High voltage – Time of Use average daily demand	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
	Demand	\$/kVA	Demand charge calculated on the average daily time of use demand for peak, shoulder and off-peak periods for the month.
High voltage – Time of Use monthly demand	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
	Demand	\$/kVA	Maximum demand charge based on the highest measured half-hour kVA demand registered in each of the peak, shoulder and off-peak periods during the month.

4.7 Large Business Sub-transmission customers' network tariffs and charging parameters

We propose continuing to offer two network tariff options for Large Business Sub-transmission customers under the 'Sub-transmission' tariff class. The tariff and the associated eligibility criteria are shown in Table 4-11 below.

Table 4-11: Eligibility for Large Business Sub-transmission customer tariffs

Tariff	Eligibility
Sub-transmission – three rate demand	<ul style="list-style-type: none"> > Sub-transmission connection (as defined by Essential Energy) > Business premises where consumption exceeds 160 MWh per year > Interval capable meter > Not applicable for connection to dual purpose sub-transmission/distribution circuits
Site specific	<ul style="list-style-type: none"> > Certain large business customers > On a case-by-case basis by application to Essential Energy

The associated tariff structure and charging parameters for our Large Business Sub-transmission customer tariffs are shown in Table 4-12 below. The structures are identical to our existing tariffs for Large Business Sub-transmission and Inter distributor transfer customers except for the change in charging windows. The morning peak has been removed and replaced with an extension of the day-time shoulder window, in line with our latest network use analysis and the AER's feedback in its draft decision.

Table 4-12: Large Business Sub-transmission customers proposed network tariff structures

Tariff	Tariff structure	Measure	Charging parameter
Sub-transmission – three rate demand	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times
	Demand	\$/kVA	Maximum demand charge based on the highest measured half-hour kVA demand registered in each of the peak, shoulder and off-peak periods during the month.
Site specific	Various	Various	Various combinations of fully cost reflective structures

4.8 Unmetered customers' network tariffs and charging parameters

We propose continuing to offer two network tariff options for Unmetered customers under the 'Unmetered' tariff class. The tariff and the associated eligibility criteria are shown in Table 4-13 below.

Table 4-13: Eligibility for Unmetered customer tariffs

Tariff	Eligibility
LV Unmetered NUOS	<ul style="list-style-type: none"> > Type 7 meter > Applies to loads agreed between a Minister and AEMO > All new unmetered supply connections will have this tariff applied
LV Public Street lighting TOU NUOS	<ul style="list-style-type: none"> > Type 7 meter > Applies to loads agreed between a Minister and AEMO > All new public street lighting connections will have this tariff applied

The associated tariff structure and charging parameters for our Unmetered customer tariffs are shown in Table 4-14 below. The structures are identical to our existing tariffs for Unmetered customers.

Table 4-14: Unmetered customers proposed network tariff structures

Tariff	Tariff structure	Measure	Charging parameter
LV Unmetered NUOS	Fixed	\$/day	Network access charge reflecting a fixed amount per day
	Energy	c/kWh	Flat rate based on usage
LV Public Street lighting TOU NUOS	Energy	c/kWh	Peak, shoulder and off-peak rate based on energy consumed in each period <ul style="list-style-type: none"> > Peak period is from 5pm to 8pm on weekdays > Shoulder period is from 7am to 5pm and 8pm to 10pm on weekdays > Off peak period is at all other times

5. OUR TARIFF SETTING METHODOLOGY

This section outlines the approach we will use to set each tariff in each of the 2017-18 and 2018-19 pricing proposals, in accordance with clause 16.8.5 of the NER.

5.1 Rule requirements

The pricing principles set out in the Rules are summarised in Table 5-1 below.

Table 5-1: The NER pricing principles

Clause	Pricing principle
6.18.5(e)	The revenue expected to be recovered for each tariff class must lie on or between > an upper bound representing the stand-alone cost of serving the retail customers who belong to that class; and > a lower bound representing the avoidable cost of not serving those retail customers
6.18.5(f)]	Each tariff is based on the long run marginal cost (LRMC) of providing the service
6.18.5(g)	Tariffs reflect the efficient costs of serving customers and minimise distortions in price signals for efficient usage
6.18.5(h)	The need to consider the impact on customers of tariff changes
6.18.5(i)	Tariff structures must be reasonably capable of being understood by customers
6.18.5(j)	Tariffs must comply with all applicable regulatory instruments

We have set each of our tariffs for the two years of this TSS with regard to the clauses noted above. In particular, the principles around considering the impact on customers and our tariffs being easily understood have heavily influenced our proposed transition strategy for this TSS. The following sections contain a brief outline of how we have met each of these pricing principles. More detail can be found in Section 4 of the addendum to this TSS.

5.1.1 Stand-alone and avoidable cost

In relation to clause 6.18.5(e), our method for estimating the stand-alone and avoidable cost for each tariff class is summarised in section 4.3.1 of the addendum to this TSS as well as Attachment 4 - *Estimation of Long Run Marginal Cost and Other Concepts Related to the Distribution Pricing Principles* of our original TSS. The method has not changed from our initial TSS.

The results of our calculations show that, for each tariff class, the proposed revenue does lie between the lower bound (avoidable cost) and upper bound (stand-alone cost).

Table 5-2: Proposed 2017-18 revenue (\$M) by tariff class complies with the Rule

Tariff class	Avoidable	Stand-alone	Proposed	Proposed revenue lies between stand-alone and avoidable cost?
Low Voltage Residential & Small Business	107	904	692	Yes
Low Voltage Demand	13	811	197	Yes
High Voltage Demand	4	523	47	Yes
Sub-transmission (including inter-distributor transfers)	13	133	14	Yes
Unmetered	1	400	9	Yes

5.1.2 Long run marginal cost

In relation to clause 6.18.5(f), our approach to estimating the long run marginal cost (LRMC) across our network was summarised in section 7.3 of our initial TSS. Our LRMC is calculated at a voltage level for our customers. Therefore, we have an LRMC estimate for each of low voltage, high voltage and sub-transmission customers. The LRMC estimate is not specific to location or feeder, but an average for all customers connected at the same voltage level or within the same tariff class.

Further details were provided in the Houston Kemp prepared *Estimation of Long Run Marginal Cost and Other Concepts Related to the Distribution Pricing Principles* that comprised Attachment 4 to the initial TSS. Our tariffs are based on LRMC. Our LRMC approach was accepted by the AER in its draft decision and remains unchanged for this revised TSS. We have, however, updated our LRMC estimates for inflation and improved data inputs relating to the likelihood of demand occurring in the peak period and our growth capex estimates. We also intend to improve our LRMC calculation in the next regulatory period – see section 7 of our Addendum document.

5.1.3 Tariffs reflect efficient costs and minimise distortions in price signals

Setting our charges based solely on LRMC would result in Essential Energy not recovering all of our required revenue. The Rules require us to consider how best to recover these remaining costs – sometimes referred to as residual costs – in a manner that is efficient and minimises distortions to price signals. The concepts of efficient pricing and price distortion are briefly discussed below.

Efficient pricing

In the initial stages of tariff reform, an efficient allocation of residual costs would be to allocate more residual costs to the less efficient tariffs and charging parameters and less residual costs to the more efficient tariffs and charging parameters, so customers on more efficient tariffs pay a smaller quantum of residual costs. This allocation of residual costs should encourage customer take-up of the more efficient tariff during the transition period.

Price distortion

Tariffs set closer to the LRMC will have a smaller distortion on efficient usage decisions than those set further from the LRMC. Some of our current tariffs are below LRMC; others are closely aligned to LRMC.

For this TSS, we have considered both these requirements in conjunction with the customer impact of tariff change required by clause 6.18.5(h). The outcomes of this requirement are explained in conjunction with the customer impact in the following section.

5.1.4 Customer impact of tariff changes

Many of our current tariff structures do not meet the requirements of the Rules. For example, they are below LRMC and/or residual costs are not being apportioned efficiently, or in a manner that minimises price distortions.

The level of adjustments to some customer tariffs required to satisfy cost-reflectivity under the Rules are of such magnitude that managing the associated bill impacts for our customers has necessarily required a higher weighting in this TSS. We would expect this weighting to decline in priority with each subsequent TSS, as our tariffs become more cost-reflective and the relative impacts on customers declines.

We have relied on stakeholder feedback to help form our transition strategy and manage the bill impacts on our customers. More details of this feedback can be found in sections 2 and 3 of the addendum to this TSS.

5.1.5 Our tariffs can be easily understood by customers

We believe that our tariff structures are simple and can therefore be reasonably easily understood by our customers. In particular:

- > Most of our tariff structures remain largely unchanged from their existing form.
- > Our existing DBT will be further simplified into a flat rate tariff.
- > We have not implemented different summer and winter seasonal charging windows.
- > We have simplified our charging windows to remove the morning peak where a customer has an interval (or higher capability) meter and replace it with an extension of the day-time shoulder window.
- > Residential and small business customers who want to select a demand based tariff can do so. This opt-in approach will ensure that only those customers who understand demand charging will be assigned to such a tariff.
- > To assist our customers, we will soon release brochures to explain our TOU, load control and demand charging tariffs, as well as a brochure outlining the different types of meters and the capabilities they offer.

5.2 Approach to setting tariffs

We aim to improve price signals to encourage more efficient use of the network where feasible, while also managing the associated bill impacts for customers as we transition to more cost-reflective pricing. Practically this is being achieved by proposing a greater difference between peak and shoulder rates.

In addition, in calculating each of our proposed tariffs for each year of this TSS we have:

- > ensured that the expected revenue for each tariff class lies between our estimates of the stand-alone cost of serving customers who belong to that class and the avoidable costs of not serving those customers
- > assessed the relevant variable component of each tariff and, where this is not above LRMC, are transitioning them to LRMC – though in some cases this will take several years, such as for the demand components of the transitional tariff and the opt-in residential demand tariff
- > allocated residual costs in a way that minimises distortion to customers’ usage decisions. To achieve this, we have sought to recover more of our residual costs from those usage tariffs that are less efficient or less responsive to changes in price. Our least efficient tariffs are the Anytime flat rate tariffs for residential and small business customers
- > considered customer bill impacts.

5.2.1 Residual cost allocation

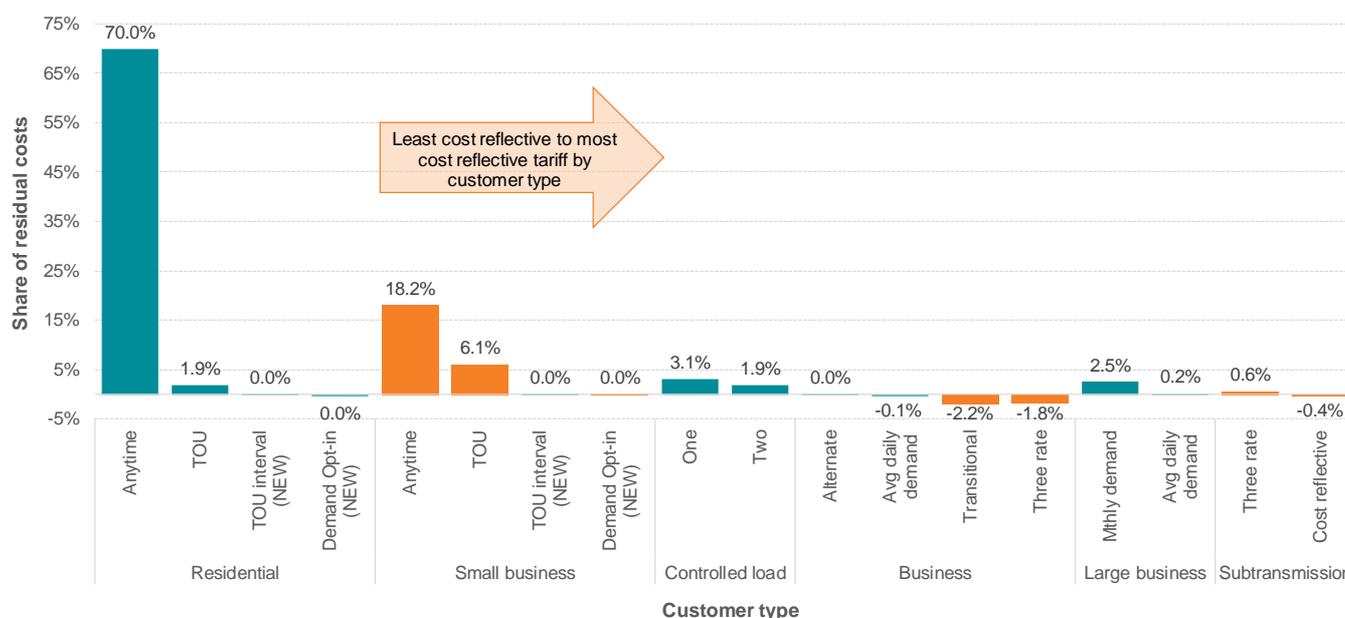
We have sought to allocate residual costs - the difference between LRMC-driven costs and its allowed revenues determined by the AER - in a fashion that:

- > minimises distortions to efficient price signals
- > encourages opt-in uptake of our newly created cost reflective demand tariffs.

This approach means that our most efficient tariffs - demand tariffs - most closely reflect their LRMC estimates, while our least efficient tariffs - anytime tariffs - attract a greater share of residual costs.

Figure 5-1 below shows that the tariffs where the charging parameters are not closely linked to the drivers of Essential Energy’s costs i.e. where time of use KVA demand is not the key driver, have been allocated a higher share of residual costs. This allocation across tariffs provides the least distortion to customers’ efficient usage decisions and supports opt-in uptake.

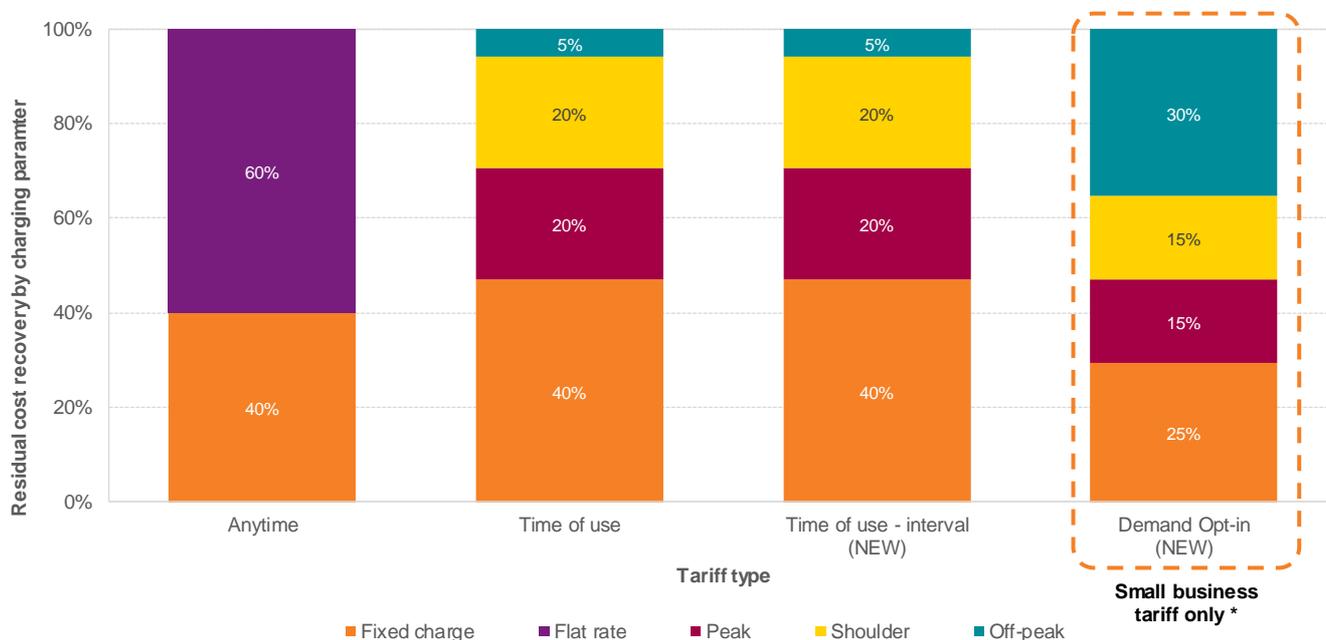
Figure 5-1: Allocation of residual costs between tariff types and customer types



The negative values in the above figure imply that the recovered revenue is less than the LRMC allocation for customers on those tariffs. This outcome is temporary and will be addressed as we transition these tariffs up to cost reflective levels over a period that allows customer impacts to be appropriately managed.

Figure 5-2 below shows that we have continued this principled-approach to allocations of residual costs *within tariffs* based on the various charging parameters within each tariff. Charging parameters that are not closely linked to the drivers of Essential Energy's costs, such as fixed and usage charges, have been allocated a higher share of residual costs and the demand tariff does not attract any residual costs. This allocation within each tariffs' charging parameters again provides the least distortion to customers' efficient usage decisions.

Figure 5-2: Allocation of residual costs by tariff component for residential & small business customers



It is important to read the allocation of residual costs shown in Figure 5-2 in conjunction with the actual residual dollars allocated to each tariff shown in Figure 5-1. This puts the split of residual costs for both the TOU and Demand tariffs in perspective. These graphs show that most customers are better on the new demand and / or TOU tariffs than the anytime and old TOU tariffs. This aligns with our aim of encouraging customers to take up these tariffs.

It is also important to note that the split of residual costs in the far right is for the opt-in small business demand tariff only. As shown in Figure 5-1, the residual costs are negative for the opt-in residential demand tariff as we are looking to encourage customer take up. Our intent is to transition the charges to more cost reflective tariffs over time.

5.2.2 Customer bill impacts

Residential and small business customers

The differences in 2017-18 residential and small business customer NUOS bills under our proposed tariffs are shown in Figure 5-3.

Figure 5-3: Comparison of proposed 2017-18 residential and small business NUOS bills by tariff

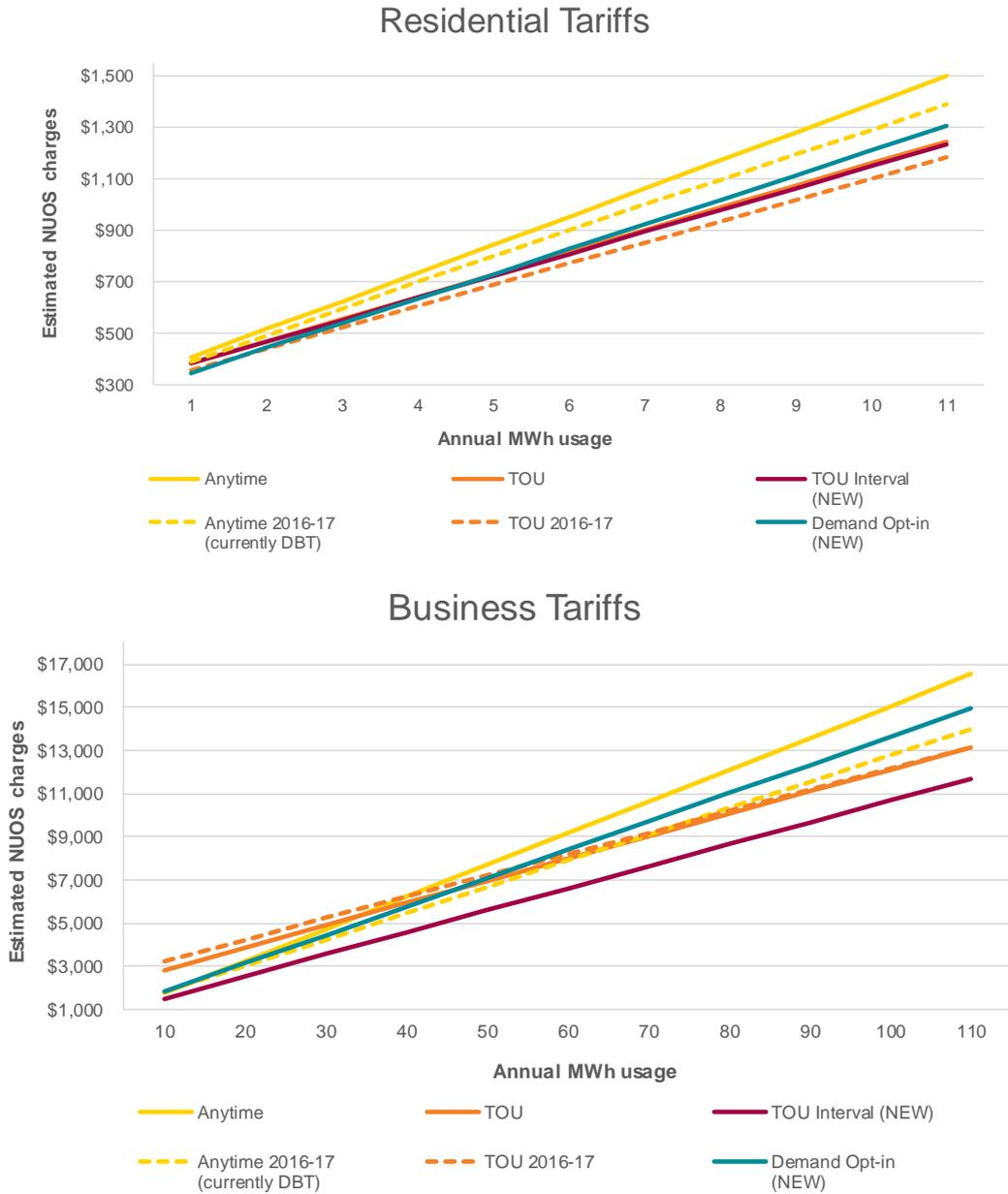


Figure 5-4 below sets out our analysis of NUOS bill impacts by tariff type for an average residential customer and two small business customers for the remainder of this regulatory period.

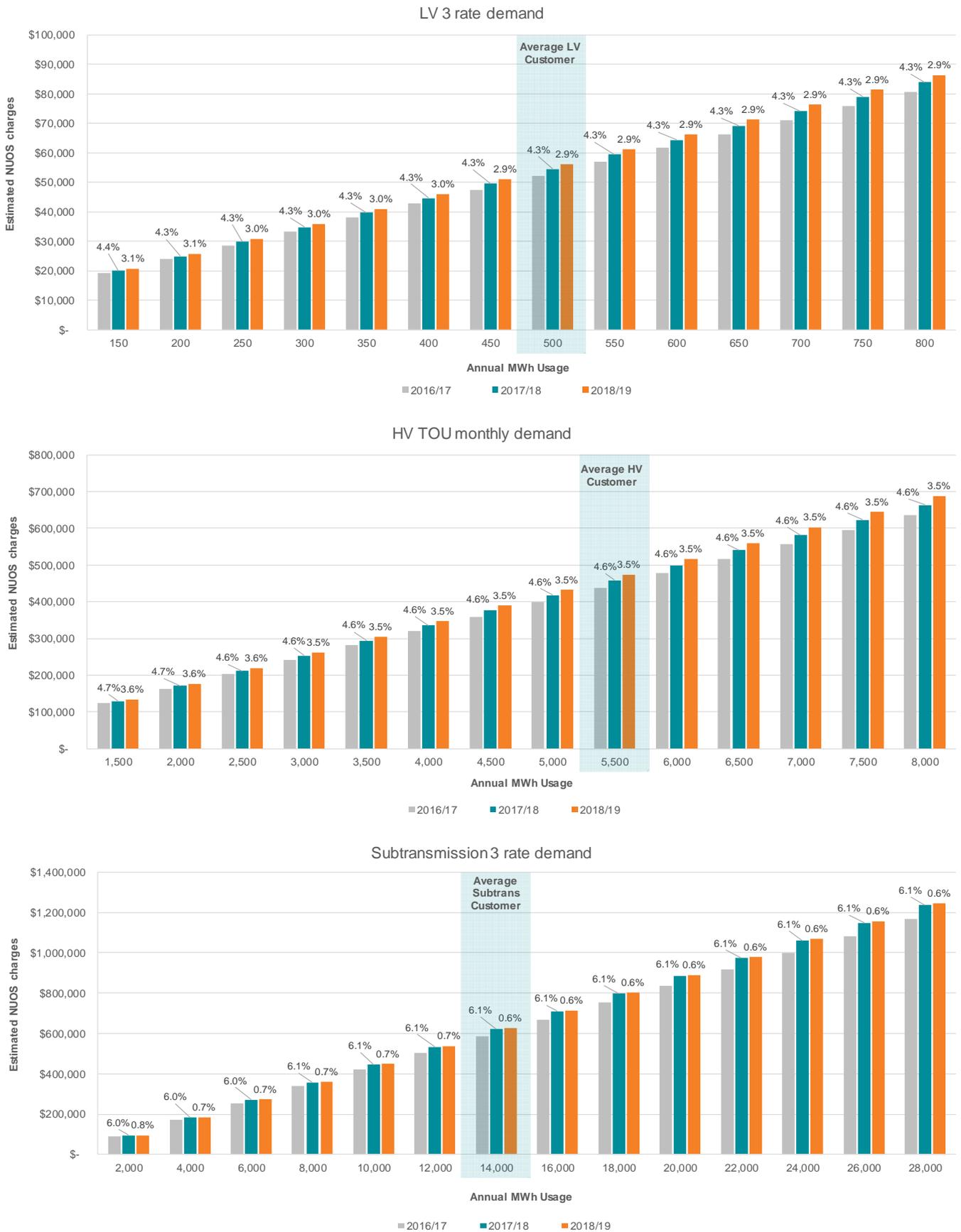
Figure 5-4: Average residential and small customer annual NUOS bill by tariff type (with year on year change)



Business, Large Business and Sub-transmission customers

Bill impacts for Business, Large Business and Sub-transmission customer bill impacts are shown in Figure 5-5, though only for the main tariffs employed by those customer groups.

Figure 5-5: Business, large business and sub-transmission annual NUOS bill (with year on year change)



5.3 Tariff change project

In consultation with our stakeholders and impacted customers, we are introducing specific transitional tariffs for those business customers currently on a Small Business DBT or TOU tariff who no longer satisfy the associated eligibility requirements and need to be moved to an appropriate demand based Business or Large Business tariff and will consequently suffer a bill increase.

The actual tariff structure for this transitional tariff does not differ from the Low voltage – Time of Use three rate demand tariff offered to other Business customers in section 4.5. Rather, it is the weighting of the various tariff components and the associated pricing transition path that differs. As such, this transitional tariff is shown separately in Attachment 2 - *Indicative NUOS Pricing Schedule* of this TSS.

This tariff will allow eligible customers to transition to the full demand based tariff over a five-year period, reducing bill shock and ensuring adherence to the pricing principles in the Rules. More details on this project, including the composition of the tariff and the impact on affected customers can be found in section 5 of the Addendum to this TSS.