



**Annual Distribution Pricing Proposal**  
**1 July 2016 – 30 June 2017**

As submitted to the Australian Energy Regulator



## Disclaimer

TasNetworks (which, for the purposes of this disclaimer, includes all of its related bodies corporate, its officers, employees, contractors, agents and consultants) makes no representation or warranty (express or implied) as to the accuracy, reliability, or completeness of the information contained in this document, or its suitability for any intended purpose. TasNetworks has no liability for any loss or damage (be it direct or indirect) arising out of, or in reliance on, any statements, opinions, information or matter contained in, or derived from, the information in this document.

Tasmanian Networks Pty Ltd  
ABN 24 167 357 299  
PO Box 606  
Moonah TAS 7009

**Enquiries regarding this document should be addressed to:**

TasNetworks Team Leader Commercial Solutions  
PO Box 606  
Moonah TAS 7009  
Email: [networktariff@tasnetworks.com.au](mailto:networktariff@tasnetworks.com.au)

## Table of Contents

1	Preface.....	1
2	Introduction.....	2
2.1	Scope.....	2
2.2	Structure .....	2
2.3	Purpose.....	4
2.4	Supporting documents.....	4
2.5	Further information .....	4
2.6	Overview of compliance obligations.....	4
3	Business profile.....	5
4	The future of network tariff reform .....	6
4.1	Future tariff changes.....	6
4.1.1	Standard control services.....	6
4.1.2	Alternative control services .....	7
5	Standard Control Services .....	8
5.1	Pricing principles and objectives.....	8
5.2	Setting the 2016-17 network tariffs.....	10
5.2.1	Maximum allowable revenue and revenue cap.....	10
5.2.2	Tariff development .....	11
5.2.3	Energy consumption, demand and customer forecasts.....	11
6	Standard control services tariff classes .....	12
6.1	Overview .....	12
6.2	Charging parameters for standard control services.....	16
6.3	Recovery of DUoS .....	17
6.4	Recovery of TUoS.....	19
7	Customer price impacts – standard control services .....	21
7.1	Price movements in 2016-17 .....	21
8	Standard control services pricing .....	25
9	Standard control services - tariff variations .....	34
9.1	Adjustments to tariffs within a regulatory year .....	34
9.1.1	ITC tariffs.....	34
9.1.2	Changes to tariffs by network tariff class.....	34
9.2	Variations between the 2015-16 and 2016-17 regulatory years .....	34
9.2.1	Reallocation between fixed and variable costs.....	35
9.2.2	Rebalancing of DUoS and TUoS revenues.....	35
10	Alternative control services.....	36
10.1	Alternative control services tariff classes.....	36
10.2	Metering services.....	37
10.2.1	Overview of metering services.....	37
10.2.2	Setting the 2016-17 metering services tariffs .....	38
10.2.3	Prices for metering services.....	39
10.3	Public lighting services .....	39
10.3.1	Overview of public lighting services.....	39
10.3.2	Setting the 2016-17 public lighting services tariffs .....	43

10.3.3	Prices for public lighting services .....	43
10.4	Fee based services .....	45
10.4.1	Overview .....	45
10.4.2	Setting the 2016-17 fee based services tariffs .....	49
10.4.3	Prices for fee-based services .....	50
10.5	Quoted services .....	51
10.5.1	Overview .....	51
10.5.2	Setting the 2016-17 quoted services tariffs .....	52
10.5.3	Labour prices for quoted services .....	53
<b>11</b>	<b>Customer price impacts – alternative control services .....</b>	<b>54</b>
11.1	Metering services .....	54
11.2	Public lighting services .....	54
11.3	Fee-based services .....	56
11.4	Quoted services .....	57
<b>12</b>	<b>Alternative control services - tariff variations .....</b>	<b>58</b>
12.1	Changes to alternative control services pricing .....	58
12.2	Changes to alternative control services tariffs .....	58
<b>13</b>	<b>Assignment of customers and tariffs .....</b>	<b>59</b>
13.1	Assignment of existing customers to tariff classes .....	59
13.2	Assignment of new customers to a tariff class .....	59
13.3	Reassignment of existing customers to another tariff class .....	59
13.4	Objections to proposed assignments and reassignments .....	59
13.5	System of assessment and review of the basis on which a customer is charged .....	60
13.6	Assignment process .....	61
<b>14</b>	<b>Transmission cost recovery .....</b>	<b>62</b>
14.1	TUoS Expenses .....	62
14.1.1	Transmission charges .....	62
14.1.2	Standard transmission charges .....	62
14.1.3	Avoided TUoS .....	62
14.2	TUoS Receipts .....	63
14.3	Tariff recovery of TUoS .....	63
14.4	TUoS unders and overs account .....	63
<b>15</b>	<b>Compliance with regulatory requirements .....</b>	<b>64</b>
15.1	DUoS unders and overs account .....	64
15.2	Compliance with avoidable and stand-alone cost requirements .....	64
15.3	Stand-alone costs .....	65
15.4	Avoidable cost .....	65
15.5	Process for determining stand-alone and avoidable cost .....	65
15.5.1	Standard control services .....	65
15.5.2	Alternative control services .....	65
15.6	Comparison of avoidable costs, expected revenue and stand-alone costs .....	66
15.7	Long run marginal cost .....	69
15.8	Transaction costs .....	69
15.9	Response to price signals .....	69
15.10	Tariff adjustment to address revenue shortfalls .....	70
15.11	Compliance with side constraints .....	70

16	Audit certification .....	72
17	Confidential information .....	73
18	Distribution Pricing Proposal compliance obligations.....	74
19	Attachments .....	79
20	Listing of tables.....	80
21	Glossary of terms/abbreviations .....	82



## 1 Preface

TasNetworks is the Transmission Network Service Provider (**TNSP**) and Distribution Network Service Provider (**DNSP**) for the Tasmanian region of the National Electricity Market (**NEM**), which includes mainland Tasmania, but not the Bass Strait Islands. TasNetworks commenced operations on 1 July 2014 and was formed by a merger of Aurora's electricity distribution network business and the transmission network business formerly operated by Transend Networks.

The National Electricity Rules (the Rules) were amended in December 2014 by the *National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014*. In accordance with the transitional arrangements within the Rules,<sup>1</sup> this amendment does not apply to the pricing proposal that is prepared by TasNetworks for the 2016-17 regulatory year. TasNetworks' pricing proposal is instead to be prepared in accordance with the version of the Rules that immediately applied before the Rule change, or version 65 of the Rules.

The prices TasNetworks charges for the use of its distribution network (electricity poles and wires) and the provision of associated services to customers are approved by the Australian Energy Regulator (**AER**). Section 6.18.2 of the Rules<sup>2</sup> requires that for each regulatory year TasNetworks must submit an Annual Distribution Pricing Proposal to the AER, at least two months before the commencement of each regulatory year during a regulatory control period.

The current five year regulatory control period began in 1 July 2012 and ends on 30 June 2017. In taking over Aurora's responsibilities for delivering power to Tasmanian homes and businesses, TasNetworks inherited the AER's decisions regarding the amount of revenue that can be recovered from the customers connected to Tasmania's distribution network over that five year period. TasNetworks is, however, responsible for proposing the prices that it will charge in order to recover the revenue allowances set by the AER.

This is TasNetworks' Annual Distribution Pricing Proposal for the regulatory year commencing on 1 July 2016 and has been prepared to comply with the requirements of the Rules and any additional requirements specified by the AER in its distribution determination.

TasNetworks also operates the transmission network in Tasmania which connects power stations and large generators, such as wind farms, with the distribution network and major industrial users of electricity. All references to TasNetworks within this Annual Distribution Pricing Proposal are, however, to TasNetworks in its capacity as a licensed DNSP in the Tasmanian region of the NEM, unless otherwise stated.

---

<sup>1</sup> Section 11.74 of the Rules states: Former Chapter 6 applies to the exclusion of current Chapter 6 in relation to the regulatory control period of the Tasmanian DNSP commencing 1 July 2012.

<sup>2</sup> Version 65

## 2 Introduction

### 2.1 Scope

This Annual Distribution Pricing Proposal outlines the proposed network tariffs for standard control services and the proposed tariffs (prices) for alternative control services for the 2016-17 regulatory year. The cost of services provided by TasNetworks where the price is negotiated between TasNetworks and its customers (negotiated services) are not addressed in this pricing proposal.

‘Standard control’ refers to an approach taken by the AER to the regulation of prices that involves the use of a cap on the amount of revenue that TasNetworks is permitted to recover from the entire customer base. The AER classifies generic distribution network services, including connections to TasNetworks’ distribution network, as standard control services. The annual revenue allowance which applies to TasNetworks’ standard control services is recovered through general network charges (network tariffs).

‘Alternative control’ denotes another form of pricing control used by the AER, which involves the use of price caps, rather than revenue caps, to regulate TasNetworks’ prices. Services classified as alternative control are typically provided to a small number of identifiable customers on a discretionary or infrequent basis, where the costs – and the associated benefits from the service – can be directly attributed to those customers.

This document is submitted in accordance with, and complies with, the requirements of the:

- National Electricity Law (NEL);
- National Electricity Rules; and
- AER’s distribution determination.

### 2.2 Structure

TasNetworks’ Annual Distribution Pricing Proposal is structured as follows.

**Table 1: Structure of this document**

Section	Title	Purpose
2	Introduction	Outlines the scope, structure and purpose of this Annual Distribution Pricing Proposal.
3	Business profile	Provides an overview of TasNetworks distribution business.
4	The future of network tariff reform	Outlines tariff development in the medium term, including additional tariffs, structural changes and/or the removal of tariffs proposed over the 2012-17 regulatory control period.
5	Standard Control Services	Outlines the pricing principles and objectives applied by TasNetworks in setting tariffs and provides the modelling inputs and outputs used to develop the tariffs to recover the regulated revenue.
6	Standard control services tariff classes	Provides details of each tariff included under standard control services, including a description of each tariff class and the charging parameters which are related to each tariff.
7	Customer price impacts – standard control services	Shows the difference in charges between 2015-16 and 2016-17 for each network tariff, as well as the percentage change.
8	Standard control services pricing	Details each tariff under standard control services and the charging parameters related to each service.

Section	Title	Purpose
9	Standard control services - tariff variations	Outlines the proposed variations in tariffs between the 2015-16 and 2016-17 regulatory years.
10	Alternative control services	Explains the tariff classes applying to alternative control services and sets out the prices applying in 2016-17 to each of metering, public lighting, fee based services and quoted services.
11	Customer price impacts – alternative control services	Sets out the nature of any variations or adjustments to prices applying to alternative control services that could occur during the course of the regulatory year and the basis on which those changes could occur.
12	Alternative control services - tariff variations	Discusses the impact on customers of the prices proposed for alternative control services in the 2016-17 regulatory year.
13	Assignment of customers and tariffs	Outlines how customers are assigned to tariff classes based on the Rules and pricing principles. Applies to all direct control services (i.e. both standard control and alternative control services).
14	Transmission cost recovery	Outlines how adjustments to charges for transmission costs and any transmission costs resulting from overs and unders are calculated and recovered.
15	Compliance with regulatory requirements	Describes how the methodology used by TasNetworks complies with the Rules and also the requirements of the AER's distribution determination.
16	Audit certification	Details the audit certification for the calculation of the tariffs applying to standard control services.
17	Confidential information	Details which parts of this Annual Distribution Pricing Proposal are confidential and provides reasons in support of a confidentiality claim.
18	Distribution Pricing Proposal compliance obligations	Sets out TasNetworks' compliance with the requirements of the Rules as they relate to annual distribution pricing proposals.
19	Attachments	Lists the attachments to this Annual Distribution Pricing Proposal.
20	Listing of tables	Lists the Figures and Tables in this Annual Distribution Pricing Proposal.
21	Glossary of terms/abbreviations	Defines the key terms and abbreviations used in this Annual Distribution Pricing Proposal.



## 2.3 Purpose

This Annual Distribution Pricing Proposal has been prepared for the purposes of complying with the Rules<sup>3</sup> and the AER's distribution determination<sup>4</sup>. It provides a detailed outline of TasNetworks' distribution pricing methodology and the principles which have been followed in proposing TasNetworks' standard control services tariffs and alternative control services prices for the 2016-17 regulatory year. A summary of indicative price impacts is provided for our customers in the Annual Distribution Pricing Proposal Overview.

## 2.4 Supporting documents

TasNetworks has published a range of documents which are intended to assist external parties understand the development and application of the network tariffs and prices for alternative control services set out in this document. This Annual Distribution Pricing Proposal is supported by the following documents:

- Network Tariff Application and Price Guide
- Metering Services Application and Price Guide
- Public Lighting Application and Price Guide
- Fee-based Services Application and Price Guide
- Quoted Services Application and Price Guide
- Annual Distribution Pricing Proposal Overview

These documents should be read in conjunction with this Annual Distribution Pricing Proposal.

## 2.5 Further information

The various pricing guides are available on the TasNetworks web site at:  
<http://www.tasnetworks.com.au/our-network/network-revenue-pricing/distribution-fees-and-tariffs>

Customers and retailers who are uncertain about the network pricing process or the pricing arrangements that may be applicable to their particular circumstances are encouraged to contact TasNetworks at:

Team Leader Commercial Solutions  
PO Box 60,  
Moonah TAS 7009  
E-mail: [networktariff@tasnetworks.com.au](mailto:networktariff@tasnetworks.com.au)

## 2.6 Overview of compliance obligations

The matters that must be satisfied by the publication of this Annual Distribution Pricing Proposal are set out in section 6.18 of the Rules<sup>5</sup>. TasNetworks' compliance with these requirements is detailed in Section 18 of this document (Distribution Pricing Proposal compliance obligations).

---

<sup>3</sup> Version 65

<sup>4</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

<sup>5</sup> Version 65

### 3 Business profile

TasNetworks is an electricity network business owned by the State of Tasmania, with complementary activities in telecommunications and energy related technologies. With total assets of over \$3 billion, we own, operate and maintain the poles and wires that deliver electricity to more than 280,000 Tasmanian households, businesses and organisations. Our purpose is to create value for our customers, our owners and our community.

Our distribution network provides a safe and reliable electricity supply to a relatively small but highly dispersed population across the State. The network is a largely rural overhead distribution network and is made up of 15,100 km of overhead high voltage lines, 10,500 km of overhead low voltage lines, 2,400 km of high and low voltage underground cables, 33,000 ground and pole mounted substations and 227,000 poles, spread across an area of 68,000 square kilometres. TasNetworks also operates and maintains approximately 47,000 public lights.

Customers are central to everything we do at TasNetworks and we are conscious that rising network costs have contributed to past increases in electricity prices for customers. That is why TasNetworks has committed itself to delivering sustainably lower power prices in the future. All without detracting from our capacity to deliver a safe and reliable electricity supply.

**Figure 1: Our network**

The network is made up of:

#### Transmission

**3,500**

circuit kilometres of transmission lines

**8,500**

transmission line support structures

**11,000**

hectares of easements

#### Distribution

**15,000**

kilometres of high voltage powerlines

**5,000**

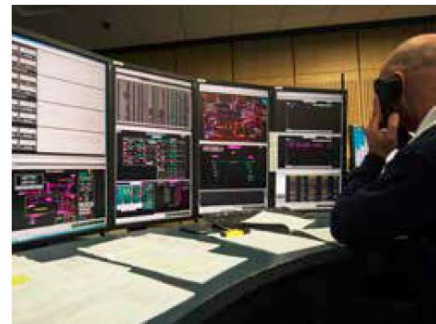
kilometres of low voltage powerlines

**2,000**

kilometres of high and low voltage underground cables

**222,000**

poles



## 4 The future of network tariff reform

TasNetworks has previously highlighted proposed changes in network tariffs and tariff structures in its annual distribution pricing proposals. Various network tariffs have been made obsolete or are under arrangements that are discussed in TasNetworks' *Network Tariff Application and Price Guide*. The *Network Tariff Application and Price Guide* also provides details of the alternative tariffs for customers affected by the discontinuation of a tariff to transition to over time.

A process of realigning the prices for a number of network tariffs, in order to reduce some long-standing cross-subsidies between and within a number of tariff classes is already underway, as is a rebalancing of the service and variable charging parameters of most of our existing network tariffs. This latter change involves gradually increasing the emphasis on service charges and reducing the extent to which variable consumption based charges are used to recover the cost of providing network services.

This process will continue during the 2016-17 regulatory year. However, in the coming regulatory control period, beginning on 1 July 2017, and in the regulatory control periods that follow, the process of tariff reform and transitioning towards more cost reflective pricing will gather momentum.

Like network companies across Australia, TasNetworks is looking to change the way it charges for the delivery of electricity and access to its distribution network. Technological and customer driven changes in the electricity market, such as the widespread uptake of solar panels, mean that the current consumption-based network tariffs used to recover the cost of network services are no longer fit for purpose.

Our aim in the medium to long term is to incentivise a customer led shift to demand-based network tariffs, with our customers understanding and recognising the value proposition associated with demand based network tariffs, as opposed to the current consumption based network tariffs.

### 4.1 Future tariff changes

In light of the rapidly changing external environment, TasNetworks' longer term tariff strategy is under continuous review to ensure the most efficient outcomes are delivered for customers, consistent with the pricing principles outlined in section 5.1. A key part of that strategy will involve the introduction of demand based network tariffs for residential and low voltage business customers. This important change is discussed in more detail below.

#### 4.1.1 Standard control services

On 1 July 2017, TasNetworks will be introducing time of use, demand based network tariffs for residential and low voltage business customers. These new network tariffs will initially be available as a choice for our customers (on an opt-in basis) through their retailer. But our view is that in the long term we will see all residential and business customers transition to time of use demand based network tariffs.

The development of the new time of use, demand based network tariffs has been informed by extensive consultation with our customers and their representatives, including a range of community stakeholders. The customers and stakeholders that we have engaged with broadly agree that time of use demand based network tariffs are the best option for the purpose of reducing peak demand for electricity and reducing the need to renew and upgrade the network in the future.

However, the time of use periods that will apply to the new demand based network tariffs are slightly different from those applying to a number of existing consumption based time of use tariffs. It is important that the peak periods identified in our tariff structures align with our network peaks and provide an indication of network constraints.

Accordingly, from 1 July 2016 we will align the time of use periods applying to two existing residential consumption based time of use network tariffs with the time periods that will apply to the new demand based network tariffs for residential and small business customers being introduced in 2017-18. This will help ensure that we provide our customers with consistent pricing signals in the future. The residential tariffs affected by this change are the Residential Low Voltage PAYG Time of Use (**TAS92**) and Residential Low Voltage Time of Use (**TAS93**) network tariffs.

No further changes to the pricing of standard control services are contemplated in 2016-17, other than the realignment of certain network tariffs relative prices and the decreasing emphasis on consumption based charges discussed previously.

TasNetworks will continue to consult with customers and stakeholders on issues relating to network tariffs and pricing throughout 2016-17 and include information on expected price trends and future tariff developments in its Annual Distribution Pricing Proposals.

#### **4.1.2 Alternative control services**

No changes to the pricing of alternative control services are contemplated in 2016-17. Our proposal for the subsequent regulatory control period is available on our website, refer the link below.

<http://www.tasnetworks.com.au/our-network/network-revenue-pricing/revenue-proposals>

## 5 Standard Control Services

‘Standard control’ refers to an approach taken by the AER to the regulation of prices which involves setting a cap on the amount of revenue that we are permitted to recover, rather than actually setting prices. The AER classifies the generic distribution network services which are relied on by all customers, including connections to our distribution network, as standard control services.

The annual revenue allowance which applies to our standard control services is recovered through general network charges (via network tariffs). Most of our revenue is earned through network tariffs and the amount of that revenue each year is capped by the AER. Retailers use our network tariffs as an input to their customers’ electricity bill.

### 5.1 Pricing principles and objectives

TasNetworks’ objective in setting network tariffs for standard control services is to ensure that our regulated revenue is recovered from customers through tariffs that are consistent with the pricing principles outlined in the Rules and the AER’s distribution determination.

TasNetworks’ objective for alternative control services is to ensure that the price charged is cost reflective and is consistent with the price caps outlined in the AER’s distribution determination.

Clause 6.18.5 of the Rules<sup>6</sup> sets out the principles that TasNetworks should adopt in preparing its tariffs.

Pricing principles:

- (a) For each tariff class, the revenue expected to be recovered should 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.
- (b) A tariff, and if it consists of 2 or more charging parameters, each charging parameter for a tariff class:
  - (1) must take into account the long run marginal cost for the service or, in the case of a charging parameter, for the element of the service to which the charging parameter relates; and
  - (2) must be determined having regard to:
    - (i) transaction costs associated with the tariff or each charging parameter; and
    - (ii) whether retail customers of the relevant tariff class are able or likely to respond to price signals.
- (c) If, however, as a result of the operation of paragraph (b), the Distribution Network Service Provider may not recover the expected revenue, the provider must adjust its tariffs so as to ensure recovery of expected revenue with minimum distortion to efficient patterns of consumption.

---

<sup>6</sup> Version 65

As part of our tariff strategy development we have been discussion tariff reform with our customers and stakeholders. As part of this process TasNetworks has developed pricing principles throughout which have been applied in the development of 2016-17 prices. In doing so, we have ensured compliance with the Rules' requirements and provided clarity about the formulation of robust, equitable network tariffs. Applying the principles has meant a gradual transition towards more cost-reflective tariffs. This transition will continue in future periods.

TasNetworks' pricing principles are summarised in the table below (Table 2).

**Table 2: Our Pricing Principles**

Principle	What it means
<b>Efficiency:</b> Tariffs should facilitate the efficient recovery of revenue	<p>The efficiency principle recognises that tariffs should facilitate the efficient recovery of our revenue, with cost reflective tariffs for customers.</p> <p>The revenue allowance set by the Australian Energy Regulator represents a build-up of our efficient cost of building, running and maintaining the network and is, therefore, the starting point for the recovery of efficient costs. The efficiency with which we recover those costs from customers is driven by the allocation of the allowable revenue to our customers.</p>
<b>Simplicity:</b> Tariffs should be as simple as possible and developed in consultation with stakeholders	<p>The principle of simplicity means that all tariffs should be designed in a way that customers can readily understand. If a charging mechanism is overly complex it will be difficult for customers to understand and respond to the price signals it's supposed to send, which may render the tariff ineffective.</p>
<b>Efficient price signals:</b> Tariffs should provide clear 'price signals' to customers, recognising that the cost of using the network varies at different times	<p>Recognising that the cost of using the network varies at different times of the day, network tariffs should clearly communicate to customers how their use of electricity drives and/or contributes to network costs.</p> <p>We will set prices that are cost reflective and empower our customers to make informed electricity usage decisions. To achieve this, we will move towards setting network tariffs to recover our efficient costs, introduce demand based network tariffs (from 1 July 2017) and amend the pricing signals of our residential consumption based time of use tariffs to better reflect the system peak (from 1 July 2016).</p> <p>We will also develop tariffs in a manner which provides customers effective price and investment signals with respect to new and emerging technologies. We want to have a tariff suite which helps our customers make informed investment decisions.</p>
<b>Clearly explained:</b> We should calculate our tariffs according to a well-defined and clearly explained methodology	<p>This principle requires that we provide sufficient information about our tariff methodology in a format that is easy for our customers to understand.</p> <p>We will work with our customers and stakeholders to ensure that we are providing clear explanations in respect to how we develop our tariffs as well how they are charged.</p>
<b>Customer impact:</b> We should consider the impacts on customers of any tariff change, and introduce change over a period of time to manage the impacts on particular customers	<p>This principle means we will take into consideration the impacts of our tariffs on our customers. In developing our tariffs we will ensure that the transition towards more cost reflective tariffs occurs gradually, over time, in order to avoid any potential for sudden adverse price impacts on customers. Our focus is to deliver predictable and sustainable prices over the longer term.</p>



Principle	What it means
<b>Compliant:</b> Our tariffs must comply with the regulatory rules, both nationally and locally	This principle means that we will ensure that we meet all our national and jurisdictional regulatory obligations when developing and setting our tariffs. It will be necessary for us to ensure that the methodology for calculating our tariffs is soundly based and consistent with the requirements of the Rules, in accordance with the principles of compliance and a clearly explained methodology.

## 5.2 Setting the 2016-17 network tariffs

This section provides an overview of how the allowable revenue for standard control services is to be recovered through TasNetworks' network tariffs.

### 5.2.1 Maximum allowable revenue and revenue cap

The 2016-17 network tariffs and charging parameters set out in this Annual Distribution Pricing Proposal are based on the Maximum Allowable Revenue (**MAR**) set by the AER in its distribution determination<sup>7</sup>, plus any AER approved adjustments from prior periods (the Revenue Cap).

TasNetworks' MAR is calculated in accordance with the following formula, which was prescribed by the AER in its distribution determination:

$$MAR_t = AR_t \pm \text{passthrough}_t \pm ESISC_t \pm NEMC_t \pm \text{transitional}_t$$

Table 3 provides details of the Revenue Cap calculation that TasNetworks has utilised in the preparation of its network tariffs.

**Table 3: Revenue cap**

Component	Amount (\$m)	Comment
AR	294.437	Annual Revenue, as given in the AER's distribution determination
± passthrough	0.000	AER approved pass-throughs
± ESISC	0.527	Adjustments for differences in the electrical safety levy
± NEMC	0.145	Adjustments for differences in the national energy market levy
<b>MAR</b>	<b>295.109</b>	<b>Expected revenue including all adjustments</b>
Adjustments		
± Unders/Overs	-3.668	Adjustment for under/over recovery of revenue in prior periods
<b>Revenue Cap</b>	<b>291.441</b>	<b>Total revenue for revenue cap</b>

<sup>7</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

### 5.2.2 Tariff development

The first stage of the network tariff development process is to allocate or assign network costs to the supply categories and, ultimately, the customer classes that utilise those assets, in an efficient and cost reflective way. TasNetworks allocates costs to customer classes and tariff classes using its Distribution Cost of Supply (**DCoS**) model. This modelling process is explained in the paper 'DCoS Methodology' provided as an attachment to this Annual Distribution Pricing Proposal.

### 5.2.3 Energy consumption, demand and customer forecasts

TasNetworks has prepared forecasts for demand, energy consumption and customer numbers as a component of its network tariff development modelling.

#### 5.2.3.1 Energy consumption

TasNetworks consumption forecasting takes into account recent consumption trends and forecast growth within each customer class. Recent years have seen a downward trend in consumption. While there has been a reversal of this decline in the past 12 months, it remains to be seen whether this is an ongoing shift in consumption. As a result, the energy consumption forecasts which underpin this Annual Distribution Pricing Proposal anticipate a further, modest decline in consumption, but at a lesser rate than forecast in recent years.

The 2016-17 energy consumption forecast is for a total consumption of 4,110 GWh. This forecast is 1.40 per cent lower than TasNetworks' forecast for its 2015-16 Annual Distribution Pricing Proposal.

#### 5.2.3.2 Demand

The demand forecasts prepared by TasNetworks as part of its Annual Planning Report are not the same as the forecasts used by TasNetworks when developing network tariffs. This is because the annual planning report draws on coincident maximum demand (system maximum demand, inclusive of transmission customer demand), whereas the setting of network tariffs is informed by any-time maximum demand (**ATMD**) on the distribution network only. The sum of ATMD will not equal the system maximum demand, as the individual demands within the ATMD do not all occur at the same time as the system maximum demand.

TasNetworks has also assumed that the largest customers that have charges based on a specified demand will set that specified demand such that they will minimise excess demand charges.

#### 5.2.3.3 Customers

The forecasts of customer numbers developed for this Annual Distribution Pricing Proposal have been prepared on a tariff-by-tariff basis. As some of TasNetworks' customers may be supplied under multiple network tariffs, the number of 'customers' used to develop TasNetworks' pricing will be greater than the number of customers that are actually connected to the distribution network.



## 6 Standard control services tariff classes

### 6.1 Overview

TasNetworks has selected network tariff classes based on the need to group customers on an economically efficient basis that adequately reflects customer characteristics and has regard to the costs of serving those customers.

The individual, demand and general tariff conditions outlined in this section have, in general, remained unchanged from those of the previous regulatory year, with the exception of the changes, noted previously, to the time of use periods applying to TAS92 and TAS93 network tariffs. The network tariff classes for standard control services are shown in Table 4.

**Table 4: Tariff classes – standard control services**

Network Tariff class	Network Tariff	Description
Residential	Residential low voltage general (TAS31)	This network tariff is for low voltage installations that are premises used wholly or principally as private residential dwellings.
	Residential low voltage pay as you go (TAS101)	This network tariff supports the Aurora Energy <i>Pay As You Go</i> product and is not to be used for any other application. This network tariff is for customers that have a specialised PAYG meter installed for the provision of the <i>Pay As You Go</i> product.  This network tariff is for low voltage installations that are premises used wholly or principally as private residential dwellings.  <b><i>This network tariff is obsolete, with no new connections allowed.</i></b>
	Residential low voltage pay as you go time of use (TAS92)	This time of use network tariff supports the Aurora <i>Pay As You Go</i> product and is not to be used for any other application. This network tariff is for customers with a basic meter and Payguard meter configuration for the provision of the <i>Pay As You Go</i> product.  This network tariff is for low voltage installations that are premises used wholly or principally as private residential dwellings.
	Residential low voltage time of use (TAS93)	This time of use network tariff is for low voltage installations that are premises used wholly or principally as private residential dwellings.
Small LV	Business low voltage general (TAS22)	This is the basic, low voltage network tariff for installations that are not private residential dwellings.
	Business low voltage nursing homes (TAS34)	This low voltage network tariff is applicable only to those businesses registered as aged care facilities.  <b><i>This network tariff is obsolete, with no new connections allowed.</i></b>

Network Tariff class	Network Tariff	Description
	General network – business, curtilage (TASCURT)	<p>This network tariff is for rural customers having a single low voltage connection point but requiring more than one meter due to site layout.</p> <p>The single connection point must supply an installation qualifying for, and being supplied on the General Network - Residential network tariff.</p> <p><b><i>This network tariff is obsolete, with no new connections allowed.</i></b></p>
	Business low voltage time of use (TAS94)	This is the basic, time of use low voltage network tariff for installations that are not private residential dwellings.
Large LV	Business low voltage kVA demand (TAS82)	This network tariff is for installations that are not private residential dwellings taking low voltage 3-phase supply.
Uncontrolled Energy	Uncontrolled low voltage heating (TAS41)	<p>This network tariff is for low voltage installations.</p> <p>In installations that are private residential dwellings, this network tariff:</p> <ul style="list-style-type: none"> <li>is for water heating and/or residential space heating and/or domestic indoor pool heating only.</li> </ul> <p>In installations that are not private residential dwellings, this network tariff:</p> <ul style="list-style-type: none"> <li>is for water heating only.</li> </ul>
Controlled Energy	Controlled low voltage energy – off peak with afternoon boost (TAS61)	<p>This off-peak network tariff is for low voltage installations and includes an ‘afternoon boost’ component.</p> <p>In installations that are private residential dwellings, this network tariff:</p> <ul style="list-style-type: none"> <li>is for water heating and/or residential space heating and/or other “wired in” appliances as approved by TasNetworks; and</li> <li>may be used for heating swimming pools, including those that incorporate a spa. Note that an individual spa from which the water goes to waste after use may not be connected on this tariff.</li> </ul> <p>In installations that are not private residential dwellings, this network tariff:</p> <ul style="list-style-type: none"> <li>is for water heating and/or space heating and/or other “wired in” appliances as approved by TasNetworks.</li> </ul>

Network Tariff class	Network Tariff	Description
	Controlled low voltage energy – night period only (TAS63)	<p>This network tariff is for low voltage installations and is only available during off-peak periods.</p> <p>In installations that are private residential dwellings, this network tariff:</p> <ul style="list-style-type: none"> <li>• is for water heating and/or residential space heating and/or other circuits as approved by TasNetworks; and</li> <li>• may be used for heating swimming pools, including those that incorporate a spa. Note that an individual spa from which the water goes to waste after use may not be connected on this tariff.</li> </ul> <p>In installations that are not private residential dwellings, this network tariff:</p> <ul style="list-style-type: none"> <li>• is for water heating and/or space heating and/or other circuits as approved by TasNetworks.</li> </ul>
Irrigation	Irrigation low voltage time of use (TAS75)	<p>This low voltage time of use network tariff is for primary producers' business installations that are used solely for the irrigation of crops, which must be classified as ANZSIC class 01.</p>
HV	Business high voltage kVA specified demand (TASSDM)	<p>This network tariff is for customers where:</p> <ul style="list-style-type: none"> <li>• connection is made to this site at high voltage; and</li> <li>• the expected ATMD of the site is less than 2 MVA.</li> </ul> <p>Customers on this network tariff are able to agree with TasNetworks a "Specified Demand" for their electrical installation. Once agreed this value is used in the calculation of Network Use of System (NUoS) charges for the following period of no less than twelve months.</p> <p>A site connected to the TasNetworks distribution network with this network tariff is not eligible for any other network tariff.</p>
	Business high voltage kVA specified demand >2MVA (TAS15)	<p>This network tariff is for customers where:</p> <ul style="list-style-type: none"> <li>• connection is made to this site at high voltage; and</li> <li>• the expected ATMD of the site is greater than 2 MVA.</li> </ul> <p>Customers on this network tariff are able to agree with TasNetworks a "Specified Demand" for their electrical installation. Once agreed this value is used in the calculation of NUoS charges for the following period of no less than twelve months.</p> <p>A site connected to the TasNetworks distribution network with this network tariff is not eligible for any other network tariff.</p>

Network Tariff class	Network Tariff	Description
ITC	Individual tariff calculation (TASCUS1) (TASCUS2) (TASCUS3) (TASCUS4)	<p>Individual Tariff Calculation (ITC) network tariffs will typically apply to customers with an electrical demand in excess of 2.0 MVA, or where a customer's circumstances in a pricing zone identify the average shared network charge to be meaningless or distorted. ITC network tariffs are determined by modelling the connection point requirements as requested by the customer or their agents.</p> <p>ITC prices are based on actual TUoS charges for the relevant transmission connection point, plus charges associated with the actual shared distribution network utilised for the electricity supply, plus connection charges based on the actual connection assets utilised. This provides the greatest cost reflectivity for this type of customer and is feasible since the number of such customers is relatively small.</p> <p>Terms and conditions for these customers are contained within individually negotiated connection agreements.</p>
Unmetered	Un-metered supply low voltage general (TASUMS)	<p>This network tariff is for small, low voltage, low demand installations with a relatively constant load profile. For example:</p> <ul style="list-style-type: none"> <li>• illuminated street signs;</li> <li>• public telephone kiosks;</li> <li>• electric fences;</li> <li>• two-way radio transmitters;</li> <li>• fixed steady wattage installations;</li> <li>• traffic lights; and</li> <li>• level crossings.</li> </ul> <p>All installations on this network tariff must have all components permanently connected. For the avoidance of doubt, an installation containing a power point does not qualify for this network tariff.</p>
Streetlights	Un-metered supply low voltage public lighting (TASUMSSL)	<p>This network tariff is for customers that have a lighting service provided by TasNetworks.</p> <p>This network tariff does not include charges for the installation and/or replacement of lamps. Costs for the installation or replacement of lamps are an additional charge.</p>
Embedded Generator	Residential low voltage import transitional (TASX1I)	<p>This network tariff is for the recording of 'export energy' for those residential installations that import energy into the distribution system and are eligible for the residential transitional feed-in tariff rate.</p> <p>Consistent with the provisions of clause 6.1.4 of the Rules, TasNetworks does not apply a charge for this network tariff.</p> <p>Connection charges for embedded generation will always be treated on an individually calculated basis. Terms and conditions for these customers are contained within individually negotiated connection agreements.</p>

Network Tariff class	Network Tariff	Description
	Business low voltage import transitional (TASX2I)	<p>This network tariff is for the recording of 'export energy' for those commercial installations that import energy into the distribution system and are eligible for the business transitional feed-in tariff rate.</p> <p>Consistent with the provisions of clause 6.1.4 of the Rules, TasNetworks does not apply a charge for this network tariff.</p> <p>Connection charges for embedded generation will always be treated on an individually calculated basis. Terms and conditions for these customers are contained within individually negotiated connection agreements.</p>
	Residential low voltage import fair and reasonable (TASX4I)	<p>This network tariff is for the recording of 'export energy' for those residential installations that import energy into the distribution system and are eligible for the standard feed-in tariff rate.</p> <p>Consistent with the provisions of clause 6.1.4 of the Rules, TasNetworks does not apply a charge for this network tariff.</p> <p>Connection charges for embedded generation will always be treated on an individually calculated basis. Terms and conditions for these customers are contained within individually negotiated connection agreements.</p>
	Business low voltage import fair and reasonable (TASX5I)	<p>This network tariff is for the recording of 'export energy' for those commercial installations that import energy into the distribution system and are eligible for the standard feed-in tariff rate.</p> <p>Consistent with the provisions of clause 6.1.4 of the Rules, TasNetworks does not apply a charge for this network tariff.</p> <p>Connection charges for embedded generation will always be treated on an individually calculated basis. Terms and conditions for these customers are contained within individually negotiated connection agreements.</p>
	Non-qualifying import (TASX6I)	<p>This network tariff is for the recording of 'export energy' for those installations that import energy into the distribution system and are not eligible for any feed-in tariff arrangement.</p> <p>Consistent with the provisions of clause 6.1.4 of the Rules, TasNetworks does not apply a charge for this network tariff.</p> <p>Connection charges for embedded generation will always be treated on an individually calculated basis. Terms and conditions for these customers are contained within individually negotiated connection agreements.</p>

## 6.2 Charging parameters for standard control services

TasNetworks structures the charging parameters within its network tariffs to signal the impact that customers have on the distribution network and to manage demand and volume variance risk. In this context:

- TasNetworks' service charge parameters for each network tariff have been designed to recover the incremental costs that arise from the connection and management of the customer. This sends a signal to those customers about the cost of their connection works, and sets a constant and foreseeable price that assists them in making a decision to connect with visibility of the costs. The fixed charges also provide TasNetworks with a revenue source by which it can recover its residual costs and, therefore, ensure that upstream investment decisions can be made with clarity. Over time, the share of fixed (service) charges will increase, to better reflect the value customers receive from connection to the network.
- TasNetworks' volume charges are designed to recover the costs of the shared network on a basis which reflects the characteristics of the network user. However, over time there will be less reliance on consumption based volume-charging and a move towards demand based charges. Further detail in respect to this transition path will be outlined in subsequent Pricing Proposals and as part of TasNetworks customer consultation program.
- TasNetworks' demand and specified demand charges are designed to recover the costs of the shared network on a basis which reflects the characteristics of the network user.

### 6.3 Recovery of DUoS

Network tariffs and charging parameters are designed to recover the approved revenue, consistent with the calculation of the Revenue Cap. The network charging parameters adopted by TasNetworks for the recovery of standard control services Distribution Use of System (**DUoS**) tariffs are detailed in Table 5.

**Table 5: Tariff charging parameters for DUoS charges**

Tariff class	Network Tariff charging (Parameter)				
	Network tariff code	Daily charge (c/day)	Volume charge <sup>1</sup> (c/kWh)	Demand charge (c/kVA/day)	Specified demand charge (c/kVA/day)
Residential	TAS31	✓	✓		
	TAS92	✓	✓		
	TAS101	✓	✓		
	TAS93	✓	✓		
Small LV	TAS22	✓	✓		
	TAS34	✓	✓		
	TASCURT	✓	✓		
	TAS94	✓	✓		
Large LV	TAS82	✓	✓	✓	
Uncontrolled Energy	TAS41	✓	✓		
Controlled Energy	TAS61	✓	✓		
	TAS63	✓	✓		
Irrigation	TAS75	✓	✓		
HV	TASSDM	✓	✓		✓
	TAS15	✓	✓		✓
ITC	TASCUS1	✓	✓		✓
	TASCUS2	✓	✓		✓
	TASCUS3	✓	✓		✓
	TASCUS4	✓	✓		✓
Unmetered	TASUMS	✓	✓		
Street Lighting	TASUMSSL		✓ <sup>2</sup>		
Embedded Generation <sup>3</sup>	TASX1I				
	TASX2I				
	TASX41				
	TASX5I				
	TASX6I				

1 Volume charge can be a combination of step or time of use parameter.

2 Public lighting – c/lamp watt/day.

3 There are no charges for this tariff class.

## 6.4 Recovery of TUoS

Electricity is received into TasNetworks' distribution network primarily from the TasNetworks' transmission network. The transmission network is separately regulated by the AER and, for the purposes of transmission cost recovery and billing, the distribution network's connections with the transmission network are treated as if they belong to an independent customer. TUoS charges levied on the distribution network are, in turn, recovered by TasNetworks from customers connected to the distribution network as a component of network tariffs.

The network tariffs applied to customers connected to the distribution network, to recover transmission costs, are based on forecasts of the TUoS charges that will be incurred at each connection point with the distribution network. These are aggregated and then adjusted for past under or over recoveries of TUoS by the distributor, as per the AER's distribution determination<sup>8</sup>. The TUoS charges applied to the distribution network and recovered from customers connected to the distribution network comprise both fixed and variable charges.

The distribution network in Tasmania has in excess of 30 transmission connection points, each with its own pricing. TasNetworks is required to provide all low voltage customers in Tasmania with a 'postage stamp' price, irrespective of the transmission connection point which supplies the distribution network in their area. Consequently, TasNetworks only preserves the locational pricing signals within the transmission network charges for larger, high voltage customers that take their supply from the distribution network. These largest customers are generally covered by the individual tariff calculation and business high voltage kVA specified demand (>2MVA) network tariffs.

The network charging parameters adopted by TasNetworks for the recovery of standard control services TUoS tariffs are detailed in Table 6.

---

<sup>8</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.



**Table 6: Tariff charging parameters for TUoS charges**

Tariff class	Network Tariff charging (Parameter)				
	Network tariff code	Daily charge (c/day)	Volume charge <sup>1</sup> (c/kWh)	Demand charge (c/kVA/day)	Specified demand charge (c/kVA/day)
Residential	TAS31		✓		
	TAS92		✓		
	TAS101		✓		
	TAS93		✓		
Small LV	TAS22		✓		
	TAS34		✓		
	TASCURT		✓		
	TAS94		✓		
Large LV	TAS82		✓	✓	
Uncontrolled Energy	TAS41		✓		
Controlled Energy	TAS61		✓		
	TAS63		✓		
Irrigation	TAS75		✓		
HV	TASSDM		✓		✓
	TAS15				✓ <sup>2</sup>
ITC	TASCUS1				✓ <sup>2</sup>
	TASCUS2				✓ <sup>2</sup>
	TASCUS3				✓ <sup>2</sup>
	TASCUS4				✓ <sup>2</sup>
Unmetered	TASUMS		✓		
Street Lighting	TASUMSSL		✓ <sup>3</sup>		
Embedded Generation <sup>4</sup>	TASX1I				
	TASX2I				
	TASX4I				
	TASX5I				
	TASX6I				

- 1 Volume charge can be a combination of step or time of use parameter.
- 2 Demand charge is locational and based upon the transmission connection point.
- 3 Public lighting – c/lamp watt/day.
- 4 There are no charges for this tariff class.

## 7 Customer price impacts – standard control services

### 7.1 Price movements in 2016-17

TasNetworks' pricing strategy recognises the changing expectations of customers and the upward pressure exerted on energy prices in recent years. As a business TasNetworks is committed to achieving a commercial outcome that strikes a balance between meeting the requirements of customers and managing sustainability and risk.

Table 7 provides the difference in the charges between 2015-16 and 2016-17 for each network tariff. This table is used to give an estimate of the percentage component change for each customer.

**Table 7: Estimated percentage price change by tariff class**

Tariff class	Tariff	Tariff Component	Charge 2015-16 (cents)	Charge 2016-17 (cents)	Change (%)
HV	TAS15	Service charge	2,062.900	2,475.500	20.00%
		Peak energy	1.936	1.897	-2.01%
		Shoulder energy	0.524	0.514	-1.91%
		Off-peak energy	0.066	0.065	-1.52%
		Specified demand	12.300	12.054	-2.00%
		Excess demand	61.500	60.270	-2.00%
		Connection specified demand	0.447	0.438	-2.01%
		Excess connection specified demand	2.235	2.190	-2.01%
	TASSDM	Service charge	155.657	186.788	20.00%
		Peak energy	1.450	1.243	-14.28%
		Shoulder energy	1.092	0.938	-14.10%
		Off-peak energy	0.619	0.525	-15.19%
		Specified demand	24.989	24.280	-2.84%
		Excess demand	249.890	242.796	-2.84%
Irrigation	TAS75	Service charge	219.051	230.006	5.00%
		Peak energy	15.614	15.553	-0.39%
		Shoulder energy	9.585	9.535	-0.52%
		Off-peak energy	1.489	1.505	1.07%
Large LV	TAS82	Service charge	222.458	244.704	10.00%
		Energy charge	3.119	2.925	-6.22%
		Demand charge	51.766	47.792	-7.68%
Small LV	TAS22	Service charge	45.584	47.864	5.00%
		Energy charge	15.555	14.168	-8.92%
	TAS34	Service charge	45.584	47.864	5.00%
		1 <sup>st</sup> 500kWh energy	15.555	14.168	-8.92%

Tariff class	Tariff	Tariff Component	Charge 2015-16 (cents)	Charge 2016-17 (cents)	Change (%)
	TASCURT	Remaining energy	8.818	8.904	0.98%
		Service charge	31.909	36.695	15.00%
		Energy charge	15.555	14.168	-8.92%
	TAS94	Service charge	46.518	48.844	5.00%
		Peak energy	15.029	13.901	-7.51%
		Shoulder energy	9.601	8.876	-7.55%
		Off-peak energy	1.552	1.554	0.13%
Residential	TAS31	Service charge	45.584	47.864	5.00%
		Energy charge	15.555	14.168	-8.92%
	TAS101	Service charge	45.584	47.864	5.00%
		Energy charge	8.233	8.301	0.83%
	TAS93 / TAS92	Service charge	45.584	47.864	5.00%
		Peak energy	15.029	19.020	26.56%
		Off-peak energy	1.552	2.811	81.12%
Uncontrolled Energy	TAS41	Service charge	4.936	5.183	5.00%
		Energy charge	5.206	5.302	1.84%
Controlled Energy	TAS61	Service charge	9.253	9.716	5.00%
		Energy charge	1.713	1.715	0.12%
	TAS63	Service charge	9.253	9.716	5.00%
		Energy charge	1.530	1.362	-10.98%
Unmetered	TASUMS	Service charge	45.584	47.864	5.00%
		Energy charge	18.400	18.245	-0.84%
Streetlights	TASUMSSL	Demand charge	0.148	0.142	-4.05%

Table 8 provides the difference in the charges between 2015-16 and 2016-17 for each ITC<sup>9</sup> network tariff. This Table is used to give an estimate of the percentage component change for each customer.

**Table 8: Estimated percentage price change by ITC tariff**

Tariff class	NMI / Tariff	Tariff Component	DUoS charge 2015-16 (cents)	DUoS charge 2016-17 (cents)	Change (%)
ITC	Individual Tariff	Service charge	██████	██████	██████
		Specified connection	██████	██████	██████

<sup>9</sup> ITC tariff rates are confidential.

Tariff class	NMI / Tariff	Tariff Component	DUoS charge 2015-16 (cents)	DUoS charge 2016-17 (cents)	Change (%)
	Calculation	Excess connection			
	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified demand			
		Excess demand			
	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified demand			
		Excess demand			
	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified demand			
		Excess demand			
	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified demand			
		Excess demand			
ITC	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified demand			
		Excess demand			
HV	TAS15	Service charge	2,062.900	2,475.500	20.00%
		Peak energy	1.936	1.897	-2.01%
		Shoulder energy	0.524	0.514	-1.91%
		Off-peak energy	0.066	0.065	-1.52%
		Specified demand	12.300	12.054	-2.00%
		Excess demand	61.500	60.270	-2.00%
		Specified connection	0.447	0.438	-2.01%
		Excess connection	2.235	2.190	-2.01%

Table 9 provides the difference in the charges between 2015-16 and 2016-17 for each locational TUoS charge. This table is used to give an estimate of the percentage change between years in the TUoS charges for each transmission connection point.

**Table 9: Estimated percentage price change for locational TUoS charges**

Transmission node description	Transmission node identifier	TUoS charge 2015-16 (c/kVA/day)	TUoS charge 2016-17 (c/kVA/day)	Change (%)
Arthurs Lake	TAL2	16.929	17.644	4.22%
Avoca	TAV2	21.442	19.097	-10.94%
Burnie	TBU3	17.888	16.978	-5.09%
Bridgewater	TBW2	19.099	19.368	1.41%
Derwent Bridge	TDB2	282.865	288.705	2.06%
Derby	TDE2	36.264	38.322	5.68%
Devonport	TDP2	19.809	19.010	-4.03%
Emu Bay	TEB2	24.343	23.312	-4.24%
Electrona	TEL2	23.231	20.371	-12.31%
Kermandie	TKE2	37.101	40.419	8.94%
Kingston 11kV	TKI2	17.435	21.035	20.65%
Kingston 33kV	TKI3	22.151	18.808	-15.09%
Knights Road	TKR2	24.528	22.955	-6.41%
Lindisfarne	TLF2	16.959	15.440	-8.96%
Meadowbank	TMB2	20.756	18.626	-10.26%
New Norfolk	TNN2	21.355	20.462	-4.18%
Newton	TNT2	42.482	43.413	2.19%
Port Latta	TPL2	20.487	20.241	-1.20%
Palmerston	TPM3	19.776	20.235	2.32%
Queenstown	TQT2	30.070	29.813	-0.85%
Railton	TRA2	19.621	18.522	-5.60%
Rosebery	TRB2	19.362	16.976	-12.32%
Scottsdale	TSD2	39.197	40.286	2.78%
St Marys	TSM2	27.957	27.378	-2.07%
Sorell	TSO2	24.135	23.883	-1.04%
Savage River	TSR2	22.067	25.758	16.73%
Smithton	TST2	26.125	26.339	0.82%
Triabunna	TTB2	28.620	29.087	1.63%
Tungatinah	TTU2	65.515	73.216	11.75%
Ulverstone	TUL2	17.526	16.923	-3.44%
Waddamana	TWA2	34.929	33.336	-4.56%
Wesley Vale	TWV2	40.056	39.413	-1.61%
Hobart Virtual	TVN1	19.052	18.813	-1.25%
Tamar Virtual	TVN2	16.583	15.905	-4.09%

## 8 Standard control services pricing

The proposed DUoS charges for each of TasNetworks' network tariffs in 2016-17 are outlined in Table 10.

The proposed DUoS charges for each of TasNetworks' 2016-17 individual tariff calculation<sup>10</sup> and business high voltage kVA specified demand (>2MVA) network tariffs are outlined in Table 11.

The proposed TUoS charges for each of TasNetworks' 2016-17 network tariffs are outlined in Table 12.

The proposed TUoS charges for each of TasNetworks' 2016-17 individual tariff calculation<sup>11</sup> and business high voltage kVA specified demand (>2MVA) network tariffs are outlined in Table 13.

The proposed locational TUoS charges that are applicable to TasNetworks' 2016-17 ITC and business high voltage kVA specified demand (>2MVA) network tariffs are outlined in Table 14.

---

<sup>10</sup> ITC tariff rates are confidential.

<sup>11</sup> ITC tariff rates are confidential.

**Table 10: Proposed DUoS charges – standard control services**

Distribution Use of System rates										
Tariff description	Network tariff code	Daily charge c/day	ToU energy rate c/kWh			Step energy rates c/kWh		Demand rates c/kVA(kW)/day	Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak	Step 1	Remaining		Specified	Excess
Residential low voltage general	TAS31	47.864					11.263			
Business low voltage general	TAS22	47.864					11.263			
Business low voltage nursing homes	TAS34	47.864				11.263	5.999			
General network – business, curtilage	TASCURT	36.695					11.263			
Uncontrolled low voltage heating	TAS41	5.183					2.545			
Controlled low voltage energy off-peak with afternoon boost	TAS61	9.716					1.003			
Controlled low voltage energy with night period only	TAS63	9.716					0.821			
Un-metered supply low voltage general	TASUMS	47.864					14.071			
Irrigation low voltage time of use	TAS75	230.006	11.851	7.111	0.926					
Business low voltage kVA demand	TAS82	244.704					2.252	32.136		
Business high voltage kVA specified demand	TASSDM	186.788	0.241	0.194	0.065				23.097	230.966
Residential low voltage pay as you go	TAS101	47.864					6.180			
Residential low voltage pay as you go time of use	TAS92	47.864	13.135		1.952					
Business low voltage time of use	TAS94	48.844	10.446	6.540	0.912					

Distribution Use of System rates										
Tariff description	Network tariff code	Daily charge c/day	ToU energy rate c/kWh			Step energy rates c/kWh		Demand rates c/kVA(kW) /day	Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak	Step 1	Remaining		Specified	Excess
Residential low voltage time of use	TAS93	47.864	13.135		1.952					
Un-metered supply low voltage public lighting	TASUMSSL							0.112		
Residential low voltage import transitional <sup>1</sup>	TASX1I									
Business low voltage import transitional <sup>1</sup>	TASX2I									
Residential low voltage import fair and reasonable <sup>1</sup>	TASX4I									
Business low voltage import fair and reasonable <sup>1</sup>	TASX5I									
Non-qualifying import <sup>1</sup>	TASX6I									

1 There are no charges for this network tariff.



**Table 11: Proposed DUoS charges – standard control services (ITC customers)<sup>12</sup>**

Distribution Use of System rates										
Tariff description	Network Tariff code	Daily charge \$/day	Energy rate c/kWh				Connection charge c/kVA/day		Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak	All energy	Specified	Excess	Specified	Excess
Business high voltage VA Specified Demand (> 2MVA)	TAS15	24.755	1.897	0.514	0.065		0.438	2.190	12.054	60.270
Individual tariff calculation	TASCUS1									
Individual tariff calculation	TASCUS1									
Individual tariff calculation	TASCUS1									
Individual tariff calculation	TASCUS1									
Individual tariff calculation	TASCUS1									
Individual tariff calculation	TASCUS1									

<sup>12</sup> ITC tariff rates are confidential.

**Table 12: Proposed TUoS charges – standard control services**

Transmission Use of System rates										
Tariff description	Network tariff code	Daily charge c/day	ToU energy rate c/kWh			Step energy rates c/kWh		Demand rates c/kVA(kW)/day	Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak	Step 1	Remaining		Specified	Excess
Residential low voltage general	TAS31						2.905			
Business low voltage general	TAS22						2.905			
Business low voltage nursing homes	TAS34					2.905	2.905			
General network – business, curtilage	TASCURT						2.905			
Uncontrolled low voltage heating	TAS41						2.757			
Controlled low voltage energy – off peak with afternoon boost	TAS61						0.712			
Controlled low voltage energy – night period only	TAS63						0.541			
Un-metered supply low voltage general	TASUMS						4.174			
Irrigation low voltage time of use	TAS75		3.702	2.424	0.579					
Business low voltage kVA demand	TAS82						0.673	15.656		
Business high voltage kVA specified demand	TASSDM		1.002	0.744	0.460				1.183	11.830
Residential low voltage pay as you go	TAS101						2.121			
Residential low voltage pay as you go time of use	TAS92		5.885		0.859					
Business low voltage time of use	TAS94		3.455	2.336	0.642					
Residential low voltage time of use	TAS93		5.885		0.859					

Transmission Use of System rates										
Tariff description	Network tariff code	Daily charge c/day	ToU energy rate c/kWh			Step energy rates c/kWh		Demand rates c/kVA(kW)/day	Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak	Step 1	Remaining		Specified	Excess
Un-metered supply low voltage public lighting	TASUMSSL								0.030	
Residential low voltage import transitional <sup>1</sup>	TASX1									
Business low voltage import transitional <sup>1</sup>	TASX2I									
Residential low voltage import fair and reasonable <sup>1</sup>	TASX4I									
Business low voltage import fair and reasonable <sup>1</sup>	TASX5I									
Non-Qualifying Import <sup>1</sup>	TASX6I									

1 There are no charges for this tariff.

**Table 13: Proposed TUoS – standard control services (ITC customers)<sup>13</sup>**

Transmission Use of System rates										
Tariff description	Network tariff code	Daily charge c/day	ToU energy rate c/kWh			Step energy rates c/kWh		Demand rates c/kVA (kW)/day	Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak	Step 1	Remaining		Specified	Excess
Business high voltage kVA Specified Demand (> 2MVA)	TAS15								Locational	Locational
Individual tariff calculation	TASCUS1								Locational	Locational
Individual tariff calculation	TASCUS2								Locational	Locational
Individual tariff calculation	TASCUS3								Locational	Locational
Individual tariff calculation	TASCUS4								Locational	Locational

<sup>13</sup> ITC tariff rates are confidential.

**Table 14: Proposed locational TUoS charges – standard control services**

Transmission node description	Transmission node identifier	Daily charge c/kVA/day
Arthurs Lake	TAL2	17.644
Avoca	TAV2	19.097
Burnie	TBU3	16.978
Bridgewater	TBW2	19.368
Derwent Bridge	TDB2	288.705
Derby	TDE2	38.322
Devonport	TDP2	19.010
Emu Bay	TEB2	23.312
Electrona	TEL2	20.371
Kermandie	TKE2	40.419
Kingston 11KV	TKI2	21.035
Kingston 33KV	TKI3	18.808
Knights Road	TKR2	22.955
Lindisfarne	TLF2	15.440
Meadowbank	TMB2	18.626
New Norfolk	TNN2	20.462
Newton	TNT2	43.413
Port Latta	TPL2	20.241
Palmerston	TPM3	20.235
Queenstown	TQT2	29.813
Railton	TRA2	18.522
Rosebery	TRB2	16.976
Scottsdale	TSD2	40.286
St Marys	TSM2	27.378
Sorell	TSO2	23.883
Savage River	TSR2	25.758
Smithton	TST2	26.339
Triabunna	TTB2	29.087
Tungatinah	TTU2	73.216
Ulverstone	TUL2	16.923
Waddamana	TWA2	33.336
Wesley Vale	TWV2	39.413
Hobart Virtual	TVN1	18.813
Tamar Virtual	TVN2	15.905

Due to the interconnected nature of the Hobart region, transmission nodes (TCR2, TCS3, TLF2, TMT2, TNH2, TRI4 and TRK2) are averaged as a single Virtual Transmission Node (VTN) in accordance with the provisions of the Rules. The Transmission Node Identifier (TNI) in Table 14 for this VTN is TVN1.

**Table 15: Hobart region virtual transmission nodes**

Transmission node description	Transmission node identifier
Chapel Street	TCS3
Creek Road	TCR2
Lindisfarne	TLF2
Mornington	TMT2
North Hobart	TNH2
Risdon	TRI4
Rokeby	TRK2

Due to the interconnected nature of the Launceston/Tamar region, transmission nodes (TGT3, THA3, TMY2, TNW2, TSL2 and TTR2) are averaged as a single VTN in accordance with the provisions of the Rules. The TNI listed in Table 14 for this VTN is TVN2.

**Table 16: Tamar region virtual transmission nodes**

Transmission node description	Transmission node identifier
George Town	TGT3
Hadspen	THA3
Mowbray	TMY2
Norwood	TNW2
St Leonards	TSL2
Trevallyn	TTR2

## 9 Standard control services - tariff variations

Clause 6.18.2(b)(5) of the Rules<sup>14</sup> requires that TasNetworks' Annual Distribution Pricing Proposal set out the nature of any variation or adjustment to a tariff that could occur during the course of the regulatory year and the basis on which it could occur.

### 9.1 Adjustments to tariffs within a regulatory year

#### 9.1.1 ITC tariffs

Variations or adjustments to network tariffs will only occur where an ITC customer advises TasNetworks that they intend to alter their demand or connection characteristics during 2016-17. In this case, TasNetworks would recalculate the charging parameters of the tariff.

New network tariffs will also be created for each ITC customer that connects during 2016-17, in line with the methodology set out in this Annual Distribution Pricing Proposal.

#### 9.1.2 Changes to tariffs by network tariff class

From 1 July 2016 we will align the time of use periods applying to two existing residential consumption based time of use network tariffs with the time periods that will apply to two new demand based network tariffs being introduced for residential and small business customers in 2017-18. This will help ensure that we provide our customers with consistent pricing signals in the future. The residential tariffs affected by this change are the Residential Low Voltage PAYG Time of Use (TAS92) and Residential Low Voltage Time of Use (TAS93) network tariffs.

TasNetworks does not anticipate any changes to network tariffs within any other tariff classes in the course of the 2016-17 regulatory year, other than the realignment of certain network tariffs relative prices and the decreasing emphasis on consumption based charges discussed previously.

### 9.2 Variations between the 2015-16 and 2016-17 regulatory years

TasNetworks' total revenue has decreased by approximately 4.49 per cent between 2015-16 and 2016-17, while the consumption of electricity by customers is expected to decrease by approximately 1.40 per cent.

TasNetworks has adopted the following general strategies in setting its network tariffs for 2016-17 to ensure customer impacts are managed on the transition to more cost-reflective tariffs. In a number of instances these strategies have remained unchanged from the previous regulatory year. These tariff strategies are:

- the DUoS and TUoS components of all network tariffs will be rebalanced to ensure an appropriate recovery of these components;
- customers on the General Network – Nursing Homes network tariff have previously received a discounted energy rate. The gradual removal of the discounted energy rate inherent in this tariff has been underway for a number of years, and commenced during the previous regulatory control period. The nursing home network tariff has been increased for the 2016-17 regulatory year by the long term average of CPI<sup>15</sup> + 6 per cent. However, the process of aligning this tariff with other tariff offerings will be accelerated in subsequent years;

---

<sup>14</sup> Version 65.

<sup>15</sup> Assumed to be 2.5 per cent

- customers on the General Network – Business Curtilage network tariff have previously received a discounted daily charge. In line with TasNetworks' Network Tariff Strategy, for the 2016-17 regulatory year the discount on the daily charge has been decreased by ten per cent. In the future the discount will be removed at an accelerated rate until such a time as the daily charge achieves parity with the daily charge within the General Network – Business network tariff;
- customers on the Uncontrolled LV heating network tariff have previously received a discounted rate for the delivery of energy. In line with TasNetworks' Network Tariff Strategy, for the 2016-17 regulatory year the energy charge discount has been further reduced.
- rebalancing to ensure appropriate revenue recovery.

#### **9.2.1 Reallocation between fixed and variable costs**

The principles of allocation between fixed (service) and variable costs remain consistent with the previous regulatory year. TasNetworks is conscious of the costs that are borne by low consumption customers and has, therefore, chosen to increase fixed (service) charges in most instances by no more than the maximum year-on-year increase in the total revenue raised from a particular tariff class permitted under the Rules. (For more information on the calculation of this limit, which can vary from year to year, see Section 15.11: Compliance with side constraints). Customers on the TASCURT network tariff will, however, see a larger increase as TasNetworks continues to unwind its curtilage subsidy. Large business customers on both low and high voltage tariffs will also see a larger increase as we move to rebalance the fixed (service) and variable components of these tariffs.

#### **9.2.2 Rebalancing of DUoS and TUoS revenues**

TasNetworks has forecast its DUoS and TUoS components to achieve the following outcomes:

- recover the total allowable revenue; and
- the TUoS and DUoS components of that revenue also match the forecast transmission network charges (passed through for recovery via network tariffs) and the TasNetworks' allowable Revenue Cap.



## 10 Alternative control services

‘Alternative control’ denotes a form of pricing control used by the Australian Energy Regulator which involves the use of price caps, rather than revenue caps, to regulate prices. Services classified as alternative control services are services where the costs – and the associated benefits from the service – can be directly attributed to specific customers.

In its distribution determination<sup>16</sup> the AER has classified the following categories of direct control services as alternative control services, with the form of control for all services being a price cap:

- metering services;
- public lighting services;
- guide ‘Fee-Based Services’; and
- quoted services.

### 10.1 Alternative control services tariff classes

Tariff classes and definitions for TasNetworks’ alternative control services are described in Table 17.

**Table 17: Tariff classes for alternative control services**

Tariff Class	Definition
Metering	<p>Metering services are those services provided with respect to the provision, installation and maintenance of standard meters and associated services provided to retail customers.</p> <p>This includes the metering services provided using Type 5, Type 6 and Type 7 metering installations in TasNetworks’ role as metering provider (<b>MP</b>) and meter data provider (<b>MDP</b>).</p>
Public lighting	<p>Public lighting services are those services provided by TasNetworks for:</p> <ul style="list-style-type: none"> <li>• the provision, maintenance and replacement of public lighting assets owned by TasNetworks;</li> <li>• the maintenance of public lighting assets owned by customers (contract lighting); and</li> <li>• the provision, maintenance and replacement of TasNetworks owned public lighting poles.</li> </ul>
Fee based services	<p>Fee-based services are those services provided by TasNetworks where the service is, in general, provided for the benefit of a single customer rather than uniformly supplied to all customers. These services are provided at the request of a third party and are typically initiated by way of a service request received from a customer’s electricity retailer.</p>

<sup>16</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

Tariff Class	Definition
Quoted services	<p>Quoted (non-standard) services are those services provided by TasNetworks where the nature and scope of the service is specific to individual customer's needs, and varies from customer to customer. As a consequence, the cost of providing the services cannot be estimated without first knowing the customer's specific requirements. It is not possible, therefore, to set a generic total fixed fee in advance for these services.</p> <p>Requests for quoted services may be received from a customer or retailer on behalf of a customer.</p>

## 10.2 Metering services

This section sets out the indicative prices for the metering services provided by TasNetworks.

### 10.2.1 Overview of metering services

Metering services are provided to all customers with Type 5 or Type 6 metering installations and form a component of the charges levied within TasNetworks' network tariffs. These metering charges are additional to those network tariff charges designed for the recovery of standard control services. The charges for metering services include the costs for TasNetworks to read those meters and collect the meter data.

The AER has determined that the provision of metering services will be classified in accordance with the type of meter and the functionality that it provides, and has assigned these meters into differing meter classes. These meter classes are shown in Table 18.

**Table 18: Meter classes for metering services**

Meter Class	Definition
Domestic LV – single phase	Type 6 metering services provided to residential customers with a single phase connection.
Domestic LV – multi phase	Type 6 metering services provided to residential customers with multiple phase connections.
Domestic LV – CT meters	Type 6 metering services provided to residential customers that require the installation of current or voltage transformers.
Domestic LV – single phase (remote read)	Type 6 metering services provided to residential customers with single phase connections and a requirement for remote meter reading (i.e. do not require a site visit to collect metering data).
Domestic LV – multi phase (remote read)	Type 6 metering services provided to residential customers with multiple phase connections and a requirement for remote meter reading (i.e. do not require a site visit to collect data).
Domestic LV – CT meters (remote read)	Type 6 metering services provided to residential customers that require the installation of current or voltage transformers and remote meter reading (i.e. do not require a site visit to collect data).
Business LV – single phase	Type 6 metering services provided to commercial customers that have a single phase connection.
Business LV – multi phase	Type 6 metering services provided to commercial customers with multiple phase connections.

Meter Class	Definition
Business LV – CT meters	Type 6 metering services provided to commercial customers that require the installation of current or voltage transformers.
Business LV – single phase (remote read)	Type 6 metering services provided to commercial customers with single phase connections that require remote meter reading (i.e. do not require a site visit to collect data).
Business LV – multi phase (remote read)	Type 6 metering services provided to commercial customers with multiple phase connections and a requirement for remote meter reading (do not require a site visit to collect data).
Business LV – CT meters (remote read)	Type 6 metering services provided to commercial customers that require the installation of current or voltage transformers and remote meter reading (i.e. do not require a site visit to collect data).
Other meters (PAYG)	<p>Type 5 or Type 6 metering services provided to customers that do not belong to one of the other meter classes. These meters include the meters that are provided in support of the Aurora Energy Pay As You Go pre-paid metering product.</p> <p>This meter class does not apply to metering services where the prepayment facility is fully incorporated as a component of the provision of that meter.</p>

### 10.2.2 Setting the 2016-17 metering services tariffs

This section provides an overview of how the allowable prices for metering services are recovered through tariffs.

The 2016-17 metering services tariffs and charging parameters set out in this Annual Distribution Pricing Proposal are based on the price caps determined by the AER in its distribution determination<sup>17</sup>. TasNetworks' price caps for the provision of metering services are calculated in accordance with the following formula, given by the AER in its distribution determination<sup>18</sup>:

$$P_t = P_{t-1} \times (1 + \Delta CPI_t) \times (1 - X)$$

Table 19 provides details of the price cap calculation that TasNetworks has utilised in the preparation of its metering services tariffs.

**Table 19: Price cap calculation – metering services**

Component	Value	Comment
$P_{t-1}$	Various	The price for each metering service in the prior regulatory year (2015-16)
$\Delta CPI_t$	1.31%	The annual percentage change in the Australian Bureau of Statistics Consumer Price Index (CPI) for All Groups, Weighted Average of Eight Capital Cities for the most recent prior year ending in March
X	0.00%	The 'X' factor as specified in the AER's distribution determination

<sup>17</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

<sup>18</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

### 10.2.3 Prices for metering services

The proposed 2016-17 prices for each of TasNetworks' metering services tariffs are outlined in Table 20.

**Table 20: Proposed tariffs for metering services**

Tariff	Price (c/day)	Annual Charge (\$)
Domestic LV – single phase	7.539	27.52
Domestic LV – multi phase	15.645	57.10
Domestic LV – CT meters	19.361	70.67
Domestic LV – single phase (remote read)	6.481	23.66
Domestic LV – multi phase (remote read)	14.654	53.49
Domestic LV – CT meters (remote read)	21.119	77.08
Business LV – single phase	7.798	28.46
Business LV – multi phase	15.600	56.94
Business LV – CT meter	20.172	73.63
Business LV – single phase (remote read)	6.481	23.66
Business LV – multi phase (remote read)	14.654	53.49
Business LV – CT meters (remote read)	21.119	77.08
Other – T07	13.767	50.25
Other – T09	13.767	50.25

## 10.3 Public lighting services

This section sets out the indicative prices for the public lighting services provided by TasNetworks.

It is important to note that the final tariff for the provision of public lighting services comprises a charge for the provision of a standard control service and an alternative control service. The conveyance of electricity to public lights requires the use of the distribution network, which is a standard control service, while the provision, construction and maintenance of the lighting asset is an alternative control service. Only the alternative control service component of public lighting tariffs is discussed in this section.

### 10.3.1 Overview of public lighting services

Public lighting services are those services provided by TasNetworks for:

- the provision, maintenance and replacement of public lighting assets owned by TasNetworks;
- the maintenance of public lighting assets owned by customers (contract lighting); and
- the provision, maintenance and replacement of TasNetworks owned public lighting poles.

Public lighting services exclude:

- the alteration and relocation of public lighting assets, which will be provided on a quoted service basis and are, therefore, categorised as a quoted service;
- the installation of contract lights, which will be provided on a quoted service basis and is, therefore, categorised as a quoted service; and

- the provision of new public lighting technologies, which will be classified as a negotiated distribution service.

The AER has determined that the provision of public lighting services will be categorised according to the type of light that is provided and whether that light is owned by TasNetworks. The AER has also determined that TasNetworks may charge a fee for the previous provision of poles in support of certain lights (referred to as surcharge poles).

Those lights that are owned by TasNetworks are referred to as public lights, while those lights that are owned by the customer, along with surcharge poles, are referred to as contract lights.

These lighting types are shown in Table 21 and Table 22 respectively.

**Table 21: Public lighting types for public lighting services**

Lighting type	Definition
42W compact fluorescent	The provision, maintenance and replacement of TasNetworks owned 42 watt compact fluorescent light fittings.
70W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 70 watt sodium vapour light fittings.
100W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 100 watt sodium vapour light fittings.
150W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 150 watt sodium vapour light fittings.
250W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 250 watt sodium vapour light fittings.
400W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 400 watt sodium vapour light fittings.
150W metal halide	The provision, maintenance and replacement of TasNetworks owned 150 watt metal halide light fittings.
250W metal halide	The provision, maintenance and replacement of TasNetworks owned 250 watt metal halide light fittings.
2 x 20W fluorescent	The provision, maintenance and replacement of TasNetworks owned 2 x 20 watt fluorescent light fittings. <b><i>This lighting type has been abolished and is no longer available to any customer.</i></b>
2 x 40W fluorescent	The provision, maintenance and replacement of TasNetworks owned 2 x 40 watt fluorescent light fittings. <b><i>This lighting type has been abolished and is no longer available to any customer.</i></b>
60W incandescent	The provision, maintenance and replacement of TasNetworks owned 60 watt incandescent light fittings. <b><i>This lighting type has been abolished and is no longer available to any customer.</i></b>
0W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 50 watt mercury vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed</i></b>
80W mercury vapour – Aeroscreen	The provision, maintenance and replacement of TasNetworks owned 80 watt mercury vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>

Lighting type	Definition
80W mercury vapour – Artcraft decorative	The provision, maintenance and replacement of TasNetworks owned 80 watt mercury vapour decorative light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
125W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 125 watt mercury vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
250W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 250 watt mercury vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
400W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 400 watt mercury vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>

**Table 22: Contract lighting types for public lighting services**

Lighting type	Definition
70W sodium vapour	The maintenance of customer owned 70 watt sodium vapour light fittings.
150W sodium vapour	The maintenance of customer owned 150 watt sodium vapour light fittings.
250W sodium vapour	The maintenance of customer owned 250 watt sodium vapour light fittings.
400W sodium vapour	The maintenance of customer owned 400 watt sodium vapour light fittings.
150W metal halide	The maintenance of customer owned 150 watt metal halide light fittings.
250W metal halide	The maintenance of customer owned 250 watt metal halide light fittings.
400W metal halide	The maintenance of customer owned 400 watt metal halide light fittings.
50W mercury vapour	The maintenance of customer owned 50 watt mercury vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
80W mercury vapour	The maintenance of customer owned 80 watt mercury vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
125W mercury vapour	The maintenance of customer owned 125 watt mercury vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
250W mercury vapour	The maintenance of customer owned 250 watt mercury vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>

Lighting type	Definition
400W mercury vapour	The maintenance of customer owned 400 watt mercury vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
1 x 20W fluorescent	The maintenance of customer owned 1 x 20 watt fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
2 x 20W fluorescent	The maintenance of customer owned 2 x 20 watt fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
1 x 40W fluorescent	The maintenance of customer owned 1 x 40 watt fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
2 x 40W fluorescent	The maintenance of customer owned 2 x 40 watt fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
3 x 40W fluorescent	The maintenance of customer owned 3 x 40 watt fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
4 x 40W fluorescent	The maintenance of customer owned 4 x 40 watt fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
60W incandescent	The maintenance of customer owned 60 watt incandescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
100W incandescent	The maintenance of customer owned 100 watt incandescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
Pole surcharge	The provision, maintenance and replacement of TasNetworks owned public lighting poles. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>



### 10.3.2 Setting the 2016-17 public lighting services tariffs

This section provides an overview of how the allowable prices for public lighting services are recovered through tariffs.

The 2016-17 public lighting services tariffs and charging parameters set out in this Annual Distribution Pricing Proposal are based on the price caps determined by the AER in its distribution determination<sup>19</sup>.

TasNetworks' price caps for the provision of public lighting services are calculated in accordance with the formula given by the AER in its distribution determination<sup>20</sup>.

$$P_t = P_{t-1} \times (1 + \Delta CPI_t) \times (1 - X)$$

Table 23 provides details of the price cap calculation that TasNetworks has utilised in the preparation of its public lighting tariffs.

**Table 23: Price cap calculation – public lighting services**

Component	Value	Comment
$P_{t-1}$	Various	The price for each public lighting service for the prior regulatory year (2015-16).
$\Delta CPI_t$	1.31%	The annual percentage change in the Australian Bureau of Statistics Consumer Price Index (CPI) for All Groups, Weighted Average of Eight Capital Cities for the most recent prior year ending in March.
X	2.60%	The 'X' factor as given in the AER's distribution determination.

### 10.3.3 Prices for public lighting services

The proposed 2016-17 prices for each of TasNetworks' public light tariffs are set out in Table 24.

**Table 24: Proposed tariffs for public lighting by type**

Lighting type	Price (c/day)	Annual Charge (\$)
50W mercury vapour (obsolete)	32.230	117.64
80W mercury vapour – Aeroscreen	32.230	117.64
80W mercury vapour – Artcraft decorative (obsolete)	51.058	186.36
125W mercury vapour (obsolete)	37.111	135.46
250W mercury vapour (obsolete)	37.541	137.02
400W mercury vapour (obsolete)	41.707	152.23
70W sodium vapour	34.325	125.29
100W sodium vapour	34.581	126.22
150W sodium vapour	38.223	139.51
250W sodium vapour	38.341	139.94

<sup>19</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

<sup>20</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.



Lighting type	Price (c/day)	Annual Charge (\$)
400W sodium vapour	38.532	140.64
150W metal halide	38.223	139.51
250W metal halide	38.341	139.94
42W compact fluorescent	34.271	125.09

The proposed 2016-17 prices for each of TasNetworks' contract light tariffs are outlined in Table 25.

**Table 25: Proposed tariffs for contract lighting by type**

Lighting type	Price (c/day)	Annual charge (\$)
50W mercury vapour	22.017	80.36
80W mercury vapour – Aeroscreen	22.006	80.32
125W mercury vapour	22.996	83.94
250W mercury vapour	23.065	84.19
400W mercury vapour	23.116	84.37
70W sodium vapour	22.191	81.00
150W sodium vapour	23.667	86.38
250W sodium vapour	23.634	86.26
400W sodium vapour	23.704	86.52
150W metal halide	23.667	86.38
250W metal halide	23.634	86.26
400W metal halide	23.634	86.26
1 x 20W fluorescent	22.067	80.54
2 x 20W fluorescent	22.179	80.95
1 x 40W fluorescent	22.075	80.57
2 x 40W fluorescent	23.171	84.57
3 x 40W fluorescent	23.290	85.01
4 x 40W fluorescent	24.071	87.86
60W incandescent	22.004	80.31
100W incandescent	22.982	83.88
Pole surcharge	20.192	73.70

## 10.4 Fee based services

This section sets out the indicative prices for the fee-based services provided by TasNetworks.

### 10.4.1 Overview

Fee-based services are those services provided by TasNetworks where the service is, in general, provided for the benefit of a single customer rather than uniformly supplied to all customers. These services are provided at the request of a third party and are typically initiated by way of a service request received from a retailer on behalf of their customer.

Examples of the services TasNetworks provides on a fee-basis include, but are not limited to:

- energisation;
- de-energisation;
- re-energisation;
- meter alteration;
- meter testing;
- supply abolishment – removal of meters and service connection;
- renewable energy connection; and
- other miscellaneous services.

These services are largely homogenous in nature, in that the cost inputs involved in providing these services do not involve material variations between customers. Therefore, a fixed fee can be set in advance with reasonable certainty.

These fee-based service types are shown in Table 26.

**Table 26: Proposed fee-based services**

Service	Description
<b>Energisation, de-energisation, re-energisation and special reads</b>	
Site visit – no appointment	A visit to a customer's premises during normal operational hours on a regular scheduled day for service delivery, where no appointment is required.
Site visit – non-scheduled visit	A visit to a customer's premises during normal operational hours where the requested date is on a day that is not a regular scheduled day for service delivery.
Site visit – same day premium service	A visit to a customer's premises during normal operational hours where the visit is required on the same day of a retailer's request and the request is received by TasNetworks after 11:00am on that day.
Site visit – after hours	A visit to a customer's premises where the visit is required on the day of a customer's request and the request for the service is organised for outside normal operational hours.
Site visit – credit action or site issues	A visit to a customer's premises during normal operational hours where no appointment is required on a regular scheduled day for service delivery and the visit is due to a credit issue or a requests by a retailer for the site to be de-energised without consultation with the customer.
Site visit – rectification of illegal connection	A visit to a customer's premises during normal operational hours to rectify an installation that has been illegally connected.
Site visit – interval metering	A visit to a customer's premises where interval metering is installed.

Service	Description
<b>Meter alteration</b>	
Tariff alteration – single phase	A visit to a customer's premises during normal operational hours to add or modify a single phase metering circuit.
Tariff alteration – three phase	A visit to a customer's premises during normal operational hours to add or modify a three phase metering circuit.
Adjust time clock	A visit to a customer's premises during normal operational hours to adjust the time period of an existing time clock.
Install pulse outputs	A visit to a customer's premises during normal operational hours to install a pulse output facility.
Remove meter	A visit to a customer's premises during normal operational hours to remove a metering circuit.
Meter alteration – after hours visit	A visit to a customer's premises outside normal operational hours to undertake a meter alteration.
Meter alteration – wasted visit	A visit to a customer's premises during normal operational hours to undertake a meter alteration where the alteration could not be completed due to issues at the customer's premises.
<b>Meter test</b>	
Meter test – single phase	A visit to a customer's premises during normal operational hours to test a single phase meter at the customer's request.
Meter test – multi phase	A visit to a customer's premises during normal operational hours to test a multi phase meter at the customer's request.
Meter test – CT	A visit to a customer's premises during normal operational hours to test a current transformer (CT) meter at the customer's request.
Meter test – after hours	A visit to a customer's premises outside normal operational hours, at the request of the retailer, to undertake a meter test.
Meter test –wasted visit	A visit to a customer's premises during normal operational hours to test a meter at the customer's request, where the test could not be completed due to issues at the customer's premises.
<b>Supply establishment</b> <i>These fee-based services are no longer available to any customer. Customers wishing to establish a permanent connection to the TasNetworks distribution network are now covered by TasNetworks' connection fees established in accordance with the provisions of the National Energy Customer Framework.</i>	
New connection – after hours	<i>This fee-based service is no longer available to any customer.</i>
Install additional service span – single phase	<i>This fee-based service is no longer available to any customer.</i>
Install additional service span – single phase-additional spans	<i>This fee-based service is no longer available to any customer.</i>
Install additional service span – multiple phase	<i>This fee-based service is no longer available to any customer.</i>
Install additional service span – multiple phase-additional spans	<i>This fee-based service is no longer available to any customer.</i>
New connection-wasted visit	<i>This fee-based service is no longer available to any customer.</i>

Service	Description
<b>Supply abolishment</b>	
Remove service and meters	The removal of meters and a service connection during normal operational hours at a customer's request or prior to building demolition.
Supply abolishment – after hours	A visit to a customer's premises outside normal operational hours, at the request of a retailer, to abolish supply.
Supply abolishment – wasted visit	A visit to a customer's premises to abolish supply where the service could not be completed due to issues at the customer's premises.
<b>Renewable energy connection</b> <i>These fee-based services are no longer available to any customer. Customers wishing to establish a renewable energy connection to the TasNetworks distribution network are now covered by TasNetworks' connection fees established in accordance with the provisions of the National Energy Customer Framework.</i>	
Renewable energy connection	<i>This fee-based service is no longer available to any customer.</i>
Renewable energy connection – after hours	<i>This fee-based service is no longer available to any customer.</i>
Renewable energy connection – wasted visit	<i>This fee-based service is no longer available to any customer.</i>
<b>Temporary builders connection</b> <i>These fee-based services are no longer available to any customer. Customers wishing to establish a temporary connection to the TasNetworks distribution network are now covered by TasNetworks' connection fees established in accordance with the provisions of the National Energy Customer Framework.</i>	
Temporary supply underground – single phase – temporary position	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply underground – three phase – temporary position	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply underground – single phase – permanent position	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply underground – three phase – permanent position	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply overhead – single phase – temporary position	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply overhead – three phase – temporary position	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply overhead – single phase – permanent position	<i>This fee-based service is no longer available to any customer.</i>

Service	Description
Temporary supply overhead – three phase – permanent position	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply – after hours	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply – wasted visit	<i>This fee-based service is no longer available to any customer.</i>
<b>Temporary show and carnival connection</b> <i>These fee-based services are no longer available to any customer. Customers wishing to establish a show or carnival connection can no longer have an unmetered site and should make application for an equivalent temporary or permanent connection to the TasNetworks distribution network in accordance with the provisions of the National Energy Customer Framework.</i>	
Temporary supply – underground	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply – overhead mains	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply – overhead service	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply – after hours	<i>This fee-based service is no longer available to any customer.</i>
Temporary supply – wasted visit	<i>This fee-based service is no longer available to any customer.</i>
<b>Truck tee-up</b>	
Tee-up – initial 30 minutes	Electrical Contractor requested tee-up with overhead crew whilst undertaking work at customer's installation during normal operational hours.
Tee-up – each additional 15 minutes	Electrical Contractor requested tee-up with overhead crew whilst undertaking work at customer's installation during normal operational hours.
Tee-up – after hours	Electrical Contractor requested tee-up with overhead crew whilst undertaking work at customer's installation after normal operational hours.
Tee-up – no truck – after hours	Electrical Contractor requested tee-up with underground crew whilst undertaking work at customer's installation after normal operational hours.
Tee-up – wasted visit	Electrical Contractor requested tee-up with TasNetworks crew where the works could not be completed due to issues at the customer's premises or where service connections crew were not required once on site.
<b>Miscellaneous services</b>	
Open turret	The opening of a turret or cabinet during normal operational hours for an electrical contractor installing or altering a customer's mains during normal operational hours.

Service	Description
Addition/alteration to connection point	<i>This fee-based service is no longer available to any customer. Customers wishing to modify a connection to the TasNetworks distribution network are now covered by TasNetworks' connection fees established in accordance with the provisions of the National Energy Customer Framework.</i>
Connection of new mains to existing installation	<i>This fee-based service is no longer available to any customer. Customers wishing to modify a connection to the TasNetworks distribution network are now covered by TasNetworks' connection fees established in accordance with the provisions of the National Energy Customer Framework.</i>
Data download	A visit to a customer's premises during normal operational hours to download data from a meter.
Alteration to unmetered supply	A visit to a customer's premises to add or remove a load on an existing unmetered supply site during normal operational hours.
Miscellaneous service	A visit to a customer's premises during normal operational hours, at the request of their retailer, to perform a service that is not described elsewhere.
Miscellaneous service – after hours	A visit to a customer's premises outside normal operational hours, at the request of the retailer, to perform any of the mentioned miscellaneous services.
Miscellaneous service – wasted visit	A visit to a customer's premises during normal operational hours to perform a miscellaneous service where the service could not be completed due to issues at the customer's premises.

#### 10.4.2 Setting the 2016-17 fee based services tariffs

This section provides an overview of how the allowable prices for fee-based services are recovered through tariffs.

The 2016-17 fee-based services tariffs and charging parameters set out in this Annual Distribution Pricing Proposal are based on the price caps determined by the AER in its distribution determination<sup>21</sup>.

TasNetworks' price caps for the provision of fee-based services are calculated in accordance with the formula given by the AER in its distribution determination<sup>22</sup>:

$$P_t = P_{t-1} \times (1 + \Delta CPI_t) \times (1 - X)$$

Table 27 provides details of the price cap calculation that TasNetworks has utilised in the preparation of its fee-based services tariffs.

<sup>21</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

<sup>22</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

**Table 27: Price cap calculation – fee-based services**

Component	Value	Comment
$P_{t-1}$	Various	The price for each fee-based service for the prior regulatory year (2015-16)
$\Delta CPI_t$	1.31%	The annual percentage change in the Australian Bureau of Statistics Consumer Price Index (CPI) for All Groups, Weighted Average of Eight Capital Cities for the most recent prior year ending in March
X	1.70%	The 'X' factor as given in the AER's distribution determination

#### 10.4.3 Prices for fee-based services

The proposed 2016-17 prices for each of TasNetworks' fee-based services tariffs are outlined in Table 28.

**Table 28: Proposed tariffs for fee-based services**

Service	Price (\$)
<b>Energisation, de-energisation, re-energisation and special reads</b>	
Site visit – no appointment	53.34
Site visit – non-scheduled visit	120.22
Site visit – same day premium service	310.59
Site visit – after hours	801.52
Site visit – credit action or site issues	78.18
Site visit – interval metering	60.10
<b>Meter alteration</b>	
Tariff alteration – single phase	178.76
Tariff alteration – three phase	243.78
Adjust time clock	58.51
Install pulse outputs	162.52
Remove meter	270.20
Meter alteration – after hours visit	780.05
Meter alteration – wasted visit	97.51
<b>Meter test</b>	
Meter test – single phase	292.52
Meter test – multi phase	585.04
Meter test – CT	650.05
Meter test – after hours	780.05
Meter test –wasted visit	97.51



Service	Price (\$)
<b>Supply abolishment</b>	
Remove service & meters	270.20
Supply abolishment – after hours	780.05
Supply abolishment – wasted visit	162.12
<b>Truck tee-up</b>	
Tee-up – initial 30 minutes	129.74
Tee-up – each additional 15 minutes	53.32
Tee-up – after hours	1,457.76
Tee-up – no truck – after hours	1,297.00
Tee-up – wasted visit	162.12
<b>Miscellaneous services</b>	
Open turret	146.26
Data download	325.01
Alteration to unmetered supply	243.78
Miscellaneous service	130.01
Miscellaneous service – after hours	780.05
Miscellaneous service – wasted visit	162.12
Miscellaneous service – rectification of illegal connection	243.78

## 10.5 Quoted services

This section sets out the indicative prices for the quoted services provided by TasNetworks.

### 10.5.1 Overview

TasNetworks is unable to provide a full range of indicative prices for quoted services, as by their nature these services are dependent on a customer's specific requirements and cost inputs may vary significantly. It is not possible, therefore, to set a generic total fixed fee in advance for these services.

Requests for quoted (non-standard) services may be received from a customer or retailer on behalf of a customer. TasNetworks provides a range of non-standard services on a quoted basis including, but not limited to:

- removal or relocation of TasNetworks' assets at a customer's premises (for example, a request from the Tasmanian Government);
- services that are provided at a higher standard than the standard service, due to a customer's request for TasNetworks to do so;
- provision of public lighting schemes;
- provision of overhead and underground subdivisions for developers;
- relocation of assets at the request of a third party; and



- services that are provided through a non-standard process at a customer's request (for example, where more frequent meter reading is required).

### 10.5.2 Setting the 2016-17 quoted services tariffs

This section provides an overview of how the allowable prices for quoted services are recovered through tariffs.

The 2016-17 quoted services tariffs and charging parameters set out in this Annual Distribution Pricing Proposal are based on the price caps as determined by the AER in its distribution determination<sup>23</sup>.

TasNetworks' price caps for the provision of quoted services are calculated in accordance with the formula given by the AER in its distribution determination<sup>24</sup>:

$$P = \sum (\text{Units}_i \times LR_i) + \text{Materials} + \text{Contractors} + \text{Other Costs} + \text{Overheads}.$$

In accordance with the AER's distribution determination TasNetworks is only required to provide a calculation of labour rates ( $LR_i$ ) as a component of this Annual Distribution Pricing Proposal.

TasNetworks' price caps for the labour rates within quoted services are calculated in accordance with the formula given by the AER in its distribution determination<sup>25</sup>:

$$LR_i = LR_t \times (\text{CPI}_t / \text{CPI}_{2011})$$

Table 29 provides details of the labour rate cap calculation that TasNetworks has utilised in the preparation of its quoted services tariffs.

**Table 29: Price cap calculation for quoted services**

Component	Value	Comment
$LR_t$	Various	The price for each quoted service labour rate as given in the AER's distribution determination.
$\text{CPI}_t$	108.2	The index number for the Australian Bureau of Statistics Consumer Price Index (CPI) for All Groups, Weighted Average of Eight Capital Cities for the most recent March quarter.
$\text{CPI}_{2011}$	98.3	The index number for the Australian Bureau of Statistics Consumer Price Index (CPI) for All Groups, Weighted Average of Eight Capital Cities for the March quarter 2011.

TasNetworks provides the following indicative prices for the labour rates that will apply to the provision of quoted services.

<sup>23</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

<sup>24</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

<sup>25</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

### 10.5.3 Labour prices for quoted services

The proposed 2016-17 prices for each of TasNetworks' quoted services tariffs are outlined in Table 30.

**Table 30: Proposed tariffs for quoted services**

Labour	Price (\$/hour)
Apprentice	71.46
Cable jointer	58.67
Customer connections – commercial metering	65.72
Customer connections – service crew	59.22
Designer	74.06
Distribution electrical technician	58.88
Distribution linesman	53.92
Distribution linesman – live line	58.78
Distribution operator	63.82
Electrical inspector	63.11
Field service co-ordinator	81.63
Labourer – overhead	49.87
Meter reader	45.47
Pole tester	49.54
Project manager	74.59

## 11 Customer price impacts – alternative control services

The price changes between 2015-16 and 2016-17 for alternative control services are provided in the following tables.

### 11.1 Metering services

Table 31 provides the difference in the charges between 2015-16 and 2016-17 for the provision of metering services.

**Table 31: Estimated percentage price change – metering services**

Tariff	Price 2015-16 (c/day)	Price 2016-17 (c/day)	Percentage change (%)
Domestic LV – single phase	7.442	7.539	1.30%
Domestic LV – multi phase	15.443	15.645	1.31%
Domestic LV – CT meters	19.111	19.361	1.31%
Domestic LV – single phase (remote read)	6.397	6.481	1.31%
Domestic LV – multi phase (remote read)	14.465	14.654	1.31%
Domestic LV – CT meters (remote read)	20.846	21.119	1.31%
Business LV – single phase	7.697	7.798	1.31%
Business LV – multi phase	15.398	15.600	1.31%
Business LV – CT meters	19.911	20.172	1.31%
Business LV – single phase (remote read)	6.397	6.481	1.31%
Business LV – multi phase (remote read)	14.465	14.654	1.31%
Business LV – CT meters (remote read)	20.846	21.119	1.31%
Other meters (PAYG)	13.589	13.767	1.31%

### 11.2 Public lighting services

Table 32 provides the difference in the charges between 2015-16 and 2016-17 for the provision of public lighting services.

**Table 32: Estimated percentage price change – public lighting**

Tariff	Price 2015-16 (c/day)	Price 2016-17 (c/day)	Percentage change (%)
50W mercury vapour	32.662	32.230	-1.32%
80W mercury vapour – Aeroscreen	32.662	32.230	-1.32%
80W mercury vapour – Artcraft decorative	51.743	51.058	-1.32%
125W mercury vapour	37.609	37.111	-1.32%
250W mercury vapour	38.045	37.541	-1.32%
400W mercury vapour	42.267	41.707	-1.32%
70W sodium vapour	34.786	34.325	-1.33%

Tariff	Price 2015-16 (c/day)	Price 2016-17 (c/day)	Percentage change (%)
100W sodium vapour	35.045	34.581	-1.32%
150W sodium vapour	38.736	38.223	-1.32%
250W sodium vapour	38.855	38.341	-1.32%
400W sodium vapour	39.049	38.532	-1.32%
150W metal halide	38.736	38.223	-1.32%
250W metal halide	38.855	38.341	-1.32%
42W compact fluorescent	34.731	34.271	-1.32%

Table 33 provides the difference in the charges between 2015-16 and 2016-17 for the provision of contract lighting services.

**Table 33: Estimated percentage price changes – contract lighting**

Tariff	Price 2015-16 (c/day)	Price 2016-17 (c/day)	Percentage change (%)
50W mercury vapour	22.312	22.017	-1.32%
80W mercury vapour	22.301	22.006	-1.32%
125W mercury vapour	23.305	22.996	-1.33%
250W mercury vapour	23.374	23.065	-1.32%
400W mercury vapour	23.426	23.116	-1.32%
70W sodium vapour	22.489	22.191	-1.33%
150W sodium vapour	23.985	23.667	-1.33%
250W sodium vapour	23.951	23.634	-1.32%
400W sodium vapour	24.022	23.704	-1.32%
150W metal halide	23.985	23.667	-1.33%
250W metal halide	23.951	23.634	-1.32%
400W metal halide	23.951	23.634	-1.32%
1 x 20W fluorescent	22.363	22.067	-1.32%
2 x 20W fluorescent	22.477	22.179	-1.33%
1 x 40W fluorescent	22.371	22.075	-1.32%
2 x 40W fluorescent	23.482	23.171	-1.32%
3 x 40W fluorescent	23.603	23.290	-1.33%
4 x 40W fluorescent	24.394	24.071	-1.32%
60W incandescent	22.299	22.004	-1.32%
100W incandescent	23.290	22.982	-1.32%
Pole surcharge	20.463	20.192	-1.32%

### 11.3 Fee-based services

Table 34 provides the difference in the charges between 2015-16 and 2016-17 for the provision of fee-based services.

**Table 34: Estimated percentage price change – fee-based services**

Tariff	Price 2015-16 (\$)	Price 2016-17 (\$)	Percentage change (%)
<b>De-energisation, re-energisation and special reads</b>			
Site visit – no appointment	53.56	53.34	-0.41%
Site visit – non scheduled visit	120.72	120.22	-0.41%
Site visit – same day premium service	311.88	310.59	-0.41%
Site visit – after hours	804.84	801.52	-0.41%
Site visit – credit action or site issues	78.50	78.18	-0.41%
Site visit – interval metering	60.35	60.10	-0.41%
<b>Meter alteration</b>			
Tariff alteration – single phase	179.50	178.76	-0.41%
Tariff alteration – three phase	244.79	243.78	-0.41%
Adjust time clock	58.75	58.51	-0.41%
Install pulse outputs	163.19	162.52	-0.41%
Remove meter	271.32	270.20	-0.41%
Meter alteration – after hours visit	783.28	780.05	-0.41%
Meter alteration – wasted visit	97.91	97.51	-0.41%
<b>Meter test</b>			
Meter test – single phase	293.73	292.52	-0.41%
Meter test – multi phase	587.46	585.04	-0.41%
Meter test – CT	652.74	650.05	-0.41%
Meter test – after hours	783.28	780.05	-0.41%
Meter test –wasted visit	97.91	97.51	-0.41%
Remove service & meters	271.32	270.20	-0.41%
Supply abolishment – after hours	783.28	780.05	-0.41%
Supply abolishment – wasted visit	162.79	162.12	-0.41%
<b>Truck tee-up</b>			
Tee-up – initial 30 minutes	130.28	129.74	-0.41%
Tee-up – each additional 15 minutes	53.54	53.32	-0.41%
Tee-up – after hours	1,463.79	1,457.76	-0.41%
Tee-up – no truck – after hours	1,302.37	1,297.00	-0.41%
Tee-up – wasted visit	162.79	162.12	-0.41%

Tariff	Price 2015-16 (\$)	Price 2016-17 (\$)	Percentage change (%)
<b>Miscellaneous service</b>			
Open turret	146.87	146.26	-0.42%
Data download	326.36	325.01	-0.41%
Alteration to unmetered supply	244.79	243.78	-0.41%
Miscellaneous service	130.55	130.01	-0.41%
Miscellaneous service – after hours	783.28	780.05	-0.41%
Miscellaneous service – wasted visit	162.79	162.12	-0.41%
Miscellaneous service – rectification of illegal connection	244.79	243.78	-0.41%

#### 11.4 Quoted services

Table 35 provides the difference in the labour rate charges between 2015-16 and 2016-17 for the provision of quoted services.

**Table 35: Estimated percentage price change – quoted services**

Tariff	Price 2015-16 (\$/hour)	Price 2016-17 (\$/hour)	Percentage change (%)
Apprentice	69.94	71.46	2.17%
Cable jointer	59.61	58.67	-1.58%
Customer connections – commercial metering	66.62	65.72	-1.35%
Customer connections – service crew	60.02	59.22	-1.33%
Designer	74.95	74.06	-1.19%
Distribution electrical technician	59.71	58.88	-1.39%
Distribution linesman	54.65	53.92	-1.34%
Distribution linesman – live line	59.58	58.78	-1.34%
Distribution operator	65.02	63.82	-1.85%
Electrical inspector	63.71	63.11	-0.94%
Field service co-ordinator	82.93	81.63	-1.57%
Labourer – overhead	50.48	49.87	-1.21%
Meter reader	45.99	45.47	-1.13%
Pole tester	50.13	49.54	-1.18%
Project manager	75.86	74.59	-1.67%

## 12 Alternative control services - tariff variations

Clause 6.18.2(b)(5) of the Rules<sup>26</sup> requires that TasNetworks' Annual Distribution Pricing Proposal set out the nature of any variation or adjustment to a tariff that could occur during the course of the regulatory year and the basis on which it could occur.

### 12.1 Changes to alternative control services pricing

Alternative control services will increase in price in 2016-17, in accordance with the AER's distribution determination<sup>27</sup>.

### 12.2 Changes to alternative control services tariffs

There are no changes in 2016-17 to the tariffs applying to alternative control services.

However, it should be noted that the introduction of the National Energy Customer Framework in Tasmania on 1 July 2012 resulted in a number of connection services previously considered to be fee-based services becoming part of the connection processes regulated under chapter 5A of the Rules. This has meant that all supply establishment services, renewable energy connection services, temporary builder's supplies and certain miscellaneous services have not been available to any customer as a fee based service since 1 July 2013. These services are now undertaken and billed as basic connection services.

---

<sup>26</sup> Version 65.

<sup>27</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

## 13 Assignment of customers and tariffs

The AER's distribution determination<sup>28</sup> sets out the principles TasNetworks must adhere to in assigning customers to tariff classes and applies to all direct control services (i.e. both standard control and alternative control services).

### 13.1 Assignment of existing customers to tariff classes

TasNetworks' customers will be taken to be assigned to the tariff class which TasNetworks was charging that customer immediately prior to 1 July 2016 if they:

- were a TasNetworks customer prior to 1 July 2016; and
- continue to be a customer of TasNetworks as at 1 July 2016.

### 13.2 Assignment of new customers to a tariff class

In the case of a new customer or connection, TasNetworks will determine the tariff class to which the new customer will be assigned. In determining the tariff class to which a customer or potential customer will be assigned, TasNetworks will take into account one or more of the following factors:

- the nature and extent of the customer's usage;
- the nature of the customer's connection to the network<sup>29</sup>; and
- 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.

In addition to the above requirements, when assigning a customer to a tariff class TasNetworks will ensure:

- customers with similar connection and usage profiles are treated equally; and
- customers which have micro-embedded generation facilities are not treated more or less favourably than customers with similar load profiles without such facilities.

### 13.3 Reassignment of existing customers to another tariff class

TasNetworks may reassign a customer to another tariff class if the existing customer's load characteristics and/or connection characteristics change such that it is no longer appropriate for that customer to be assigned to their current tariff class. Should a customer no longer have the same or materially similar load or connection characteristics as other customers in the customer's existing tariff class, then TasNetworks may also reassign that customer to another tariff class.

In some cases, a tariff class may cease. TasNetworks will notify in advance any customers affected by the cessation of a tariff class of the cessation and the transition to a new tariff class.

### 13.4 Objections to proposed assignments and reassignments

TasNetworks will notify customers in writing of the tariff class to which they have been assigned or reassigned, prior to the assignment or reassignment occurring. Any notification will inform the customer that they may request further information from TasNetworks and that they may object to the proposed assignment or reassignment, where possible we will work with Retailers in informing our customers. To that end, the notice will:

---

<sup>28</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

<sup>29</sup> The AER interprets 'nature' to include the installation of any technology capable of supporting time based tariffs.



- include a copy of TasNetworks' internal procedures for reviewing objections and the link to where such information is available on TasNetworks' website;
- inform the customer that if an objection is not resolved to their satisfaction then they are entitled to escalate the matter to the Energy Ombudsman Tasmania; and
- advise the customer that if their objection is not resolved to their satisfaction after escalating the matter to the Energy Ombudsman Tasmania, then they are entitled to seek a decision by the AER via the dispute resolution process available under Part 10 of the NEL.

If TasNetworks receives a request for further information about a tariff assignment or reassignment from a customer, then it will provide such information unless the requested information is considered confidential by TasNetworks.

If a customer makes an objection to TasNetworks about a proposed tariff assignment or reassignment, TasNetworks will conduct a reassessment of the customer's circumstances against the criteria used to assign customers to a tariff class (see above). TasNetworks will notify the customer in writing of its decision and the reasons for that decision.

If a customer's objection to a tariff class assignment or reassignment is upheld by the Energy Ombudsman Tasmania or the AER, then any adjustment which needs to be made will be done as part of the next available billing cycle.

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

In accordance with the AER's distribution determination<sup>30</sup>, TasNetworks' Annual Distribution Pricing Proposal must contain provision for a system of assessment and review of the basis on which a customer is charged, 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. TasNetworks considers that the basis of charge may vary according to usage or load profile where either:

- a change in the usage or load profile of a customer indicates that a different network tariff is applicable; or
- within a network tariff, the charging parameter changes according to the customer's usage.

TasNetworks reviews the assignment of customers to its tariff classes as part of the annual process of developing its tariffs for AER approval. TasNetworks in conjunction with retailers has set procedures and criteria to determine when it may be appropriate for a customer to be reassigned to a differing tariff or tariff class, or that the basis of the customer's demand charges should be amended. This change is usually the result of changes in the customer's energy consumption, expected maximum demand or connection characteristics. These procedures ensure the customer's underlying network tariff is appropriate to the assumed usage or load profile.

In addition to this annual review process, customers (or a customer's retailer) are able to request that TasNetworks review and change a network tariff assigned to a customer in the event of variation to the customer's usage or load profile. Provided TasNetworks agrees to a change in network tariff, this change can take effect during a regulatory year. TasNetworks uses the procedures and criteria discussed above to determine if it is appropriate to change the network tariff assigned to a customer.

---

<sup>30</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

The charging parameters within TasNetworks' network tariffs do not alter as the customer's usage or load profile varies. Should a customer's usage or load profile vary, the customer may either manage their usage in response to the price signals inherent in the tariff, or request to be reassigned to an alternative tariff where applicable.

This provides an effective system for assessing and reviewing the basis on which a customer is charged.

### **13.6 Assignment process**

The assignment processes adopted by TasNetworks are discussed in more detail in the Network Tariff Application and Price Guide; Metering Services Application and Price Guide; Public Lighting Application and Price Guide; and Fee-based Services Application and Price Guide.

These guides are available on TasNetworks' website at:

<http://www.tasnetworks.com.au/our-network/network-revenue-pricing/distribution-fees-and-tariffs>

## 14 Transmission cost recovery

Clauses 6.18.2(b)(6) and 6.18.7 of the Rules<sup>31</sup> allow for the pass through of charges for TUoS services, including any adjustments for under or over recovery. The network tariffs outlined in this Annual Distribution Pricing Proposal have been designed with this approach. To comply with the Rules, information reported as part of this Annual Distribution Pricing Proposal includes:

### Expenses

- regulated transmission charges paid to TasNetworks in its capacity as the licensed transmission network service provider in the Tasmanian region of the NEM; and
- avoided TUoS payments to embedded generators.

### Receipts

- payments received from network users

### Adjustments for under/over recovery:

- difference between receipts and expenses

## 14.1 TUoS Expenses

### 14.1.1 Transmission charges

Transmission charges are considered as a direct pass-through, with variations in transmission charges being passed through to all installations on a pro-rata basis through network tariffs.

TasNetworks' distribution network is connected to the transmission network at multiple connection points within Tasmania, as are a number of other customers. As the operator of the transmission network, TasNetworks recovers its allowable revenue through the transmission charges levied on the distribution network, as well as the other customers connected directly to the transmission network.

The transmission charges imposed on TasNetworks' distribution network form the basis of the TUoS charges embedded within the network tariffs TasNetworks charges customers connected to the distribution network.

### 14.1.2 Standard transmission charges

A number of customers, or groups of customers, may have specially calculated network tariffs. As part of these network tariffs there will be a pass-through of the transmission charges arising from each customer's share of the load on the transmission system. These nodal connection charges are based upon demand, and vary according to the terminal substation to which the customer is connected.

### 14.1.3 Avoided TUoS

The Rules require TasNetworks to pay avoided TUoS usage charges (avoided TUoS) to embedded generators who have generated electricity and transmitted this energy into TasNetworks' distribution network.

In accordance with the Rules, where prices for the locational component of prescribed TUoS services were in force at the relevant transmission network connection point throughout the relevant financial year, TasNetworks shall:

---

<sup>31</sup> Version 65.

- (a) determine the charges for the locational component of prescribed TUoS services that would have been payable by TasNetworks had the embedded generator not injected any energy at its connection point during that financial year;
- (b) determine the amount by which the charges calculated in (a) exceed the amount for the locational component of prescribed TUoS services actually payable by TasNetworks; and
- (c) credit the value from (b) to the embedded generator.

Avoided TUoS payments to embedded generators reflect the avoided costs of upstream transmission network reinforcement within Tasmania. As such, the benefits primarily relate to all customers – that is, avoided TUoS does not solely impact on the connection point to which an embedded generator is connected. Avoided TUoS has, therefore, been assigned to all tariff classes.

## 14.2 TUoS Receipts

### 14.3 Tariff recovery of TUoS

A description of how TUoS is recovered through TasNetworks' standard control network tariffs is given in section 6.4.

### 14.4 TUoS unders and overs account

As a requirement of its distribution determination<sup>32</sup>, the AER requires TasNetworks to provide a TUoS unders and overs account for the most recently completed regulatory year.

Table 36 outlines the TUoS unders and overs calculation and provides separate identification of any under or over recovery relating to prior years included in the current year's revenue.

**Table 36: TUoS unders and overs account (\$ million)**

<b>TUoS unders and overs account</b>	<b>Year t-2 (Actual) (\$ million)</b>	<b>Year t-1 (Estimate) (\$ million)</b>	<b>Year t (Forecast) (\$ million)</b>
Revenue from TUoS charges	117.18	106.68	93.04
Less total transmission related payments	111.09	99.85	97.23
Transmission charges to be paid to TNSP	111.00	99.79	97.23
Avoided TUoS payments	0.08	0.06	0.00
Under/over recovery for regulatory year	6.09	6.84	-4.19
TUoS under and overs account			
Nominal WACC	8.28%	8.28%	8.28%
Opening balance	-8.83	-2.97	4.19
Interest on opening balance	-0.73	-0.25	0.00
Under/over recovery for regulatory year	6.09	6.84	-4.19
Interest on under/over recovery for regulatory year	0.50	0.57	0.00
Closing balance	-2.97	4.19	0.00

<sup>32</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

## 15 Compliance with regulatory requirements

### 15.1 DUoS unders and overs account

As a requirement of its distribution determination<sup>33</sup>, the AER requires TasNetworks to provide a DUoS unders and overs account for the most recently completed regulatory year.

Table 37 outlines the DUoS unders and overs calculation and provides separate identification of any under or over recovery relating to prior years included in the current year revenue.

**Table 37: DUoS unders and overs account (\$ million)**

DUoS unders and overs account	Year t-2 (Actual) (\$ million)	Year t-1 (Estimate) (\$ million)	Year t (Forecast) (\$ million)
Revenue from DUoS charges	283.54	308.19	291.44
Less MAR for the relevant year	284.87	280.87	295.11
Allowed revenue (ARt)	284.64	280.63	294.44
Transitional (transitionalt)	0.00	0.00	0.00
Electrical safety inspection service adjustment (ESISct)	0.10	0.10	0.53
National energy market charge adjustment (NEMct)	0.12	0.14	0.15
Approved pass throughs (Passthrought)	0.00	0.00	0.00
Under/over recovery for regulatory year	-1.33	27.32	-3.67
DUoS under and overs account			
Nominal WACC	8.28%	8.28%	8.28%
Opening balance	-20.77	-23.93	3.67
Interest on opening balance	-1.72	-1.98	0.00
Under/over recovery for regulatory year	-1.33	27.32	-3.67
Interest on under/over recovery for regulatory year	-0.11	2.26	0.00
Closing balance	-23.93	3.67	0.00

### 15.2 Compliance with avoidable and stand-alone cost requirements

Clause 6.18.5(a) of the Rules<sup>34</sup> requires that the revenue expected to be recovered from each tariff class lie on or between an upper bound representing the stand-alone cost of serving the customers who belong to that class and a lower bound representing the avoidable cost of not serving those customers.

The Rules<sup>35</sup> do not specifically define avoidable and stand-alone costs or set out the methodology that should be applied to calculate these costs. TasNetworks has set out its interpretation of both stand-alone and avoidable costs below.

<sup>33</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

<sup>34</sup> Version 65.

<sup>35</sup> Version 65.

### 15.3 Stand-alone costs

TasNetworks calculates this amount as the cost of serving all of the customers currently accessing services under that tariff class, if no other tariff classes were being served from TasNetworks' system. This is equal to the costs of installing and maintaining the shared network (which would be solely allocated to that tariff class) and the connection costs allocated to that tariff class. It does not, therefore, include costs associated with connection assets assigned to other tariff classes.

### 15.4 Avoidable cost

TasNetworks calculates this amount as the total cost avoided if that tariff class was not served, while other tariff classes remained served. This is equal to the costs of financing and maintaining the connection assets designated to that tariff class.

### 15.5 Process for determining stand-alone and avoidable cost

#### 15.5.1 Standard control services

TasNetworks has estimated the stand-alone costs for each tariff class by calculating the total annual costs of operating its distribution network, less the avoidable costs of serving other tariff classes.

This approach uses the total MAR as a first step, and then subtracts all costs that would be avoided if no other tariff classes were served. This assumes the existence of the network in its current state.

TasNetworks' assessments of stand-alone cost were conducted using its DCoS model. As noted in section 5.2 of this Annual Distribution Pricing Proposal, the DCoS model allocates the building block components of the MAR to assets, then customer groupings, then network tariffs.

TasNetworks interprets the avoidable cost for all tariff classes as being the value of the connection assets for the customers within that tariff class. Shared costs relating to operational areas have been assumed to be unavoidable as these operational areas service multiple network tariff classes.

TasNetworks considers that:

- its shared costs (overheads) – the costs of maintaining its corporate operations – are not avoidable for any tariff class. These services would need to be maintained for the remaining tariff classes even if one of the tariff class was no longer served
- the costs of the shared network – the costs of funding and maintaining the network – are not avoidable for any particular tariff class
- the direct costs of supplying each tariff class – being the return on assets, depreciation and operating expenditure on assets that are directly attributable to the customers within that tariff class – are avoidable

TasNetworks' stand-alone and avoidable costs for each standard control service tariff class are set out below.

#### 15.5.2 Alternative control services

TasNetworks provides its alternative control services using a mix of shared and dedicated physical assets and labour. It prices each of these services on a full cost recovery basis using the formula approved by the AER.

The use of a cost based formula for pricing implies that if there were only one alternative control service tariff class provided by TasNetworks, then total revenue for that tariff class would equal the total cost of serving that tariff class (where the total cost incurred in the provision of the service for that tariff class includes the full cost of assets used by all alternative control services). Given that TasNetworks provides more than one alternative control service tariff class, shared assets such as depots and vehicles are shared between all alternative control services tariff classes. This means that the revenue received from one alternative control services tariff class will be less than the stand-alone cost of that tariff class.

The avoidable cost of alternative control services is the cost that would be incurred in the delivery of the services to a tariff class if no services were provided to any other tariff class. The only avoided costs relating to alternative control services relate to labour costs charged on an hourly basis and materials consumed during the course of providing the service. Given that the formula used to derive prices for fee-based and quoted services includes a component of shared costs, the total revenue for tariff classes will exceed the avoidable portion.

TasNetworks has not undertaken any quantitative analysis of its stand-alone and avoidable costs for alternative control services.

### 15.6 Comparison of avoidable costs, expected revenue and stand-alone costs

The tables below demonstrates that, in accordance with clause 6.18.5(a) of the Rules<sup>36</sup>, for each network tariff and tariff class, the 2016-17 expected revenue for each network tariff and tariff class lies on or between the lower bound avoidable cost and an upper bound stand-alone cost.

TasNetworks' cost and pricing models calculate three data outcomes that are necessary to demonstrate compliance with this principle:

- The stand-alone cost of serving a tariff class. TasNetworks calculates this amount as the costs of serving all of the customers currently accessing services under that tariff class, if no other tariff classes were being served from TasNetworks' system. This is equal to the costs of installing and maintaining the shared network (which would be solely allocated to that tariff class) and the connection costs designated to that tariff class. It therefore does not include costs associated with connection assets designated to other tariff classes;
- The expected revenue from a tariff class; and
- The avoidable costs of serving a tariff class. TasNetworks calculates this amount as the total cost that would be avoided if that tariff class was not served, while other tariff classes continued to be served. This is equal to the costs of financing and maintaining the connection assets designated to that tariff class.

The outcomes of TasNetworks' cost and pricing models are set out in Table 38. Table 39 shows the stand-alone and avoidable costs for each network tariff class, compared to the expected revenue from network tariffs.

---

<sup>36</sup> Version 65



**Table 38: Stand-alone and avoidable cost boundaries by tariff**

Tariff class	Tariff	Avoidable cost (\$m)	Expected revenue excluding side constraint adjustment (\$m)	Stand-alone cost (\$m)
ITC	Individual Tariff Calculation (TASCUS)	0.16	1.71	302.58
HV	Business HV kVA Specified Demand >2MVA (TAS15)	0.08	3.25	302.50
	Business HV kVA Specified Demand (TASSDM)	1.69	6.12	304.11
Irrigation	Irrigation LV TOU (TAS75)	0.49	6.20	302.91
Large LV	Business LV kVA Demand (TAS82)	2.83	26.95	305.25
Small LV	Business LV General (TAS22)	1.30	44.25	303.72
	Business LV Nursing Homes (TAS34)	0.21	2.13	302.63
	General Network – Business, Curtilage (TASCURT)	0.02	1.08	302.44
	Business LV TOU (TAS94)	1.37	31.26	303.79
Residential	Residential LV General (TAS31)	8.34	121.83	310.76
	Residential LV PAYG TOU / Residential LV TOU (TAS92) (TAS93)	0.09	1.56	302.50
	Residential LV PAYG (TAS101)	2.01	15.52	304.43
Uncontrolled Energy	Uncontrolled LV Heating (TAS41)	0.00	24.61	302.42
Controlled Energy	Controlled LV Energy – Off Peak with afternoon boost (TAS61)	0.00	1.43	302.42
	Controlled LV Energy – Night period only (TAS63)	0.00	0.00	302.42
Unmetered	UMS LV General (TASUMS)	0.02	1.11	302.44
Streetlights	UMS LV Public Lighting (TASUMSSL)	0.09	2.41	302.51



Tariff class	Tariff	Avoidable cost (\$m)	Expected revenue excluding side constraint adjustment (\$m)	Stand-alone cost (\$m)
Embedded Generator <sup>1</sup>	Residential LV Import Transitional (TASX1I)	0.00	0.00	0.00
	Business LV Import Transitional (TASX2I)	0.00	0.00	0.00
	Residential LV Import Fair and Reasonable (TASX4I)	0.00	0.00	0.00
	Business LV Import Fair and Reasonable (TASX5I)	0.00	0.00	0.00
	Non-Qualifying Import (TASX6I)	0.00	0.00	0.00

1 As there are no charges for this tariff, this calculation has been set to zero.

The outputs from TasNetworks' cost and pricing models are also set out in Table 39. The table shows the stand-alone and avoidable costs for each tariff class, compared to the revenue expected to be raised from the network tariffs within that tariff class.

**Table 39: Stand-alone and avoidable cost boundaries by tariff class**

Tariff class	Avoidable cost (\$m)	Expected revenue excluding side constraint adjustment (\$m)	Stand-alone cost (\$m)
ITC	0.16	1.71	302.58
HV	1.77	9.37	606.61
Irrigation	0.49	6.20	302.91
Large LV	2.83	26.95	305.25
Small LV	2.90	78.72	1,212.57
Residential	10.43	138.92	917.69
Uncontrolled Energy	0.00	24.61	302.42
Controlled Energy	0.00	1.43	604.84
Unmetered	0.02	1.11	302.44
Streetlights	0.09	2.41	302.51
Embedded Generation <sup>1</sup>			

1 As there are no charges for this tariff, this calculation has been set to zero.

## 15.7 Long run marginal cost

Clause 6.18.5(b)(1) of the Rules<sup>37</sup> requires that each charging parameter for a tariff class take into account the long run marginal cost for the service or, in the case of a charging parameter, for the element of the service to which the charging parameter relates.

TasNetworks interprets long run marginal cost (**LRMC**) as the investment required to sustain or expand long term capacity in a network.

TasNetworks has determined the costs to be recovered from a tariff class, and designed the charging parameters within a network tariff, in order to reflect long term cost and provide effective price signals to customers. TasNetworks' network tariffs and charging parameters are designed to recover amounts from tariff classes which are reflective of the costs of providing services to these customers, and send pricing signals to customers through the selection of appropriate charging parameters.

TasNetworks has designed its network tariffs to contain a combination of charging parameters in order to reflect LRMC and recover the total allowable revenue:

- where appropriate, a specified demand charge may take into account the long term demand peak and can provide effective pricing signals to customers of excessive load;
- an any-time demand charge is used to take into account short term peaks in demand;
- energy charges are used where appropriate; and
- fixed charges are used to ensure the remaining costs including the costs associated with connection assets are recovered.

## 15.8 Transaction costs

Clause 6.18.5(b)(2)(i) of the Rules<sup>38</sup> requires each tariff and, if it consists of two or more charging parameters, each charging parameter for a tariff class to be developed having regard to transaction costs associated with the tariff or charging parameter.

TasNetworks has not altered the structure or format of its network tariffs from the previous regulatory year in any material way. TasNetworks' charging parameters and network tariffs are well known to its customers and their retailers. A combination of various parameters has been used to ensure that appropriate pricing signals are provided to customers. However, the number and design of these parameters has been selected with regard to minimising the associated transaction costs.

## 15.9 Response to price signals

Clause 6.18.5(b)(2)(ii) of the Rules<sup>39</sup> requires each tariff and, if it consists of two or more charging parameters, each charging parameter for a tariff class to be developed having regard to whether customers of the relevant tariff class are able or likely to respond to price signals.

The charging parameter within TasNetworks' network tariffs has been developed such that customers are able to and are likely to respond to price signals.

The fixed charging parameter has been designed to recover the fixed cost of a customer's connection assets. Network users can manage these costs by ensuring that the dedicated connection assets installed match their load and reliability requirements.

---

<sup>37</sup> Version 65

<sup>38</sup> Version 65

<sup>39</sup> Version 65

The demand charges provide a strong signal to customers regarding the impact of demand on the cost of the shared network, and an inducement to reduce their maximum demand.

The volume charge provides a signal that increased customer usage results in cost increases in operations. If customers use more electricity, then they will bear an increasing portion of the MAR and their network charges will rise as a result. Customers may manage the amount of their charges by reducing their usage.

### 15.10 Tariff adjustment to address revenue shortfalls

Clause 6.18.5(c) of the Rules<sup>40</sup> provides that if, as a result of the operation of clause 6.18.5(b)<sup>41</sup>, TasNetworks may not recover its expected revenue, tariffs will be adjusted in accordance with clause 6.18.5(c) of the Rules<sup>42</sup>, so as to ensure recovery of expected revenue with minimum distortion to efficient patterns of consumption.

TasNetworks does not need to apply this clause of the Rules<sup>43</sup> as the operation of clause 6.18.5(b)<sup>44</sup> does not impact on TasNetworks' ability to recover the expected revenue.

### 15.11 Compliance with side constraints

Within a given regulatory control period, the Rules<sup>45</sup> require that the revenue raised from a particular tariff class through tariffs applying to standard control services must not increase from year to year by more than the permissible percentages set out in the Rules. This limitation on tariffs and the revenue they can recover is referred to as a side constraint.

In accordance with the AER's distribution determination<sup>46</sup>, the following formula is to be used to determine side constraints for each tariff class:

$$\frac{\sum_{t=1}^n d_t^j \times q_t^j}{\sum_{t=1}^n d_{t-1}^j \times q_{t-1}^j} \leq (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + 2\%) \times (1 + S_t) \pm passthrough_t \pm ESISC_t \pm NEMC_t \pm DUOS_t \pm transitional_t$$

where each tariff class 'j' has up to 'm' components, and where:

- $d_t^j$  is the proposed price for component 'j' of the tariff class for year t.
- $d_{t-1}^j$  is the price charged by the DNSP for component 'j' of the tariff class in year t-1.
- $q_t^j$  is the forecast quantity of component 'j' of the tariff class in year t.
- $\Delta CPI_t$  is the annual percentage change in the ABS Consumer Price Index All Groups, Weighted Average of Eight Capital Cities from March in regulatory year t-2 to March in regulatory year t-1.

<sup>40</sup> Version 65

<sup>41</sup> Version 65

<sup>42</sup> Version 65

<sup>43</sup> Version 65

<sup>44</sup> Version 65

<sup>45</sup> Version 65

<sup>46</sup> Final Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, April 2012.

- $X_t$  is the X factor for each year of the regulatory control period. If  $X > 0$ , then X will be set equal to zero for the purposes of the side constraint formula.
- $S_t$  is the STPIS factor sum of the raw s-factors for all reliability of supply and customer service parameters (as applicable) to be applied in regulatory year t.
- $passthrough_t$  is an annual adjustment factor that reflects the pass through amounts approved by the AER with respect to regulatory year t.
- $ESISC_t$  is the actual overs or unders from the estimated ESISC costs in regulatory year t-1.
- $NEMC_t$  is the actual overs or unders from the estimated NEMC costs in regulatory year t-1.
- $DUoS_t$  is an annual adjustment factor related to the balance of the DUoS unders and overs account with respect to regulatory year t.
- $transitional_t$  is a transitional factor revenue adjustment from the current regulatory period that will not be ongoing in the forthcoming regulatory period.

Clause 6.18.6(b) of the Rules<sup>47</sup> applies side constraints in relation to weighted average revenue increases between regulatory years.

As TasNetworks' X factor for the 2016-17 regulatory year is 1.50 and therefore greater than zero, when applying the AER's side constraint formula, TasNetworks has set the value of  $X_t$  to zero for the purposes of the side constraint formula.

TasNetworks confirms that each of its tariff classes for the 2016-17 regulatory year are within the weighted average revenue increases allowed in accordance with clause 6.18.6 of the Rules<sup>48</sup> and the AER's side constraint formula. The results of TasNetworks' compliance with the side constraint requirements are shown in Table 40.

**Table 40: Side constraint compliance for 2016-17**

Tariff class	Weighted average revenue 2015-16 (\$m)	Anticipated revenue 2016-17 (\$m)	% change (calculated)	% change (allowed by side constraint)
ITC	1.72	1.71	-0.85%	5.33%
HV	9.52	9.37	-1.54%	5.33%
Irrigation	6.00	6.20	3.31%	5.33%
Large LV	27.55	26.95	-2.18%	5.33%
Small LV	83.20	78.72	-5.38%	5.33%
Residential	142.28	138.92	-2.36%	5.33%
Uncontrolled Energy	23.53	24.61	4.59%	5.33%
Controlled Energy	1.38	1.43	3.78%	5.33%
Unmetered	1.08	1.11	2.68%	5.33%
Streetlights	2.41	2.41	0.00%	5.33%

<sup>47</sup> Version 65

<sup>48</sup> Version 65

## 16 Audit certification

Clause 6.18.8 of the Rules<sup>49</sup> requires that the AER must approve a Pricing Proposal if the AER is satisfied that:

- (1) the Proposal complies with Part I in Chapter 6 of the Rules (Distribution Pricing Rules), any relevant clauses in Chapter 11 of the Rules and any applicable distribution determination; and
- (2) all forecasts associated with the proposal are reasonable

To assist the AER in this determination, TasNetworks has provided audit certification from Synateq confirming that TasNetworks has completed this Annual Distribution Pricing Proposal in accordance with the requirements of the Rules and the AER's distribution determination.

---

<sup>49</sup> Version 65

## 17 Confidential information

The AER has published confidentiality guidelines as part of its Better Regulation program that provide guidance regarding the submission of claims of confidentiality by network service providers. Those Guidelines have been applied when assessing the need to protect the information submitted to the AER in support of this Annual Distribution Pricing Proposal.

TasNetworks considers that the sections within, or attachments to this Annual Distribution Pricing Proposal which are identified in the following table, Table 41, contain sensitive information. TasNetworks considers that this information should be protected as confidential, on the basis that it is neither common knowledge nor publicly available, that its publication would be detrimental to TasNetworks, and that the detriment to TasNetworks of disclosure would outweigh the public benefits.

Where such confidential information exists within this Annual Distribution Pricing Proposal or any attachment, TasNetworks has redacted those confidential parts and provided a 'public' version of the Annual Distribution Pricing Proposal or the attachment. Where TasNetworks considers that an entire attachment should remain confidential it has not provided a 'public' version.

**Table 41: Confidential information**

Reference	Title	Topic	Description	Category	Explanation	Detriment from disclosure
PP007	AER Tariff Reconciliation Model	Distribution Pricing	Contains	Market intelligence	Contains individual negotiated network tariffs	May undermine TasNetworks ability to negotiate individual tariffs

## 18 Distribution Pricing Proposal compliance obligations

Section 6.18 of the Rules contains a range of compliance obligations which TasNetworks must meet in developing and publishing its annual distribution pricing proposals for the AER. Table 42 sets out those obligations and the section of this pricing proposal which addresses each requirement.

**Table 42: Compliance obligations under the Rules**

Clause	Pricing Proposal Requirement	Reference
6.18.2(a)(2)	A DNSP must submit to the AER, at least two months before the commencement of the second and each subsequent regulatory year of the regulatory control period, a further pricing proposal (an annual distribution pricing proposal) for the relevant regulatory year.	This Annual Distribution Pricing Proposal
6.18.2(b)(1)	A pricing proposal must set out the tariff classes that are to apply for the relevant regulatory year.	Section 6 Section 10
6.18.2(b)(2)	A pricing proposal must set out the proposed tariffs for each tariff class.	Section 8 Section 10
6.18.2(b)(3)	A pricing proposal must set out, for each proposed tariff, the charging parameters and the elements of service to which each charging parameter relates.	Section 6 Section 10
6.18.2(b)(4)	A pricing proposal must set out, for each tariff class related to standard control services, the expected weighted average revenue for the relevant regulatory year and also for the current regulatory year.	Section 15
6.18.2(b)(5)	A pricing proposal must set out the nature of any variation or adjustment to the tariff that could occur during the course of the regulatory year and the basis on which it could occur.	Section 9 Section 12
6.18.2(b)(6)	A pricing proposal must set out how designated pricing proposal charges are to be passed on to customers and any adjustments to tariffs resulting from over or under recovery of those charges in the previous regulatory year.	Section 6 Section 8
6.18.2(b)(6A)	A pricing proposal must set out how jurisdictional scheme amounts for each approved jurisdictional scheme are to be passed on to customers and any adjustments to tariffs resulting from over or under recovery of those amounts.	There are no jurisdictional schemes applicable to TasNetworks.
6.18.2(b)(6B)	A pricing proposal must describe how each approved jurisdictional scheme that has been amended since the last jurisdictional scheme approval date meets the jurisdictional scheme eligibility criteria.	There are no jurisdictional schemes applicable to TasNetworks.
6.18.2(b)(7)	A pricing proposal must demonstrate compliance with the Rules and any applicable distribution determination.	Section 15
6.18.2(b)(8)	A pricing proposal must describe the nature and extent of change from the previous regulatory year and demonstrate that the changes comply with the Rules and any applicable distribution determination.	Section 15

Clause	Pricing Proposal Requirement	Reference
6.18.3(a)	A pricing proposal must define the tariff classes into which retail customers for direct control services are divided.	Section 6 Section 10 Section 13
6.18.3(b)	Each customer for direct control services must be a member of 1 or more tariff classes.	Section 13
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 two or more tariff classes).	Section 6 Section 10 Section 13
6.18.3(d)(1)	A tariff class must be constituted with regard to the need to group retail customers together on an economically efficient basis.	Section 13
6.18.3(d)(2)	A tariff class must be constituted with regard to the need to avoid unnecessary transaction costs.	Section 15
6.18.4(a)(1)	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 principle that 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 customer's premises as a result of a regulatory obligation or requirement.	Section 13
6.18.4(a)(2)	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 principle that retail customers with a similar connection and usage profile should be treated on an equal basis.	Section 13
6.18.4(a)(3)	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 principle that retail customers with micro-generation facilities should be treated no less favourably than customers without such facilities but with a similar load profile.	Section 13.2



Clause	Pricing Proposal Requirement	Reference
6.18.4(a)(4)	In formulating provisions of a distribution determination governing the assignment of customers to tariff classes or the re-assignment of customers from one tariff class to another, the AER must have regard to the principle that a DNSP'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.	Section 13
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.	Section 13
6.18.5(a)	For each tariff class, the revenue expected to be recovered should lie on or between: <ul style="list-style-type: none"> <li>(1) an upper bound representing the stand alone cost of serving the retail customers who belong to that class; and</li> <li>(2) a lower bound representing the avoidable cost of not serving those retail customers.</li> </ul>	Section 15
6.18.5(b)(1)	A tariff, and if it consists of two or more charging parameters, each charging parameter for a tariff class must take into account the long run marginal cost for the service or, in the case of a charging parameter, for the element of the service to which the charging parameter relates.	Section 15
6.18.5(b)(2)	A tariff, and if it consists of two or more charging parameters, each charging parameter for a tariff class must be determined having regard to: <ul style="list-style-type: none"> <li>(i) transaction costs associated with the tariff or each charging parameter; and</li> <li>(ii) whether retail customers of the relevant tariff class are able or likely to respond to price signals.</li> </ul>	Section 15
6.18.5(c)	If, however, as a result of the operation of paragraph (b), the DNSP may not recover the expected revenue, the provider must adjust its tariffs so as to ensure recovery of expected revenue with minimum distortion to efficient patterns of consumption.	Section 15
6.18.6(a)	This clause applies only to tariff classes related to the provision of standard control services.	Section 15
6.18.6(b)	The expected weighted average revenue to be raised from a tariff class for a particular regulatory year of a regulatory control period must not exceed the corresponding expected weighted average revenue for the preceding regulatory year in that regulatory control period by more than the permissible percentage.	Section 15

Clause	Pricing Proposal Requirement	Reference
6.18.6(c)	The permissible percentage is the greater of the following: (1) the CPI-X limitation on any increase in the DNSP's expected weighted average revenue between the two regulatory years plus 2%. (2) CPI plus 2%.	Section 15
6.18.6(d)	In deciding whether the permissible percentage has been exceeded in a particular regulatory year, the following are to be disregarded: (1) the recovery of revenue to accommodate a variation to the distribution determination under rule 6.6 or 6.13; (2) the recovery of revenue to accommodate pass through of designated pricing proposal charges to retail customers; and (3) the recovery of revenue to accommodate pass through of jurisdictional scheme amounts for approved jurisdictional schemes. (4) the recovery of revenue to accommodate any increase in the Distribution Network Service Provider's annual revenue requirement by virtue of an application of a formula referred to in clause 6.5.2(l).	Section 15
6.18.6(e)	This clause does not, however, limit the extent a tariff for retail customers with remotely-read interval metering or other similar metering technology may vary according to the time or other circumstances of the customer's usage.	Section 15
6.18.7(a)	A pricing proposal must provide for tariffs designed to pass on to retail customers the designated pricing proposal charges to be incurred by the DNSP for transmission use of system services.	Section 14
6.18.7(b)	The amount to be passed on to retail customers for a particular regulatory year must not exceed the estimated amount of the designated pricing proposal charges adjusted for over or under recovery in accordance with paragraph (c).	Section 14
6.18.7(c)	The over and under recovery amount must be calculated in a way that: (1) subject to subparagraphs (2) and (3) below, is consistent with the method determined by the AER in the relevant distribution determination for the Distribution Network Service Provider; (2) ensures a DNSP is able to recover from retail customers no more and no less than the designated pricing proposal charges it incurs; and (3) adjusts for an appropriate cost of capital that is consistent with the rate of return used in the relevant distribution determination for the relevant regulatory year.	Section 14

Clause	Pricing Proposal Requirement	Reference
6.18.7(d)	Notwithstanding anything else in this clause 6.18.7, a DNSP may not recover charges under this clause to the extent these are: <ul style="list-style-type: none"> <li>(1) recovered through the Distribution Network Service Provider's annual revenue requirement;</li> <li>(2) recovered under clause 6.18.7A; or</li> <li>(3) recovered from another Distribution Network Service Provider.</li> </ul>	Section 14
6.18.7A(a)	A pricing proposal must provide for tariffs designed to pass on to customers a DNSP's jurisdictional scheme amounts for approved jurisdictional schemes.	There are no jurisdictional schemes applicable to TasNetworks.
6.18.7A(b)	The amount to be passed on to customers for a particular regulatory year must not exceed the estimated amount of jurisdictional scheme amounts for a DNSP's approved jurisdictional schemes adjusted for over or under recovery in accordance with paragraph (c).	There are no jurisdictional schemes applicable to TasNetworks.
6.18.7A(c)	The over and under recovery amount must be calculated in a way that: <ul style="list-style-type: none"> <li>(1) subject to subparagraphs (2) and (3) below, is consistent with the method determined by the AER for jurisdictional scheme amounts in the relevant distribution determination for the DNSP, or where no such method has been determined, with the method determined by the AER in the relevant distribution determination in respect of designated pricing proposal charges;</li> <li>(2) ensures a DNSP is able to recover from customers no more and no less than the jurisdictional scheme amounts it incurs; and</li> <li>(3) adjusts for an appropriate cost of capital that is consistent with the rate of return used in the relevant distribution determination for the relevant regulatory year.</li> </ul>	There are no jurisdictional schemes applicable to TasNetworks.

## 19 Attachments

TasNetworks includes the following documents as attachments to this Annual Distribution Pricing Proposal.

**Table 43: Attachments**

Reference	Title
PP001	DCoS Methodology
PP002	Network Tariff Application and Price Guide
PP003	Metering Services Application and Price Guide
PP004	Public Lighting Application and Price Guide
PP005	Fee-based Services Application and Price Guide
PP006	Quoted Services Application and Price Guide
PP007	AER Tariff Reconciliation Model (confidential)
PP008	Synateq Audit Certification
PP009	Annual Distribution Pricing Proposal Overview

## 20 Listing of tables

Following is a list of the tables within this Annual Distribution Pricing Proposal.

Table 1:	Structure of this document.....	2
Table 2:	Our Pricing Principles.....	9
Table 3:	Revenue cap.....	10
Table 4:	Tariff classes – standard control services .....	12
Table 5:	Tariff charging parameters for DUoS charges .....	18
Table 6:	Tariff charging parameters for TUoS charges .....	20
Table 7:	Estimated percentage price change by tariff class .....	21
Table 8:	Estimated percentage price change by ITC tariff.....	22
Table 9:	Estimated percentage price change for locational TUoS charges .....	24
Table 10:	Proposed DUoS charges – standard control services .....	26
Table 11:	Proposed DUoS charges – standard control services (ITC customers).....	28
Table 12:	Proposed TUoS charges – standard control services.....	29
Table 13:	Proposed TUoS – standard control services (ITC customers).....	31
Table 14:	Proposed locational TUoS charges – standard control services.....	32
Table 15:	Hobart region virtual transmission nodes .....	33
Table 16:	Tamar region virtual transmission nodes .....	33
Table 17:	Tariff classes for alternative control services .....	36
Table 18:	Meter classes for metering services .....	37
Table 19:	Price cap calculation – metering services.....	38
Table 20:	Proposed tariffs for metering services .....	39
Table 21:	Public lighting types for public lighting services .....	40
Table 22:	Contract lighting types for public lighting services.....	41
Table 23:	Price cap calculation – public lighting services.....	43
Table 24:	Proposed tariffs for public lighting by type .....	43
Table 25:	Proposed tariffs for contract lighting by type.....	44
Table 26:	Proposed fee-based services .....	45
Table 27:	Price cap calculation – fee-based services.....	50
Table 28:	Proposed tariffs for fee-based services .....	50
Table 29:	Price cap calculation for quoted services .....	52
Table 30:	Proposed tariffs for quoted services .....	53
Table 31:	Estimated percentage price change – metering services .....	54
Table 32:	Estimated percentage price change – public lighting.....	54

Table 33:	Estimated percentage price changes – contract lighting .....	55
Table 34:	Estimated percentage price change – fee-based services.....	56
Table 35:	Estimated percentage price change – quoted services .....	57
Table 36:	TUoS unders and overs account (\$ million).....	63
Table 37:	DUoS unders and overs account.....	64
Table 38:	Stand-alone and avoidable cost boundaries by tariff.....	67
Table 39:	Stand-alone and avoidable cost boundaries by tariff class .....	68
Table 40:	Side constraint compliance for 2016-17 .....	71
Table 41:	Confidential information .....	73
Table 42:	Compliance obligations under the Rules .....	74
Table 43:	Attachments .....	79

## 21 Glossary of terms/abbreviations

Term	Definition
ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
ATMD	Any Time Maximum Demand
Aurora	Aurora Energy Pty Ltd
Business transitional feed-in tariff rate	The rate prescribed in section 44F of the ESI Act for small business customers
CPI	Consumer Price Index
CT	Current Transformer
DCoS	Distribution Cost of Supply
DNSP	Distribution Network Service Provider
DUoS	Distribution Use of System
EHV or Extra High Voltage	Voltages of 88 kV and above
ESI Act	<i>Electricity Supply Industry Act 1995</i>
ESISC	Electrical Safety Inspection Service Charge
GW	GigaWatt
GWh	GigaWatt Hour
HV or High Voltage	Voltages between 6.6 kV and 66 kV
Hydro or HEC	Hydro Electric Corporation or Hydro Electric Commission
ISO 9001	Part of the ISO 9000 family of quality management system standards published by the International Organisation for Standardisation
kV	KiloVolt
kVA	KiloVolt Amp
kW	KiloWatt
kWh	KiloWatt Hour
LV or Low Voltage	Voltages of 415 Volts or less
LRMC	Long Run Marginal Cost
MAR	Maximum Allowable Revenue
MD	Maximum Demand
MV	MegaVolt
MVA	MegaVolt Amps
MW	MegaWatt
MWh	MegaWatt Hour
NECF	National Energy Customer Framework
NEL	National Electricity Law

Term	Definition
NEM	National Electricity Market
NEMC	National Energy Market Charge
NUoS	The tariff for use of the distribution and transmission networks. It is the sum of both Distribution Use of System and Transmission Use of System Charges.
NPV	Net Present Value
OH	Overhead
Ombudsman Act	<i>Energy Ombudsman Act 1998</i>
OTTER	Office of the Tasmanian Economic Regulator
PAYG	The Pay As You Go package offered to electricity customers
Payguard	The credit management facility provided by Aurora as a component of PAYG
Private residential dwelling	A house, flat, home unit, town house or similar qualifying residential premise
PTRM	Post Tax Revenue Model
RAB	Regulated Asset Base
Regulator	The meaning given in the <i>Economic Regulator Act 2009</i>
Residential transitional feed-in tariff rate	The rate prescribed in section 44F of the ESI Act for residential customers
Rules	National Electricity Rules
TasNetworks	Tasmanian Networks Pty Ltd
Standard feed-in tariff rate	The rate determined by the Regulator in accordance with section 44G of the ESI Act
TEC	Tasmanian Electricity Code
TNSP	Transmission Network Service Provider
ToU	Time of Use
Transend	Transend Networks Pty Ltd
TUoS	Transmission Use of System
UMS	Unmetered Supply
VT	Voltage Transformer
WACC	Weighted Average Cost of Capital