



## **Annual Distribution Pricing Proposal**

**2021–22**

As submitted to the Australian Energy Regulator



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## Table of Contents

Executive summary .....	1
1 Preface .....	4
2 Introduction .....	5
2.1 Scope .....	5
2.2 Structure .....	5
2.3 Supporting documents .....	6
2.4 Goods and service tax (GST) .....	6
2.5 Further information .....	7
2.6 Overview of compliance obligations .....	7
3 Tariff classes and tariffs .....	8
3.1 Overview .....	8
3.2 Network tariff classes – standard control services .....	8
3.3 Tariff structure and charging parameters .....	12
3.3.1 Recovery of Distribution Use of System .....	12
3.3.2 Recovery of Transmission Use of System .....	13
3.4 Tariff classes – alternative control services .....	14
3.5 Assignment of customers to tariffs .....	26
3.6 System of assessment and review of the basis on which a customer is charged .....	26
3.7 Transaction costs .....	26
4 Pricing principles .....	27
4.1 Overview .....	27
4.2 Stand-alone and avoidable costs .....	28
4.3 Stand-alone and avoidable costs – standard control services .....	28
4.4 Stand-alone and avoidable costs – alternative control services .....	28
4.5 Long run marginal cost .....	29
4.6 Total efficient cost .....	31
4.7 Impact on retail customers .....	31
5 Standard control services – pricing proposal requirements .....	32
5.1 Total revenue allowance .....	32
5.2 Setting the 2021-22 network tariffs .....	32
5.2.1 Total allowable revenue and revenue cap .....	32
5.2.2 Tariff development .....	34
5.2.3 Energy consumption, demand and customer forecasts .....	34
5.3 DUoS unders and overs .....	36
5.4 Side constraints .....	36
5.4.1 Weighted average revenue .....	37
5.5 2021-22 pricing and indicative prices provided in the TSS .....	38
5.6 National Electricity Rules and applicable regulatory instruments .....	39
5.7 Sub-threshold tariffs .....	39
6 Transmission charges .....	40
6.1 TUoS expenses .....	40
6.1.1 Transmission charges .....	40

6.1.2	Standard transmission charges.....	40
6.1.3	Avoided TUoS.....	40
6.2	TUoS receipts .....	41
6.3	Tariff recovery of TUoS .....	41
6.4	Designated pricing proposal charges unders and overs account.....	41
7	Standard control services – customer price impacts.....	42
7.1	Price movements in 2021-22 .....	42
8	Standard control services – tariff variations.....	47
8.1	Adjustments to tariffs within a regulatory year .....	47
8.1.1	ITC network tariffs .....	47
8.1.2	Changes to tariffs by network tariff class .....	47
8.2	Variations between the 2020-21 and 2021-22 regulatory years .....	48
8.2.1	Reallocation between fixed and variable costs .....	48
8.2.2	Rebalancing of DUoS and TUoS revenues.....	48
9	Alternative control services .....	49
9.1	Overview of alternative control services .....	49
9.1.1	Metering services.....	49
9.1.2	Public lighting services .....	49
9.1.3	Ancillary service – fee based services .....	50
9.1.4	Ancillary service – quoted services .....	50
9.2	Setting the 2021-22 tariffs .....	50
9.3	Tariff variations .....	51
9.4	Customer price impacts .....	51
10	Confidential information .....	52
11	Compliance review .....	53
12	Attachments .....	54
Appendix 1:	Compliance Checklist.....	55
Appendix 2:	Glossary .....	60
Appendix 3:	Proposed Network Tariffs .....	63
Appendix 4:	Proposed Alternative Control Services Tariffs.....	71

## Listing of tables

Table 1	Residential tariffs for 2021-22 .....	2
Table 2	Small business tariffs for 2021-22.....	3
Table 3	Structure of this document.....	5
Table 4	Network tariff classes – standard control services .....	8
Table 5	Recovery of Distribution Use of System .....	12
Table 6	Recovery of Transmission Use of System .....	13
Table 7	Meter classes for metering services .....	14
Table 8	Public lighting types for public lighting services .....	15
Table 9	Contract lighting types for public lighting services.....	17
Table 10	Ancillary service – fee based services.....	19
Table 11	Ancillary service – quoted services.....	25
Table 12	Stand-alone and avoidable cost boundaries 2021-22 .....	28
Table 13	Estimated long run marginal costs .....	29
Table 14	Revenue cap formula .....	32
Table 15	Under or Over Recovery of DUoS Charges .....	33
Table 16	Electrical Safety Inspection Service Charge .....	33
Table 17	Nominal vanilla WACC .....	33
Table 18	National Energy Market Charge.....	33
Table 19	Total allowable revenue .....	34
Table 20	Weighted average revenue.....	38
Table 21	Changes in assumptions for indicative pricing to pricing proposal .....	38
Table 22	Network tariff classes – percentage price change.....	42
Table 23	ITC tariffs – percentage price change .....	44
Table 24	Locational TUoS charges – percentage price change .....	46
Table 25	Networks tariff reforms .....	47
Table 26	Weighted average price movement by Tariff Class .....	47
Table 27	Price cap calculation .....	51
Table 28	Attachments .....	54
Table A1.1	Compliance obligations under the Rules .....	55
Table A2.1	Glossary.....	60
Table A3.1	DUoS charges – standard control services.....	63
Table A3.2	DUoS charges – standard control services (ITC customers) .....	65
Table A3.3	TUoS charges – standard control services .....	66
Table A3.4	TUoS – standard control services (ITC customers) .....	68
Table A3.5	Locational TUoS charges – standard control services .....	69

Table A3.6	Hobart region virtual transmission node.....	70
Table A3.7	Tamar region virtual transmission node.....	70
Table A4.1	Tariffs for metering services .....	71
Table A4.2	Tariffs for public lighting by type .....	71
Table A4.3	Tariffs for contract lighting by type .....	72
Table A4.4	Tariffs for fee based services .....	74
Table A4.5	Tariffs for quoted services .....	76



## Executive summary

This Annual Distribution Pricing Proposal outlines the proposed network tariffs for standard control services and the proposed tariffs (prices) for alternative control services for 2021-22.

### 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 Australian Energy regulator (**AER**) classifies the generic distribution network services which are relied on by all customers, including connections to our distribution network, as standard control services.

Every household, business and organisation connected to the network makes a contribution towards network costs. However, rather than bill customers directly for their use of the network, we charge their retailer, who then passes the cost of the network on to customers through the retail tariffs that appear on their power bills.

Since commencing operations in 2014, TasNetworks has actively sought to place downward pressure on electricity prices for all of our customers. However, after reducing in each of the previous five years, the network charges faced by typical residential and small business customers will rise in 2021-22.

The network charges incurred by a typical residential customer supplied under the combination of a network tariff for general power and light (TAS31) and another for hot water and/or home heating (TAS41) will rise by around 2.6 per cent higher in 2021-22. The network charges incurred by an energy intensive small business customer assigned to the general network tariff (TAS22) will be around 2.6 per cent higher than they were in 2020-21.

### Why are network charges increasing in 2021-22?

When delivering our distribution determination for the 2019 – 2024 regulatory period in April 2019, the AER approved a revenue allowance for 2021-22 that was 4.1 per cent higher than the allowance for the previous year. However, since that time there have been a number of factors (both positive and negative) that have further impacted on our revenue target for 2021-22 including:

- the over-recovery of revenue that occurred in previous years due to higher levels of consumption than were forecast when setting network prices for those years;
- lower transmission charges being passed on to the distribution network in 2021-22;
- lower interest rates resulting in lower costs of debt;
- lower inflation than had been expected in the past two years;
- a moderate bonus received under the service target performance incentive scheme (**STPIS**).

As a result of these adjustments, the revenue that can be recovered for distribution network services in 2021-22 is 3.5 per cent more than for the previous year.

The process of turning our revenue allowance into prices can also introduce some variability into our network charges. The methodology – which is approved by the AER – is based on forecasts of variables like customer numbers, electricity consumption and demand, and the number of customers assigned to each network tariff. Sometimes those forecasts will prove to be inaccurate, resulting in either an under or over-recovery of TasNetworks’ revenue allowance. For example, a colder than average winter can result in higher electricity consumption than the forecast used to set our prices for the year in question, and if customers are on consumption based network tariffs, it may result in TasNetworks recovering more than the revenue allowance set by the AER for that year. The effect of COVID-19 on historical and future consumption and demand levels has impacted network charges for 2021-22.

As the amount of revenue we recover from our customers through general network charges is capped, TasNetworks cannot retain any revenue that is recovered in excess of the approved revenue cap. Therefore, every year we reconcile the revenue actually recovered from our customers with our



revenue allowance for that year. If we have recovered too much in the way of network charges, we adjust our pricing in the coming years to return the difference to our customers (plus interest), in the form of lower prices than might otherwise have applied.

### Direction of pricing

With the approval of the AER, we are adjusting the prices of some of our long-standing network tariffs, which do not appropriately reflect the costs associated with the demands that customers on those tariffs make on the network. For example, we are gradually lifting the price of the dedicated home heating and hot water network tariff (TAS41) so that, eventually, its price will be similar to the residential general power and lighting tariff (TAS31). This is a gradual process and we are not about to abolish such a widely used network tariff and transition customers onto an alternative.

Further, we are also working closely with electricity retailers to ensure that customers are able to understand their own usage of electricity, what different network tariffs might mean for them and how they can manage their use of electricity in a way that maximises the value they get from their electricity supply while minimising the cost.

### Indicative price changes for residential customers

The network charges incurred by a typical residential customer supplied under the combination of network tariffs TAS31 for general power and light and TAS41 for hot water and/or home heating will increase by around 2.6 per cent in 2021-22. For customers supplied under the TAS93 time of use consumption based network tariff, charges will also rise by about 2.6 per cent in 2021-22.

Table 1 below compares the charges expected to apply for typical residential customers on these tariffs in 2021-22 with the charges applying in the previous year.

**Table 1 Residential tariffs for 2021-22**

	2020-21	2021-22	Change
<b>Residential time of use consumption tariff (TAS93)</b>			
Service Charge	55.923 cents / day	57.601 cents / day	↑ 3.0 %
Peak energy charge (weekdays 7am – 9am, 4pm – 9pm)	14.564 cents / kWh	14.807 cents / kWh	↑ 1.7 %
Off peak energy charge (all other times, including all weekend)	2.769 cents / kWh	2.887 cents / kWh	↑ 4.3 %
<b>General power and lighting (TAS31)</b>			
Service Charge	51.153 cents / day	52.688 cents / day	↑ 3.0 %
Energy Charge	8.201 cents / kWh	8.392 cents / kWh	↑ 2.3 %
<b>Uncontrolled home heating and/or hot water (TAS41)</b>			
Service Charge	6.321 cents / day	6.511 cents / day	↑ 3.0 %
Energy Charge	5.389 cents / kWh	5.522 cents / kWh	↑ 2.5 %

### Indicative price changes for small business customers

The network charges incurred by a medium usage small business customer assigned to the TAS22 network tariff should be around 2.6 per cent per cent higher than they were in 2020-21. For small business customers supplied under the TAS94 time of use consumption based network tariff, charges will increase by about 4.3 per cent in 2021-22 compared to the previous year.

Table 2 below compares the charges expected to be faced by typical small business customers on these tariffs in 2021-22, compared with the charges applying in the previous year.



**Table 2 Small business tariffs for 2021-22**

	2020-21	2021-22	Change
<b>Business time of use consumption tariff (TAS94)</b>			
Service Charge	66.902 cents / day	68.909 cents / day	↑ 3.0 %
Peak energy charge (weekdays 7am – 10pm)	9.607 cents / kWh	10.055 cents / kWh	↑ 4.7 %
Shoulder energy charge (weekend days 7am-10pm)	5.765 cents / kWh	6.034 cents / kWh	↑ 4.7 %
Off peak energy charge (all other times)	1.442 cents / kWh	1.508 cents / kWh	↑ 4.6 %
<b>Business low voltage general (TAS22)</b>			
Service Charge	50.862 cents / day	52.388 cents / day	↑ 3.0 %
Energy Charge	8.861 cents / kWh	9.080 cents / kWh	↑ 2.5 %

**Alternative control services**

‘Alternative control’ denotes a form of pricing control used by the AER 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.

Alternative control services prices are indexed each year using a (CPI – X) approach. As a result, in 2021-22 alternative control services prices will change as shown below:

- metering service prices increase by 1.9%;
- public lighting service prices increase by 2.6%;
- ancillary services – fee based service prices increase by 1.3%; and
- the labour component for ancillary services – quoted services increases by 1.3%.



# 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.

The prices that 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(a)(1) of the National Electricity Rules (**Rules**) requires that DNSPs submit their Annual Distribution Pricing Proposal to the AER, at least 3 months before the start of the second and each subsequent regulatory year of their regulatory control period.

The current five year regulatory control period began on 1 July 2019 and ends on 30 June 2024. This Annual Distribution Pricing Proposal is for the regulatory year commencing on 1 July 2021 and has been prepared to comply with the requirements of the Rules and any additional requirements specified by the AER in its distribution determination for TasNetworks.<sup>1</sup>

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

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<sup>1</sup> <https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/tasnetworks-determination-2019-24>

## 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 2021-22 regulatory year. The classification of services, tariff classes and tariff structures reflected in this Annual Pricing Proposal are as per the Tariff Structure Statement<sup>2</sup> (TSS) approved by the AER in April 2019.<sup>3</sup>

The cost of services provided by TasNetworks where the price is negotiated between TasNetworks and its customers (negotiated services) is not addressed in this pricing proposal.

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

- National Electricity Law (NEL);
- National Electricity Rules (Rules); and
- AER's distribution determination for TasNetworks.<sup>4</sup>

### 2.2 Structure

TasNetworks' Annual Distribution Pricing Proposal is structured as follows.

**Table 3 Structure of this document**

Section	Title	Purpose
1	Preface	Explains the requirement to submit Annual Distribution Pricing Proposals and the regulatory control period to which this Annual Distribution Pricing Proposal applies.
2	Introduction	Outlines the scope, structure and purpose of this Annual Distribution Pricing Proposal.
3	Tariff classes and tariffs	Provides details of each tariff included under standard control services and alternative control services, including a description of each tariff class and the charging parameters making up each tariff. Also includes an explanation of how customers are assigned to tariff classes based on the Rules and pricing principles.
4	Pricing principles	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 TasNetworks' regulated revenue in any given year.
5	Standard control services – pricing proposal requirements	Describes how the methodology used by TasNetworks complies with the Rules and also the pricing-related obligations placed on TasNetworks by the AER's distribution determination.
6	Transmission charges	Outlines how adjustments to charges for transmission costs and any over and under-recoveries of transmission costs in previous years are calculated and recovered.
7	Standard control services – customer price impacts	Shows the difference in charges for 2020-21 and 2021-22 for each network tariff, as well as the percentage change.

<sup>2</sup> TasNetworks, Revised Tariff Structure Statement 2019-2024 Final – April 2019

TasNetworks, Revised Tariff Structure Statement 2019-2024 – Explanatory Statement Final – April 2019

<sup>3</sup> Final Decision, TasNetworks distribution determination 2019-24, Attachment 18 – Tariff structure statement, April 2019.

<sup>4</sup> <https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/tasnetworks-determination-2019-24/final-decision>

Section	Title	Purpose
8	Standard control services – tariff variations	Outlines the proposed variations in tariffs between the 2020-21 and 2021-22 regulatory years.
9	Alternative control services	Explains the tariff classes applying to alternative control services, sets out the prices applying in 2021-22 to metering, public lighting and ancillary services (both fee based services and quoted services), variations and customer impacts.
10	Confidential information	Details which parts of this Annual Distribution Pricing Proposal are confidential and provides reasons in support of any confidentiality claims.
11	Compliance review	Details TasNetworks' compliance with the requirements of Rules as they relate to Annual Distribution Pricing Proposals.
12	Attachments	Lists the attachments to this Annual Distribution Pricing Proposal.
Appendix 1	Compliance Checklist	Sets out TasNetworks' compliance with the requirements of Rules as they relate to Annual Distribution Pricing Proposals.
Appendix 2	Glossary	Glossary of abbreviations and terms used in this document.
Appendix 3	Proposed Network Tariffs	Outlines the proposed network tariffs for 2021-22.
Appendix 4	Proposed Alternative Control Services Tariffs	Outlines the proposed alternative control services tariffs for 2021-22.

## 2.3 Supporting documents

TasNetworks has published a range of documents which are intended to assist external parties understand the development and application of network tariffs and of prices for alternative control services set out in this document. This Annual Distribution Pricing Proposal is supported by the following documents:<sup>5</sup>

- Annual Distribution Pricing Proposal Overview 2021-22;
- Network Tariff Application and Price Guide 2021-22;
- Metering Services Application and Price Guide 2021-22;
- Public Lighting Application and Price Guide 2021-22;
- Ancillary Service – Fee Based Services Application and Price Guide 2021-22;
- Ancillary Service – Quoted Services Application and Price Guide 2021-22;
- Total Efficient Cost Methodology 2021-22;
- Network Tariff Summary 2021-22; and
- Pricing Quantities Forecasting Methodology 2021–22.

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

## 2.4 Goods and service tax (GST)

The tariffs outlined in this pricing proposal, unless otherwise stated, are exclusive of GST.

<sup>5</sup> These documents are available on TasNetworks' website at: <https://www.tasnetworks.com.au/Poles-and-wires/Pricing/Our-prices>.

## **2.5 Further information**

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:

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## **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 clause 6.18 of the Rules. TasNetworks' compliance with these requirements is detailed in section Appendix 1 – Compliance Checklist.



## 3 Tariff classes and tariffs

### 3.1 Overview

TasNetworks has selected network tariff classes based on the requirement to group customers on an economically efficient basis that adequately reflects customer characteristics and has regard to the costs of serving those customers. This approach is outlined in section 4 of our TSS.

The Rules set out a range of requirements relating to tariff classes which have been addressed in our TSS and are explained below.

We assign each customer for standard control services to a tariff which is, in turn, grouped by tariff class. Therefore, each customer is a member of at least one tariff class.<sup>6</sup>

Tariff classes comprise only customers to whom standard control services are supplied, or alternative control services, but not both. That is, no tariff class comprises customers to whom both standard control services and alternative control services are supplied.<sup>7</sup>

We have grouped tariffs into tariff classes based on the need to group customers on an economically efficient basis and in a way that adequately reflects customer characteristics and the costs of serving those customers. For instance, we group residential customers into a single tariff class because these customers tend to have similar characteristics through being low voltage installations for premises that are principally used as residential purposes.<sup>8</sup>

### 3.2 Network tariff classes – standard control services

In general, the individual, demand and general tariff conditions outlined in this section have remained unchanged from those outlined in the Annual Distribution Pricing Proposal prepared for the previous regulatory year. The network tariff classes for standard control services are shown in Table 4.

**Table 4 Network 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 time of use demand (TAS87)	This time of use demand 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 time of use (TAS92)	<p>This time of use network tariff supports Aurora Energy's PAYG product and is not to be used for any other application. This network tariff is for customers with a basic meter and Payguard meter configured for the provision of the PAYG product.</p> <p>This network tariff is for low voltage installations that are premises used wholly or principally as private residential dwellings.</p> <p><b><i>This network tariff is obsolete, with no new connections allowed.</i></b></p>

<sup>6</sup> As required under Clause 6.18.3(b) of the Rules. Our approach for assigning customers to network tariffs is outlined in more detail in our Network Tariff Application and Price Guide which can be found at our website at: <https://www.tasnetworks.com.au/poles-and-wires/pricing/Our-prices>.

<sup>7</sup> As required under Clause 6.18.3(c) of the Rules.

<sup>8</sup> As required under Clause 6.18.3(d)(1) of the Rules.

Network tariff class	Network tariff	Description
	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.
	Residential low voltage Distributed Energy Resources (TAS97)	This time of use demand network tariff is for low voltage installations that are premises used wholly or principally as private residential dwellings, where electricity storage, generation or electricity management devices – collectively referred to as “distributed energy resources” (DER) – have been deployed behind the meter.
	Residential low voltage pay as you go (TAS101)	<p>This network tariff supports Aurora Energy’s Pay As You Go (PAYG) 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 PAYG product.</p> <p>This network tariff is for low voltage installations that are premises used wholly or principally as private residential dwellings.</p> <p><i><b>This network tariff is obsolete, with no new connections allowed.</b></i></p>
Small Low Voltage	Business low voltage general (TAS22)	This network tariff is for low voltage installations that are not private residential dwellings.
	Business low voltage time of use demand (TAS88)	This time of use demand network tariff is for low voltage installations that are not private residential dwellings.
	Business low voltage time of use (TAS94)	This time of use network tariff is for low voltage installations that are not residential dwellings.
	Business low voltage Distributed Energy Resources (TAS98)	This time of use demand network tariff is for low voltage installations that are not private residential dwellings, where electricity storage, generation and/or electricity management devices – collectively referred to as “distributed energy resources” (DER) have been deployed behind the meter.
Large Low Voltage	Business low voltage kVA demand (TAS82)	This demand-based network tariff is for installations taking low voltage multi-phase supply that are not private residential dwellings.
	Large business low voltage time of use demand (TAS89)	This time of use demand network tariff is for installations that are taking low voltage multi-phase supply that are not private residential dwellings.
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 can only be applied to water heating and/or space heating loads, and/or domestic indoor pool heating.</p> <p>In installations that are not private residential dwellings, this network tariff is for water heating only.</p>

Network tariff class	Network tariff	Description
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>For installations that are private residential dwellings, this network tariff may be applied to:</p> <ul style="list-style-type: none"> <li>water heating and/or 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 a spa from which the water goes to waste after use may not be connected on this tariff.</li> </ul> <p>For installations that are not private residential dwellings, this network tariff may be applied to:</p> <ul style="list-style-type: none"> <li>water heating and/or space heating and/or other “wired in” appliances as approved by TasNetworks.</li> </ul> <p><i>This network tariff is obsolete and is not available to new customers.</i></p>
	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>For installations that are private residential dwellings, this network tariff may be applied to:</p> <ul style="list-style-type: none"> <li>water heating and/or 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 a spa from which the water goes to waste after use may not be connected on this tariff.</li> </ul> <p>In the case of installations that are not private residential dwellings, this network tariff may only be applied to:</p> <ul style="list-style-type: none"> <li>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>
High Voltage	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 their site at high voltage; and</li> <li>the expected Any Time Maximum Demand (<b>ATMD</b>) of the site is less than 2 MVA.</li> </ul> <p>Customers on this network tariff are able to agree with TasNetworks on a “Specified Demand” for their electrical installation. Once agreed this value is used in the calculation of Network Use of System (<b>NUoS</b>) charges for the following period of not less than 12 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
	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 their 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 on a “Specified Demand” for their electrical installation to be used in the calculation of NUoS charges. Once agreed this value will be applied to the following period of not less than 12 months.</p> <p>A site connected to the TasNetworks distribution network with this network tariff is not eligible for any other network tariff.</p>
Individual Tariff Calculation	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 agent.</p> <p>ITC prices are based on the TUoS charges applying to the nearest relevant transmission connection point, plus the charges associated with the shared distribution network utilised for the customer’s electricity supply, as well as connection charges based on the connection assets utilised to supply the customer. This provides the greatest cost reflectivity for this type of customer and is feasible since the number of such customers is small.</p> <p>Terms and conditions for these customers are contained within individually negotiated connection agreements.</p>
Unmetered	Unmetered 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>
Street Lighting	Unmetered 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 cover the installation and/or replacement of lamps, which are charged separately.</p>

### 3.3 Tariff structure and charging parameters

Section 3 of TasNetworks' TSS sets out our tariff structure and network charging parameters.

#### 3.3.1 Recovery of Distribution Use of System

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 Recovery of Distribution Use of System**

Tariff class	Network tariff code	Network tariff charging parameter				
		Service charge (c/day)	Volume charge <sup>1</sup> (c/kWh)	Demand charge (c/kW/day)	Demand charge (c/kVA/day)	Specified demand charge (c/kVA/day)
Residential	TAS31	✓	✓			
	TAS87	✓		✓ <sup>2</sup>		
	TAS92	✓	✓ <sup>2</sup>			
	TAS93	✓	✓ <sup>2</sup>			
	TAS97	✓		✓ <sup>2</sup>		
	TAS101	✓	✓			
Small Low Voltage	TAS22	✓	✓			
	TAS88	✓		✓ <sup>2</sup>		
	TAS94	✓	✓ <sup>3</sup>			
	TAS98	✓		✓ <sup>2</sup>		
Large Low Voltage	TAS82	✓	✓		✓	
	TAS89	✓			✓ <sup>2</sup>	
Uncontrolled Energy	TAS41	✓	✓			
Controlled Energy	TAS61	✓	✓			
	TAS63	✓	✓			
Irrigation	TAS75	✓	✓ <sup>3</sup>			
High Voltage	TASSDM	✓	✓ <sup>3</sup>			✓
	TAS15	✓	✓ <sup>3</sup>			✓
Individual Tariff Calculation	TASCUS1	✓	✓			✓
	TASCUS2	✓	✓			✓
	TASCUS3	✓	✓ <sup>3</sup>			✓
	TASCUS4	✓	✓ <sup>3</sup>			✓
Unmetered	TASUMS	✓	✓			
Street Lighting	TASUMSSL		✓ <sup>4</sup>			

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

2 These charges comprise both peak and off peak components.

3 These charges comprise peak, shoulder and off peak components.

4 Public lighting is charged on the basis of c/lamp watt/day.

### 3.3.2 Recovery of Transmission Use of System

Electricity is received into TasNetworks' distribution network primarily from 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. Transmission use of system (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.

To recover transmission costs, the network tariffs applied to customers connected to the distribution network are based on the expected 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 for TasNetworks. TUoS charges are allocated to network tariff classes using the Total Efficient Cost (TEC) model.<sup>9</sup> The TUoS charges applied to the distribution network and recovered from customers connected to the distribution network comprise variable charges only.

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 (ITC and TAS15).

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

**Table 6 Recovery of Transmission Use of System**

Tariff class	Network tariff code	Network tariff charging parameter				
		Service charge (c/day)	Volume charge <sup>1</sup> (c/kWh)	Demand charge (c/kW/day)	Demand charge (c/kVA/day)	Specified demand charge (c/kVA/day)
Residential	TAS31		✓			
	TAS87			✓ <sup>2</sup>		
	TAS92		✓ <sup>2</sup>			
	TAS93		✓ <sup>2</sup>			
	TAS97			✓ <sup>2</sup>		
	TAS101		✓			
Small Low Voltage	TAS22		✓			
	TAS88			✓ <sup>2</sup>		
	TAS94		✓ <sup>3</sup>			
	TAS98			✓ <sup>2</sup>		

<sup>9</sup> See attachment PP001 to this Annual Distribution Pricing Proposal entitled 'TEC Methodology 2021-22.'

Tariff class	Network tariff code	Network tariff charging parameter				
		Service charge (c/day)	Volume charge <sup>1</sup> (c/kWh)	Demand charge (c/kW/day)	Demand charge (c/kVA/day)	Specified demand charge (c/kVA/day)
Large Low Voltage	TAS82		✓		✓	
	TAS89				✓ <sup>2</sup>	
Uncontrolled Energy	TAS41		✓			
Controlled Energy	TAS61		✓			
	TAS63		✓			
Irrigation	TAS75		✓ <sup>3</sup>			
HV	TASSDM		✓ <sup>3</sup>			✓
	TAS15					✓ <sup>4</sup>
ITC	TASCUS1					✓ <sup>4</sup>
	TASCUS2					✓ <sup>4</sup>
	TASCUS3					✓ <sup>4</sup>
	TASCUS4					✓ <sup>4</sup>
Unmetered	TASUMS		✓			
Street Lighting	TASUMSSL		✓ <sup>5</sup>			

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

2 These charges comprise both peak and off peak components.

3 These charges comprise peak, shoulder and off peak components.

4 Demand charge is locational and based upon the transmission connection point.

5 Public lighting is charged on the basis of c/lamp watt/day.

### 3.4 Tariff classes – alternative control services

Tariff class for alternative control services as set out in our TSS. There were no changes to alternative control services tariff classes from the previous regulatory year. The following tables set out the metering, public lighting, ancillary service – fee based services and ancillary service – quoted service groupings of alternative control services:

- Table 7 Meter classes for metering services
- Table 8 Public lighting types for public lighting services
- Table 9 Contract lighting types for public lighting services
- Table 10 Ancillary service – fee based services
- Table 11 Ancillary service – quoted services

**Table 7 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.

Meter class	Definition
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.
Business LV – CT meters	Type 6 metering services provided to commercial customers that require the installation of current or voltage transformers.
Other meters ( <b>PAYG</b> )	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 were provided in support of Aurora Energy's Pay As You Go ( <b>PAYG</b> ) pre-paid product which is no longer offered by Aurora Energy. <i><b>This metering tariff is obsolete, with no new connections allowed.</b></i>

**Table 8 Public lighting types for public lighting services**

Lighting type	Definition
New technology – minor	The provision, maintenance and replacement of TasNetworks owned new or emerging lighting technology for minor light fittings.
New technology – major	The provision, maintenance and replacement of TasNetworks owned new or emerging lighting technology for major light fittings.
14W LED	The provision, maintenance and replacement of TasNetworks owned 14 watt LED light fittings.
14W LED decorative	The provision, maintenance and replacement of TasNetworks owned 14 watt LED light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
18W LED	The provision, maintenance and replacement of TasNetworks owned 18 watt LED light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
18W LED decorative	The provision, maintenance and replacement of TasNetworks owned 18 watt LED light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
25W LED	The provision, maintenance and replacement of TasNetworks owned 25 watt LED light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
25W LED decorative	The provision, maintenance and replacement of TasNetworks owned 25 watt LED light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
42W compact fluorescent	The provision, maintenance and replacement of TasNetworks owned 42 watt compact fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
42W compact fluorescent – bottom pole entry	The provision, maintenance and replacement of TasNetworks owned 42 watt compact fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
70W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 70 watt sodium vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>

Lighting type	Definition
100W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 100 watt sodium vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
150W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 150 watt sodium vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
250W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 250 watt sodium vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
400W sodium vapour	The provision, maintenance and replacement of TasNetworks owned 400 watt sodium vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
250W sodium vapour – flood light	The provision, maintenance and replacement of TasNetworks owned 250 watt sodium vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
400W sodium vapour – flood light	The provision, maintenance and replacement of TasNetworks owned 400 watt sodium vapour light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
100W metal halide	The provision, maintenance and replacement of TasNetworks owned 100 watt metal halide light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
150W metal halide	The provision, maintenance and replacement of TasNetworks owned 150 watt metal halide light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
250W metal halide	The provision, maintenance and replacement of TasNetworks owned 250 watt metal halide light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
400W metal halide	The provision, maintenance and replacement of TasNetworks owned 400 watt metal halide light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
250W metal halide – flood light	The provision, maintenance and replacement of TasNetworks owned 250 watt metal halide light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
400W metal halide – flood light	The provision, maintenance and replacement of TasNetworks owned 400 watt metal halide light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
T5 fluorescent 2 x 24W	The provision, maintenance and replacement of TasNetworks owned 2 x 24 watt compact fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>
1 x 20W fluorescent	The provision, maintenance and replacement of TasNetworks owned 1 x 20 watt fluorescent light fittings. <i><b>This lighting type is obsolete, with no new connections allowed.</b></i>

Lighting type	Definition
50W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 50 watt mercury vapour light fittings. <i>This lighting type is obsolete, with no new connections allowed</i>
80W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 80 watt mercury vapour light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
80W mercury vapour – decorative	The provision, maintenance and replacement of TasNetworks owned 80 watt mercury vapour decorative light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
125W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 125 watt mercury vapour light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
250W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 250 watt mercury vapour light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
400W mercury vapour	The provision, maintenance and replacement of TasNetworks owned 400 watt mercury vapour light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>

**Table 9 Contract lighting types for public lighting services**

Lighting type	Definition
New technology – minor	The maintenance of customer owned new or emerging lighting technology for minor light fittings.
New technology – major	The maintenance of customer owned new or emerging lighting technology for major light fittings.
14W LED	The maintenance of customer owned 14 watt LED light fittings.
14W LED decorative	The maintenance of customer owned 14 watt LED light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
18W LED	The maintenance of customer owned 18 watt LED light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
18W LED decorative	The maintenance of customer owned 18 watt LED light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
25W LED	The maintenance of customer owned 25 watt LED light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
25W LED decorative	The maintenance of customer owned 25 watt LED light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
42W compact fluorescent	The maintenance of customer owned 42 watt compact fluorescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
42W compact fluorescent – bottom pole entry	The maintenance of customer owned 42 watt compact fluorescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>

Lighting type	Definition
70W sodium vapour	The maintenance of customer owned 70 watt sodium vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
100W sodium vapour	The maintenance of customer owned 100 watt sodium vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
150W sodium vapour	The maintenance of customer owned 150 watt sodium vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
250W sodium vapour	The maintenance of customer owned 250 watt sodium vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
400W sodium vapour	The maintenance of customer owned 400 watt sodium vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
250W sodium vapour – flood light	The maintenance of customer owned 250 watt sodium vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
400W sodium vapour – flood light	The maintenance of customer owned 400 watt sodium vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
100W metal halide	The maintenance of customer owned 100 watt metal halide light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
150W metal halide	The maintenance of customer owned 150 watt metal halide light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
250W metal halide	The maintenance of customer owned 250 watt metal halide light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
400W metal halide	The maintenance of customer owned 400 watt metal halide light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
250W metal halide – flood light	The maintenance of customer owned 250 watt metal halide light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
400W metal halide – flood light	The maintenance of customer owned 400 watt metal halide light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
50W mercury vapour	The maintenance of customer owned 50 watt mercury vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
80W mercury vapour	The maintenance of customer owned 80 watt mercury vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
80W mercury vapour – decorative	The maintenance of customer owned 80 watt mercury vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
125W mercury vapour	The maintenance of customer owned 125 watt mercury vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
250W mercury vapour	The maintenance of customer owned 250 watt mercury vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
400W mercury vapour	The maintenance of customer owned 400 watt mercury vapour light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>
1 x 20W fluorescent	The maintenance of customer owned 1 x 20 watt fluorescent light fittings. <b><i>This lighting type is obsolete, with no new connections allowed.</i></b>



Lighting type	Definition
2 x 20W fluorescent	The maintenance of customer owned 2 x 20 watt fluorescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
1 x 40W fluorescent	The maintenance of customer owned 1 x 40 watt fluorescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
2 x 40W fluorescent	The maintenance of customer owned 2 x 40 watt fluorescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
3 x 40W fluorescent	The maintenance of customer owned 3 x 40 watt fluorescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
4 x 40W fluorescent	The maintenance of customer owned 4 x 40 watt fluorescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
4 x 20W fluorescent	The maintenance of customer owned 4 x 20 watt fluorescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
60W incandescent	The maintenance of customer owned 60 watt incandescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>
100W incandescent	The maintenance of customer owned 100 watt incandescent light fittings. <i>This lighting type is obsolete, with no new connections allowed.</i>

**Table 10 Ancillary service – fee based services**

Service	Description
<b>Energisation, de-energisation, re-energisation and special reads</b>	
Site visit – no appointment (energisation, de-energisation, re-energisation)	A visit to a customer's premises during field operational hours on a regular scheduled day for service delivery, where no appointment is required.
Site visit – no appointment (special reads)	A visit to a customer's premises during field 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 field operational hours where the requested date is on a day that is not a regular scheduled day for service delivery. Visits to customer premises during field operational hours where the visit is required on the same day as the retailer's request will also be treated as a Site visit – non-scheduled if the request is received by TasNetworks before 11:00am on that day.
Site visit – same day premium service	A visit to a customer's premises during field 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. Requests received after 3:00pm are treated as a Site visit – after hours.
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 field operational hours.
Site visit – credit action or site issues	A visit to a customer's premises during field 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 request by a retailer for the site to be de-energised without consultation with the customer.

Service	Description
Site visit – credit action pillar box/pole top	A visit to a customer's premises during field operational hours where no appointment is required on a regular scheduled day due for services delivery and visit is due to a credit issue to perform a de-energisation other than at the distribution point of attachment, switchboard isolation fuse or disconnect switch and the visit occurs.
Site visit – current transformer (CT) metering	Visit to a customer's premises during field operational hours on a scheduled service delivery day to de-energise or re-energise a site where current transformer metering exists.
Site visit – pillar box/pole top	A visit to customer's premises during field operational hours where no appointment is required to de-energise the site by means other than the point of attachment, switchboard isolation fuse or disconnect switch without consultation with the customer.
Site visit – pillar box/pole top wasted visit	A visit to a customer's premises during field operational hours to undertake a site visit – pillar box/pole top where the service could not be completed due to issues at the customer's premises.
Transfer of retailer	<p>The transfer of premises to a new retailer with an effective date as per the scheduled meter read date and where no site visit is required will not incur a fee.</p> <p>The transfer of premises to a new retailer that involves a site visit or requested for a date other than of the scheduled meter read date will incur a site visit fee.</p>
<b>Meter test</b>	
Meter test – single phase	A visit to a customer's premises during field 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 field operational hours to test a multi-phase meter at the customer's request.
Meter test – CT	A visit to a customer's premises during field 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 field 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 field 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 abolishment</b>	
Remove service and meters	The removal of meters and a service connection during field operational hours at a customer's request or prior to building demolition.
Supply abolishment – after hours	A visit to a customer's premises outside field 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>Truck tee-up</b>	
Tee-up/Appointment	A tee-up with a TasNetworks crew during field operational hours.
Tee-up/Appointment – after hours	A tee-up with overhead crew whilst undertaking work at customer's installation outside field operational hours.
Tee-up/Appointment – no truck – after hours	A tee-up with underground crew whilst undertaking work at customer's installation outside field operational hours.

Service	Description
Tee-up – wasted visit	A tee-up where the works could not be completed due to issues on site or where the TasNetworks crew was not required once on site.
<b>Miscellaneous services</b>	
Open turret	Visit to site to open turret or cabinet during field operational hours for electrical contractor installing or altering customer's mains.
Data download	Visit to a customer's premises during field operational hours to download data from a meter.
Alteration to unmetered supply	Visit to a customer's premises during field operational hours to add or remove a load on an existing unmetered supply site.
Meter relocation	Visit to a customer's premises during field operational hours to relocate an existing metering position to a new location where the point of attachment has not altered position.
Tiger tails – standard single/multi-phase	Initial visit and return to customer's premises during field operational hours to install/remove tiger tails. This includes attaching visual warning devices on the service wire and point of attachment and insulated rubber matting where no isolations have been made.
Tiger tails – scaffolding single phase	Initial visit and return to customer's premises during field operational hours to install/remove tiger tails. This includes attaching visual warning devices on the service wire and point of attachment and insulated rubber matting where the service is required to be disconnected and reconnected to facilitate the installation for a single phase connection.
Tiger tails – scaffolding multi-phase	Initial visit and return to customer's premises during field operational hours to install/remove tiger tails. This includes attaching visual warning devices on the service wire and point of attachment and insulated rubber matting where the service is required to be disconnected and reconnected to facilitate the installation for a multi-phase connection.
Administration	An administration charge levied when office work is required to be performed to complete a task at the customer's request that is not described elsewhere.
Tariff change	A change of tariff where no site visit is required, only administration actions.
Statutory right – access prevented	A charge to facilitate a standard warrant to access premises in order to disconnect where access is being prevented. This involves administrative actions only.
Emergency maintenance contestable meters	Visit to a customer's premises during field operational hours to rectify a fault on an external metering provider's equipment or where an outage has been caused by the metering provider and TasNetworks has to restore power to the customer's premises.
Emergency maintenance contestable meters – after hours	Visit to a customer's premises outside field operational hours to rectify a fault on an external metering provider's equipment or where an outage has been caused by the metering provider and TasNetworks has to restore power to the customer's premises.
Meter recovery and disposal	Visit to a customer's premises during field operational hours to remove and dispose of type 5 or 6 meters at the request of the metering provider.
Miscellaneous service	Visit to a customer's premises, at the request of their retailer, during field operational hours, to perform a service that is not described elsewhere.

Service	Description
Miscellaneous service – after hours	Visit to a customer's premises outside field operational hours to perform a service that is not described elsewhere.
Miscellaneous service – wasted visit	Visit to a customer's premises during field operational hours for the requested miscellaneous service where the service could not be completed due to issues on site or where the crew was not required once on site.
<b>Connection establishment charges</b>	
Creation of a NMI	A charge to facilitate the office administration associated with the creation of a NMI.
Overhead service, single span – single phase	A visit to a customer's premises during field operational hours for the installation of a single span of single phase overhead service wire (off a pole) and associated service fuse.
Overhead service, single span – multi-phase	A visit to a customer's premises during field operational hours for installation of a single span of multi-phase overhead service wire (off a pole) and associated service fuses.
Underground service in turret/cabinet– single phase	A visit to a customer's premises during field operational hours for installation of a single phase underground service connecting the customer's consumer mains to the fuse located in a TasNetworks turret or cabinet.
Underground service in turret/cabinet – multi-phase	A visit to a customer's premises during field operational hours for installation of a multi-phase underground service connecting the customer's consumer mains to the fuses located in a TasNetworks turret or cabinet.
Underground service with pole mounted fuse – single phase	A visit to a customer's premises during field operational hours for installation of a single phase underground service connecting the customer's consumer mains to a fuse located on a TasNetworks pole or private pole.
Underground service with pole mounted fuse – multi-phase	A visit to a customer's premises during field operational hours for installation of a multi-phase underground service connecting the customer's consumer mains to the fuses located on a TasNetworks pole or private pole.
Basic connection – after hours	A visit to a customer's premises outside field operational hours for the basic connection service
Connection establishment wasted visit	Site visit to provide basic connection service where the connection could not be completed due to issues at the site.
<b>Temporary disconnections charges</b>	
Disconnect/reconnect overhead service for fascia repairs – single phase	A visit to a customer's premises during field operational hours to disconnect and reconnect an existing TasNetworks single span of single phase overhead service wire whilst repairs are made to a fascia containing the customer's connection point for the overhead service wire.
Disconnect/reconnect overhead service for fascia repairs – multi-phase	A visit to a customer's premises during field operational hours to disconnect and reconnect an existing TasNetworks single span of multi-phase overhead service wire whilst repairs are made to a fascia containing the customer's connection point for the overhead service wire.
Temporary disconnect/reconnect – after hours	A visit to a customer's premises outside field operational hours to perform temporary disconnection.
Temporary disconnect/reconnect – wasted visit	A visit to a customer's premises during field operational hours for the requested temporary disconnection where the service could not be completed due to issues on site or where the crew was not required once on site.

Service	Description
<b>Basic connection alteration</b>	
Connection alteration – overhead single phase Includes: <ul style="list-style-type: none"> <li>• new consumer mains – overhead supply</li> <li>• new consumer mains – underground to pole</li> <li>• changeover new consumer mains to new private pole</li> <li>• changeover overhead service to new point of attachment</li> </ul>	A visit to a customer's premises during field operational hours for a single phase connection alteration following an alteration to the customer's installation.  The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.
Connection alteration – overhead multi-phase Includes: <ul style="list-style-type: none"> <li>• new consumer mains – overhead supply</li> <li>• new consumer mains – underground to pole</li> <li>• changeover new consumer mains to new private pole</li> <li>• changeover overhead service to new point of attachment</li> </ul>	A visit to a customer's premises during field operational hours for a multi-phase connection alteration following an alteration to the customer's installation.  The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.
Connection of new consumer mains to an existing installation – underground single phase to turret	A visit to a customer's premises during field operational hours for a connection of new single phase consumer mains to the existing TasNetworks distribution network following an alteration to the customer's installation.  The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.
Connection of new consumer mains to an existing installation – underground single phase to pole	A visit to a customer's premises during field operational hours for a connection of new single phase consumer mains to the existing TasNetworks distribution network following an alteration to the customer's installation.  The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.
Connection of new consumer mains to an existing installation – underground multi-phase to turret	A visit to a customer's premises during field operational hours for a connection of new multi-phase consumer mains to the existing TasNetworks distribution network following an alteration to the customer's installation.  The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.
Connection of new consumer mains to an existing installation – underground multi-phase to pole	A visit to a customer's premises during field operational hours for a connection of new multi-phase consumer mains to the existing TasNetworks distribution network following an alteration to the customer's installation.  The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.

Service	Description
Augment single phase overhead service to multi-phase supply	<p>A visit to a customer's premises during field operational hours for a disconnect and remove existing single span of single phase overhead service wire, and associated service fuse, and connect new single span of multi-phase overhead service wire and associated service fuses to the existing TasNetworks distribution network.</p> <p>The existing single phase overhead service wire must be removed and not reused.</p> <p>The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.</p> <p>This service requires a connection application.</p>
Augment multi-phase overhead service to single phase supply	<p>A visit to a customer's premises during field operational hours for a disconnect and remove existing single span of multi-phase overhead service wire, and associated service fuses, and connect new single span of single phase overhead service wire and associated service fuse to the existing TasNetworks distribution network.</p> <p>The existing multi-phase overhead service wire will be removed and not reused.</p> <p>The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.</p> <p>This service requires a connection application.</p>
Augment single phase overhead service to underground supply (turret)	<p>A visit to a customer's premises during field operational hours to disconnect and remove existing single span of single phase overhead service wire, and associated service fuse, and connect new single phase underground consumer mains to the fuse located in an existing TasNetworks turret or cabinet.</p> <p>The existing single phase overhead service wire will be removed and not reused.</p> <p>The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.</p> <p>Customers also requiring the installation of a TasNetworks turret or cabinet will be required to follow TasNetworks' negotiated connection process and will have their charges determined in accordance with that process.</p> <p>This service requires a connection application.</p>
Augment multi-phase overhead service to underground supply (turret)	<p>A visit to a customer's premises during operational hours to disconnect and remove existing single span of multi-phase overhead service wire, and associated service fuses, and connect new multi-phase underground consumer mains to the fuses located in an existing TasNetworks turret or cabinet.</p> <p>The existing multi-phase overhead service wire will be removed and not reused.</p> <p>The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.</p> <p>Customers also requiring the installation of an TasNetworks turret or cabinet will be required to follow TasNetworks' negotiated connection process and will have their charges determined in accordance with that process.</p> <p>This service requires a connection application.</p>

Service	Description
Augment single phase overhead service to underground supply (pole)	<p>A visit to a customer's premises during operational hours to disconnect and remove existing single span of single phase overhead service wire, and associated service fuse, and connect new single phase underground consumer mains to a fuse located on a TasNetworks pole.</p> <p>The existing single phase overhead service wire will be removed and not re-used.</p> <p>The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.</p> <p>This service requires a connection application.</p>
Augment multi-phase overhead service to underground supply (pole)	<p>A visit to a customer's premises during operational hours to disconnect and remove existing single span of multi-phase overhead service wire, and associated service fuses, and connect new multiphase underground consumer mains to the fuses located on a TasNetworks pole.</p> <p>The existing multi-phase overhead service wire will be removed and not reused.</p> <p>The customer's supply of electricity will be interrupted by TasNetworks while this basic connection service is being provided.</p> <p>This service requires a connection application.</p>
Basic connection alteration – after hours	A visit to a customer's premises outside operational hours to perform basic connection alteration.
Basic connection wasted visit	Site visit to provide basic connection service where the underground connection could not be completed due to issues at the site.

**Table 11 Ancillary service – quoted services**

Service
<b>Non-standard services</b>
Removal or relocation of TasNetworks' assets at the request of a customer or third party (for example, 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 overhead or underground subdivision for developers
Services that are provided through a non-standard process at a customer's request (for example, where more frequent meter reading is required)
Network safety services
Customer vegetation defect works
Premises connection services and extension
Connection application services (other than those provided as ancillary services – fee based services)
Design work for a new connection
Access permits, oversight and facilitation
Notice of arrangement
Network related property services
Planned interruption – customer requested
Provision of training to third parties for network related access



### 3.5 Assignment of customers to tariffs

Section 4 of our TSS 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).

The assignment processes are discussed in more detail in the following documents that have been submitted to the AER in conjunction with this Annual Distribution Pricing Proposal:

- Network Tariff Application and Price Guide 2021-22 (PP002);
- Metering Services Application and Price Guide 2021-22 (PP003);
- Public Lighting Application and Price Guide 2021-22 (PP004); and
- Ancillary Services – Fee Based Services Application and Price Guide 2021-22 (PP005).

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

In accordance with the AER's distribution determination, 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 reviews and changes 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.

### 3.7 Transaction costs

Clause 6.18.3(d)(2) of the Rules 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.

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.

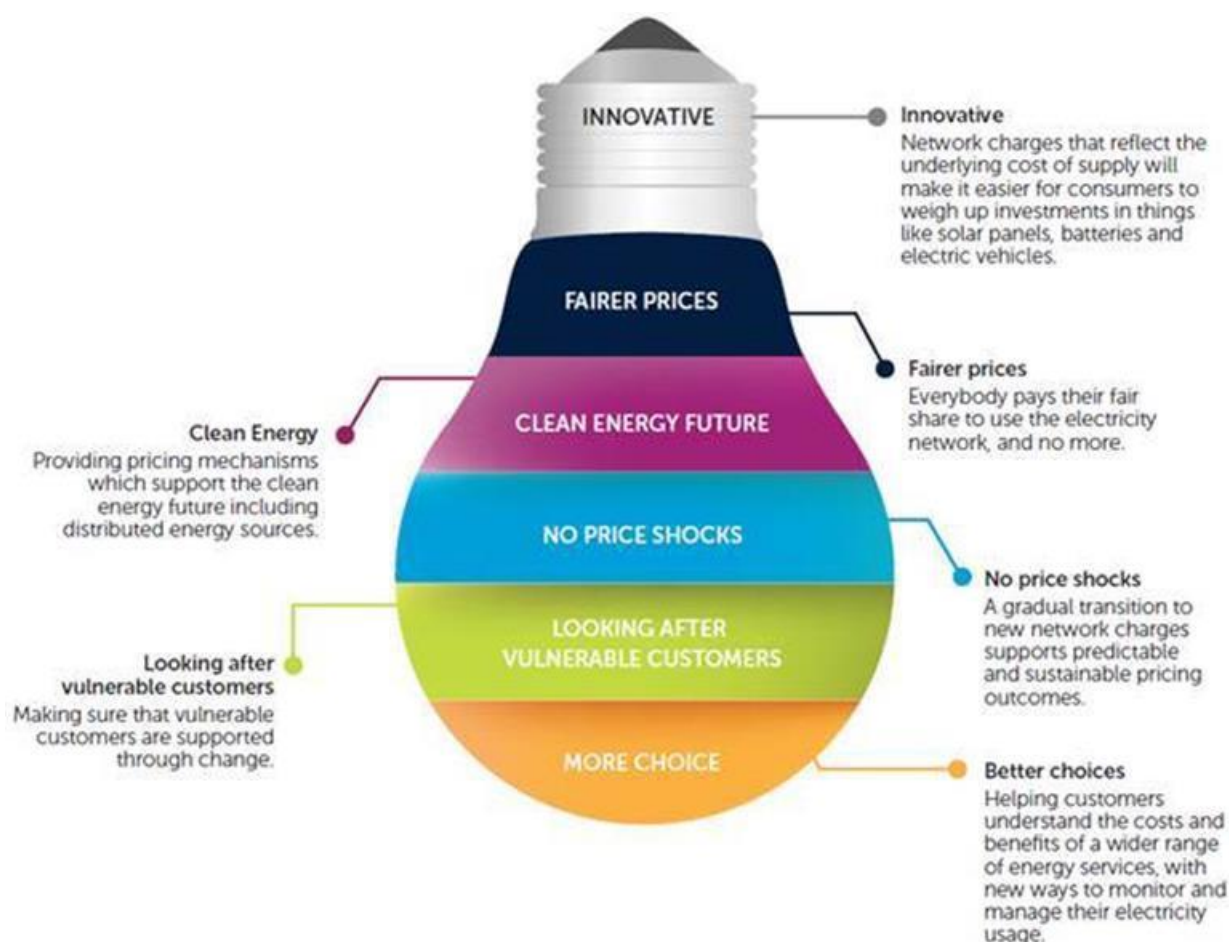
TasNetworks has not altered the structure or format of its network tariffs from those included in the Annual Distribution Pricing Proposal of the previous regulatory year.



## 4 Pricing principles

The following illustration highlights some of the key benefits of network tariff reform for our customers.

**Figure 1: Key benefits of network tariff reform**



### 4.1 Overview

TasNetworks' TSS sets out the checks and balances that we apply in our tariff setting processes which include:

- that overall forecast revenue, when summed across the network tariff class, is not more than the revenue allowance approved by the AER after allowing for the under or over-recoveries in prior year, adjustments for actual inflation and pass-through, such as the electrical safety levy;
- we have considered and managed annual bill impacts on our customers, and ensured the annual percentage changes in tariffs classes are within the side constraints approved by the AER;
- the revenue for each tariff class lies between the stand-alone and avoidable costs for that tariff class;
- the revenue for each tariff is at, or moving towards, recovery of the total efficient cost for that tariff; and
- where applicable, the peak demand component of the tariff is set at a level to recover the long run marginal cost for that tariff.

Clause 6.18.5 of the Rules sets out the principles that TasNetworks should adopt in preparing our tariffs. TasNetworks' pricing principles reflect the requirements of the Rules. Section 6 and Appendix C of our TSS set out how the rule requirements are addressed in our pricing principles.

## 4.2 Stand-alone and avoidable costs

Clause 6.18.5(e) of the Rules 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 do not specifically define avoidable and stand-alone costs or set out the methodology that should be applied to calculate these costs. TasNetworks has interpreted the upper and lower bounds for each network tariff class as follows:

- Stand-alone cost (upper bound) – we calculate this amount as the cost of servicing all customers under that tariff class, assuming no other tariff classes are being served from our distribution system. This is the cost that we would theoretically incur if we provided services solely to that tariff class.
- Avoidable cost (lower bound) – we calculate this amount as the total cost avoided if that tariff class was not served, while other classes remained served. This represents the dedicated costs incurred to provide services to that tariff class.

## 4.3 Stand-alone and avoidable costs – standard control services

Table 12 demonstrates that we expect the revenue in each network tariff class for standard control services to fall between the avoidable and stand-alone costs for each network tariff class.

**Table 12 Stand-alone and avoidable cost boundaries 2021-22**

Network tariff class	Avoidable cost (\$m)	Expected revenue (\$m)*	Stand-alone cost (\$m)
Individual Tariff Calculation	0.041	2.272	219.237
High Voltage	0.430	7.984	658.019
Irrigation	0.589	8.109	219.785
Large Low Voltage	1.261	14.032	658.849
Small Low Voltage	3.384	57.051	1,318.561
Residential	9.143	119.416	1,105.124
Uncontrolled Energy	-	36.556	219.196
Controlled Energy	-	1.317	438.392
Unmetered	0.041	0.995	219.237
Street Lighting	0.092	1.118	219.288

\* The expected revenue excludes side constraint adjustments.

## 4.4 Stand-alone and avoidable costs – 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.

## 4.5 Long run marginal cost

Clause 6.18.5(f) of the Rules requires that each tariff must be based on the long run marginal cost (**LRMC**) of providing the service to retail customers assigned to that class, with the method of calculating such costs, and the manner in which that method is applied to be determined having regard to:

1. the costs and benefits associated with calculating, implementing and applying the method;
2. the additional costs likely to be associated with meeting (incremental) demand from the customers that are assigned to the tariff at times of greatest utilisation for the relevant part of the distribution network; and
3. the location of customers that are assigned to that tariff and the extent to which costs vary between different locations.

Section C.2 of our TSS sets out our approach to estimating LRMC using the average incremental cost method.

Table 13 sets out the LRMC estimates using the methodology in our TSS.

**Table 13 Estimated long run marginal costs**

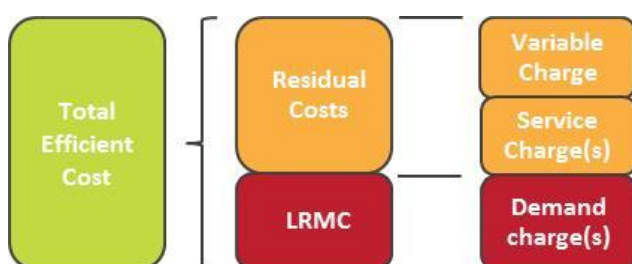
Network tariff class	Network tariff	Long run marginal cost (\$/kW)
		2021-22
Residential	Residential Low Voltage General (TAS31)	147
	Residential Time of Use Demand Tariff (TAS87)	147
	Residential Low Voltage PAYG Time of Use (TAS92)	147
	Residential Low Voltage Time of Use (TAS93)	147
	Residential low voltage Distributed Energy Resources (TAS97)	147
	Residential Low Voltage PAYG (TAS101)	147
Small Low Voltage	Business Low Voltage General (TAS22)	141
	Low Voltage Commercial Time of Use Demand (TAS88)	113
	Business Low Voltage Time of Use (TAS94)	113
	Business Low Voltage Distributed Energy Resources (TAS98)	113
Large Low Voltage	Business Low Voltage kVA Demand (TAS82)	84
	Large Low Voltage Commercial Time of Use Demand (TAS89)	84
Uncontrolled Energy	Uncontrolled Low Voltage Heating (TAS41)	101

Network tariff class	Network tariff	Long run marginal cost (\$/kW)
		2021-22
Controlled Energy	Controlled Low Voltage Energy – Off Peak with afternoon boost (TAS61)	111
	Controlled Low Voltage Energy – Night period only (TAS63)	111
Irrigation	Irrigation Low Voltage Time of Use (TAS75)	116
High Voltage	Business High Voltage kVA Specified Demand (TASSDM)	92
	Business High Voltage kVA Specified Demand >2MVA (TAS15)	108
Individual Tariff Calculation	Individual Tariff Calculation (TASCUS)	108
Unmetered	Unmetered Supply Low Voltage General (TASUMS)	144
Street Lighting	Unmetered Supply Low Voltage Public Lighting (TASUMSSL)	144

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. Our 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;
- time of use demand charge can provide effective pricing signal for short term peaks in demand in peak and off-peak periods;
- 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.



#### **4.6 Total efficient cost**

Clause 6.18.5(g) of the Rules requires that each tariff must reflect the Distribution Network Service Provider's total efficient cost of serving the retail customers that are assigned to that tariff. Our Total Efficient Costs (**TEC**) methodology is included as an attachment to this pricing proposal (PP001). Using this methodology we have estimated the revenue that is needed to be recovered from each tariff class by determining the proportion of our revenue allowance that is attributable to each network tariff class and each network tariff.

Network tariffs have been set to transition to the TEC levels over the medium to longer term. The transitional path has been selected to reduce the potential for price shocks to customers.

#### **4.7 Impact on retail customers**

Clause 6.18.5(h) of the Rules require us to consider the impact on retail customers. Our TSS outlines the network tariff reforms we are implementing. Our reforms and impacts on customers are discussed in the TSS in Section 4 and Appendix C, and further in section 7 (for standard control services) and section 9 (for alternative control services) of this document.



## 5 Standard control services – pricing proposal requirements

‘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.

### 5.1 Total revenue allowance

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 bills.

### 5.2 Setting the 2021-22 network tariffs

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

#### 5.2.1 Total allowable revenue and revenue cap

The 2021-22 network tariffs and charging parameters set out in this Annual Distribution Pricing Proposal are based on the Total Allowable Revenue (**TAR**) set by the AER in its distribution determination for TasNetworks, plus any AER approved adjustments from prior periods (the **Revenue Cap**).

TasNetworks’ TAR is calculated in accordance with the following formula, which was prescribed by the AER in its distribution determination for TasNetworks:

**Table 14 Revenue cap formula**

Revenue cap formula		
1	$TAR_t \geq \sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_t^{ij}$	$i = 1, \dots, n$ and $j = 1, \dots, m$ and $t = 1, 2, \dots, 5$
2	$TAR_t = AAR_t + I_t + B_t + C_t$	$t = 1, 2, \dots, 5$
3	$AAR_t = AR_t x (1 + S_t)$	$t = 1$
4	$AAR_t = AAR_{t-1} x (1 + \Delta CPI_t)(1 - X_t)(1 + S_t)$	$t = 2, \dots, 5$

Where:

**TAR<sub>t</sub>** is the total allowable revenue in year t.

**p<sub>t</sub><sup>ij</sup>** is the price of component ‘j’ of tariff ‘i’ in year t.

**q<sub>t</sub><sup>ij</sup>** is the forecast quantity of component ‘j’ of tariff ‘i’ in year t.

**AR<sub>t</sub>** is the annual smoothed revenue requirement in the Post Tax Revenue Model (**PTRM**) for year t.

**AAR<sub>t</sub>** is the adjusted annual smoothed revenue requirement for year t.

**I<sub>t</sub>** is the sum of demand management incentive scheme and innovation allowance adjustments in year t relating to:

- the final carryover amount from the application of the demand management incentive scheme (**DMIA**) from the 2017–19 distribution determination.
- approved demand management incentive scheme amounts for year t-2.

$B_t$  is the sum of the following annual adjustment factors for year t:

- true-up for any under or over recovery of actual revenue collected through DUoS charges calculated using the following method:

**Table 15 Under or Over Recovery of DUoS Charges**

Under or Over Recovery of DUoS Charge
$DUoS \text{ Under and Overs True} - Up_t = - (Opening \text{ Balance}_t) (1 + WACC_t)^{0.5}$

Where:

$DUoS \text{ Under and Overs True} - Up_t$  is the true-up for the balance of the DUoS unders and overs account in year t.

Opening Balance<sub>t</sub> is the opening balance of the DUoS unders and overs account in year t as calculated by the method in appendix A of the AER's distribution determination for TasNetworks.

WACC<sub>t</sub> is the approved weighted average cost of capital used in regulatory year t in the DUoS under and overs account in Appendix A of the AER's distribution determination for TasNetworks.

- any under or over recovery of the Electrical Safety Inspection Service charge, calculated using the following method:

**Table 16 Electrical Safety Inspection Service Charge**

Electrical Safety Inspection Service Charge
$ESISC_t = (ESISC_{t-1} - ESISCe_{t-1}) \times (1 + \text{Nominal vanilla } WACC_t)$

where:

$ESISC_{t-1}$  is the actual Electrical Safety Inspection Service charge for year t-1.

$ESISCe_{t-1}$  is the estimated Electrical Safety Inspection Service charge for year t-1 as determined by the AER.

**Nominal vanilla WACC<sub>t</sub>** is the approved nominal weighted average cost of capital (WACC) for the relevant regulatory year using the following method:

**Table 17 Nominal vanilla WACC**

Nominal vanilla WACC <sub>t</sub>
$\text{Nominal vanilla } WACC_t = ((1 + \text{real vanilla } WACC_t) \times (1 + \Delta CPI_t)) - 1$

where the *real vanilla WACC<sub>t</sub>* is as set out in our final decision PTRM and updated annually.

- any under or over recovery of the National Energy Market charge, calculated used the following method:

**Table 18 National Energy Market Charge**

National Energy Market Charge
$NEMC_t = (NEMCa_{t-1} - NEMCe_{t-1}) \times (1 + \text{Nominal vanilla } WACC_t)$

where:

$NEMCa_{t-1}$  is the actual National Energy Market charge for year t-1.

$NEMCe_{t-1}$  is the estimated National Energy Market charge for year t-1 as determined by the AER.





**Nominal vanilla WACC<sub>t</sub>** is the approved nominal weighted average cost of capital (WACC) for the relevant regulatory year as calculated above.

**C<sub>t</sub>** is the sum of approved cost pass through amounts (positive or negative) with respect to regulatory year t, as determined by the AER. It will also include any end-of-period adjustments in year t.

**ΔCPI<sub>t</sub>** is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities from the December quarter in year t-2 to the December quarter in year t-1.

**X<sub>t</sub>** is the X factor for each year of the 2019-24 regulatory control period as determined by the AER in the PTRM, and annually revised by the AER.

**S<sub>t</sub>** is the s-factor for regulatory year t. It will also incorporate any adjustments required due to the application of the service target performance incentive scheme (STPIS) in the 2019–24 regulatory control period consistent with the AER's STPIS.

Table 19 provides details of the Revenue Cap calculation that TasNetworks has utilised in the preparation of its network tariffs.

**Table 19 Total allowable revenue**

Criteria	2021-22 value (\$m)
AAR <sub>t-1</sub>	245.407
ΔCPI <sub>t</sub>	2.112
X <sub>t</sub>	2.769
S <sub>t</sub>	4.007
$AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + S_t)$	254.296
I <sub>t</sub>	0.000
B <sub>t</sub>	(5.724)
C <sub>t</sub>	0.000
$TAR_t = AAR_t + I_t + B_t + C_t$	248.573

### 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 TEC model. This modelling process is explained in the paper 'Total Efficient Cost Methodology 2021-22' provided as an attachment to this Annual Distribution Pricing Proposal (PP001).

### 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.



TasNetworks has been refining its consumption and demand modelling over the past 12 months. This has included comparing TasNetworks' outputs against the forecasts created by the Australian Energy Market Operator (AEMO), which are used in other parts of the business and across the National Electricity Market for the purposes of forecast network utilisation.

A key challenge in the current forecasting iteration was to determine the impact of COVID-19 on electricity consumption and demand. Analysis of recent billing data showed that residential consumption is still elevated compared to pre-COVID-19 levels while some low voltage business consumption remains subdued. Key findings are discussed in more detail below.

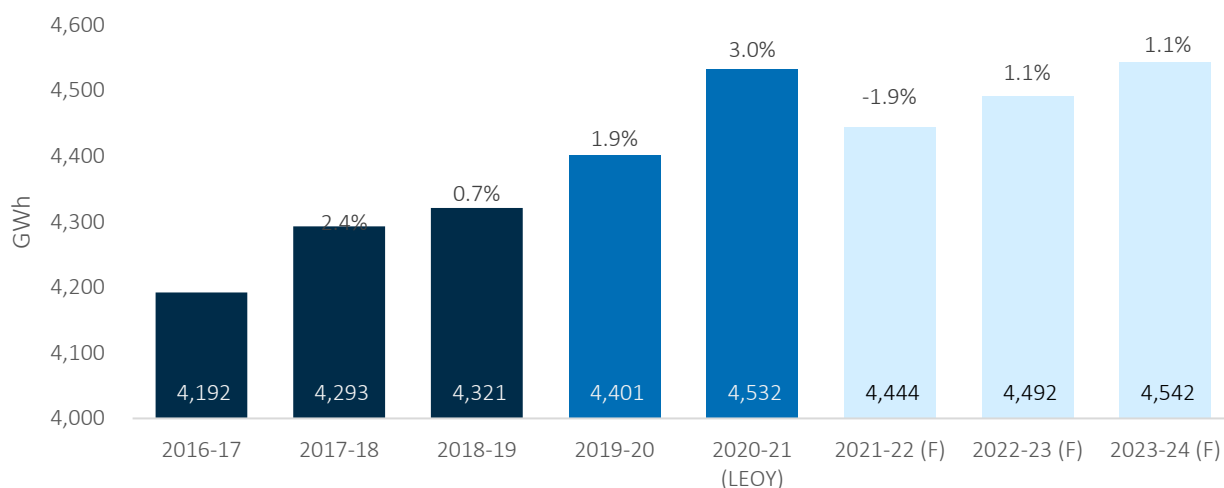
### 5.2.3.1 Energy consumption

The forecasts for this 2021-22 Annual Distribution Pricing Proposal have been impacted by several factors. In particular, the 2020-21 likely end of year (LEOY) estimate was informed by:

- higher than forecast actual consumption for 2019-20. The actual consumption for 2019-20 was 0.5 per cent higher than the LEOY estimate;
- the temporary cessation of manual meter readings in late 2019-20 resulted in some of the incremental (COVID-related) residential consumption from the final quarter of 2019-20 being recorded during the first quarter of 2020-21; and<sup>10</sup>
- higher than expected consumption among residential customers has been observed as a result of the impact of people working from home.

These factors have resulted in the 2020-21 LEOY forecast being about 3.5 per cent higher than originally expected and 3.0 per cent higher than 2019-20 consumption (see Figure 2). For 2021-22, it is assumed that residential consumption will decline as a result of some of the population returning to work; with overall consumption for 2021-22 expected to be lower than the LEOY for 2020-21.

**Figure 2: Total annual consumption forecast**



However, it is anticipated that annual consumption for residential customers will remain slightly elevated as a result of some people continuing to work from home, and that residential customers' consumption will return to pre-COVID growth rates from 2022-23.

<sup>10</sup> Due to the COVID-19 lockdowns, TasNetworks did not undertake any manual meter reads for the period March 2020 – June 2020. As is the practice when a meter cannot be read, estimated meter reads based on prior year consumption were used to replace missed readings. Manual meter readings restarted early in 2020-21 and revealed higher than average consumption among residential customers, resulting in increased aggregate consumption.

It has been observed through the consumption data that low voltage business customers were more impacted by the pandemic than high voltage customers. However low voltage business customers are forecast to continue their gradual recovery but we note that some sectors (particularly hospitality and higher education) continue to experience some challenges.

#### **5.2.3.2 Demand**

The demand forecasts prepared by TasNetworks as part of its Annual Planning Report (**APR**) are not the same as the forecasts used by TasNetworks when developing network tariffs. This is because the APR 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.

Demand<sup>11</sup> is forecast to grow over the coming year, with lower than normal growth proposed for the 2020-21 LEOY outcome. This slowed growth is a reflection on the impact of COVID-19 being more strongly felt among low voltage business customers, offset by increased growth for large high voltage customers – who seem to be less affected by the pandemic.

#### **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 aggregate number of 'customers' used to develop TasNetworks' pricing will be greater than the number of customers that are actually connected to the distribution network.

These forecasts have more explicit assumptions on how many new customers are projected to connect, and how many customers are projected to change tariffs. Forecasts of new customer connections were derived using the outputs of the customer connections forecasting model, which predicts the number of new residential and commercial connections using econometric modelling and the historical trend of billed days.

The total annual billed days is forecast to increase slightly in 2021-22, consistent with the historical trend, which reflects small increases in both residential and low voltage business customers.

### **5.3 DUoS unders and overs**

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

Attachment PP007 to this Annual Distribution Pricing Proposal 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.

### **5.4 Side constraints**

Clause 6.18.6(b) of the Rules requires that, within a given regulatory control period, 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.

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<sup>11</sup> Billed demand forecasts are only for tariffs with demand charges. These forecasts do not capture residential customers and can be impacted by customers changing from consumption to demand tariffs.

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

$$\frac{(\sum_{i=1}^n \sum_{j=1}^m d_t^{ij} q_t^{ij})}{(\sum_{i=1}^n \sum_{j=1}^m d_{t-1}^{ij} q_t^{ij})} \leq (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + 2\%) \times (1 + S_t) + I'_t + B'_t + C'_t$$

where:

$d_t^{ij}$  is the proposed price for component 'j' of tariff 'i' for year t.

$d_{t-1}^{ij}$  is the price charged for component 'j' of tariff 'i' year t-1.

$q_t^{ij}$  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 CPI All Groups, Weighted Average of Eight Capital Cities from the December quarter in year t-2 to the December quarter in year t-1.

$X_t$  is the X factor for each year of the 2019-24 regulatory control period as determined in the PTRM and annually revised for the return on debt update. If  $X > 0$ , then X will be set equal to zero for the purposes of the side constraint formula.

$S_t$  is the S-factor for regulatory year t. It will also incorporate any adjustments required due to the application of the STPIS in the 2019-24 regulatory control period consistent with the AER's STPIS.

$I'_t$  is the annual percentage change from the sum of demand management incentive schemes and allowance adjustments in year t relating to:

- the final carryover amount from the application of the old demand management innovation allowance (DMIA/DMIAM) from the 2017-19 distribution determination. This amount was incorporated in the allowed revenue in the 2020-21 pricing proposal.
- approved demand management incentive scheme amounts from year t-2.

$B'_t$  is the annual percentage change from the sum of the following annual adjustment factors for year t:

- True-up for any under or over recovery of actual revenue collected through DUoS charges calculated using the method in Table 15.
- Electrical Safety Inspection Service charge, calculated using the method in Table 16.
- Any under or over recovery of the National Energy Market charge, calculated using the method in Table 18.

$C'_t$  is the annual percentage change from the sum of approved cost pass through amount (positive or negative) with respect to regulatory year t, as determined by the AER.

With the exception of the CPI, X-factor and S-factor, the percentage for each of the other factors above can be calculated by dividing the incremental revenues (as used in the total annual revenue formula) for each factor by the expected revenues for regulatory year t-1 (based on the prices in year t-1 multiplied by the forecast quantities for year t).

#### 5.4.1 Weighted average revenue

Clause 6.18.2(b)(4) of the Rules require TasNetworks to 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.

Table 20 sets out the expected weighted average of revenue for 2020-21 and 2021-22.

**Table 20 Weighted average revenue**

Tariff class	Weighted average revenue 2020-21 (\$m)	Anticipated revenue 2021-22 (\$m)	Change (%)	Change allowed by side constraint (%)
Residential	114.223	119.416	4.55%	7.88%
Small Low Voltage	53.289	57.051	7.06%	7.88%
Large Low Voltage	13.023	14.032	7.75%	7.88%
Uncontrolled Energy	33.889	36.556	7.87%	7.88%
Controlled Energy	1.270	1.317	3.77%	7.88%
Irrigation	7.552	8.109	7.38%	7.88%
High Voltage	7.446	7.984	7.23%	7.88%
ITC	2.215	2.272	2.57%	7.88%
Unmetered	0.953	0.995	4.39%	7.88%
Street Lighting	1.038	1.118	7.79%	7.88%

## 5.5 2021-22 pricing and indicative prices provided in the TSS

Our TSS outlines the assumptions we used to forecast indicative network use of system (NUoS) prices. These assumptions have changed from our TSS to our actual proposed 2021-22 NUoS prices. The differences between our indicative 2021-22 NUoS prices and our pricing proposal prices are predominately driven by changes to total allowable revenue (as identified in Table 21) including:

- a slightly higher maximum allowed revenue;
- much lower than expected inflation;
- reduced cost of debt;
- confirmation of a positive s-factor outcome;
- previous years over-recoveries (for both DUoS and TUoS); and
- significantly lower than expected TUoS charges for 2021-22.

**Table 21 Changes in assumptions for indicative pricing to pricing proposal**

Assumptions	Pricing Proposal (\$m)	TSS (\$m)	Variance (\$m)
2021-22 Adjusted Annual Smoothed Revenue	245.407	244.925	0.482
$\Delta CPI_t$	2.112	5.939	(3.827)
$X_t$	2.769	4.014	(1.245)
S-Factor	4.007	0.000	4.007
2021-22 Adjusted Annual Smoothed Revenue	254.295	254.878	(0.583)
I-Factor	0.000	0.000	0.000
B-Factor	(5.724)	0.000	(5.724)
C-Factor	0.000	0.000	0.000
Total Allowable Revenue	248.571	254.878	(6.307)
Charges paid to TNSP	69.686	75.418	(5.732)

Assumptions	Pricing Proposal (\$m)	TSS (\$m)	Variance (\$m)
TUOS Unders and overs amount	(3.038)	0.000	(3.038)

In addition, refinements to our demand and consumption forecasts for 2021-22 have flowed through to NUoS prices.

Since 2017-18 we have offered three demand-based time of use tariffs designed for residential, small business and large business customers (TAS87, TAS88 and TAS89 respectively). During 2018-19 we began offering two more demand-based time of use tariffs designed for residential and small business customers that deploy distributed energy (**DER**) technologies, such as solar panels and battery storage (TAS97 and TAS98 respectively). Each of the demand-based time of use tariffs are opt-in only.

Initially, both of the DER tariffs (TAS97 and TAS98) were offered on a discounted basis (50 per cent reduction to the off-peak rate), to provide economically-justified incentives to encourage take-up of the new tariffs on an opt-in basis. In 2019-20 we expanded the discount to the original time of use demand based tariffs for residential and small business customers (TAS87 and TAS88).

With the goal of cost reflectivity in mind, the discounts will be offered on a transitional basis only and will decline progressively over the course of the 2019-24 regulatory control period, to the point that no discount will be offered from 1 July 2024. In 2021-22, we are applying a 30 per cent reduction to the off-peak rate arrangements to the time of use demand based tariffs for residential and small business customers to further incentivise their uptake as well.

We are funding the discount cost directly (estimated to be \$0.659 million in 2021-22), so the cost of the discount will not be passed onto other customers.

Further information on these tariffs is included in section 5.7.

## 5.6 National Electricity Rules and applicable regulatory instruments

Clause 6.18.5(j) of the Rules requires that a tariff must comply with the Rules and all applicable regulatory instruments. Our existing tariffs comply with this principle.

## 5.7 Sub-threshold tariffs

Clause 6.18.1C(a) of the Rules require that no later than four months before the start of a regulatory year, a DNSP may notify the AER, affected retailers and affected retail customers of a new proposed tariff (a relevant tariff) that is determined otherwise than in accordance with the DNSP's current TSS.

There are no new proposed tariffs for this regulatory year.

## 6 Transmission charges

### 6.1 TUoS expenses

#### 6.1.1 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 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.

#### 6.1.2 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.

#### 6.1.3 Avoided TUoS

TasNetworks must pay avoided Customer TUoS charges (**avoided TUoS**) to embedded generators who have generated electricity and transmitted this energy into TasNetworks' distribution network, thereby reducing TasNetworks' need to import energy from the transmission network and avoiding some TUoS charges.<sup>12</sup>

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 must:<sup>13</sup>

- (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 payments have, therefore, been assigned to all tariff classes.

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<sup>12</sup> As required under Clause 5.3AA(h) of the Rules.

<sup>13</sup> As required under Clause 5.3AA(i) of the Rules.

## **6.2 TUoS receipts**

## **6.3 Tariff recovery of TUoS**

A description of how TUoS is recovered through TasNetworks' standard control network tariffs is provided in section 3.3.2.

## **6.4 Designated pricing proposal charges unders and overs account**

Clause 6.18.2(b)(6) of the Rules requires us to provide a designated pricing proposal charges (**DPPC**) unders and overs account for the most recently completed regulatory year. Attachment PP007 to this Annual Distribution Pricing Proposal outlines the unders and overs calculation and provides separate identification of any under or over-recovery relating to prior years included in the current year revenue.



## 7 Standard control services – customer price impacts

### 7.1 Price movements in 2021-22

TasNetworks' tariff 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 22 provides the difference in the charges between 2020-21 and 2021-22 for each network tariff component.

**Table 22 Network tariff classes – percentage price change**

Network tariff class	Network tariff	Network tariff component	Charge 2020-21 (cents)	Charge 2021-22 (cents)	Change (%)
Residential	TAS31	Service charge	51.153	52.688	3.0%
		Energy charge	8.201	8.392	2.3%
	TAS87	Service charge	56.902	58.609	3.0%
		Peak demand	25.056	25.601	2.2%
		Off-peak demand	5.006	5.967	19.2%
	TAS93 / TAS92	Service charge	55.923	57.601	3.0%
		Peak energy	14.564	14.807	1.7%
		Off-peak energy	2.769	2.887	4.3%
	TAS97	Service charge	56.902	58.609	3.0%
		Peak demand	25.056	25.601	2.2%
		Off-peak demand	5.006	5.967	19.2%
	TAS101	Service charge	51.571	53.118	3.0%
		Energy charge	7.108	7.302	2.7%
Small Low Voltage	TAS22	Service charge	50.862	52.388	3.0%
		Energy charge	8.861	9.080	2.5%
	TAS88	Service charge	73.994	76.214	3.0%
		Peak demand	55.013	56.702	3.1%
		Off-peak demand	10.992	13.218	20.3%
	TAS94	Service charge	66.902	68.909	3.0%
		Peak energy	9.607	10.055	4.7%
		Shoulder energy	5.765	6.034	4.7%
		Off-peak energy	1.442	1.508	4.6%
	TAS98	Service charge	73.994	76.214	3.0%
		Peak demand	55.013	56.702	3.1%
		Off-peak demand	10.992	13.218	20.3%



Network tariff class	Network tariff	Network tariff component	Charge 2020-21 (cents)	Charge 2021-22 (cents)	Change (%)
Large Low Voltage	TAS82	Service charge	331.981	346.920	4.5%
		Energy charge	2.243	2.326	3.7%
		Demand charge	31.412	32.518	3.5%
	TAS89	Service charge	467.668	488.713	4.5%
		Peak demand	41.620	43.154	3.7%
		Off-peak demand	13.858	14.370	3.7%
Uncontrolled Energy	TAS41	Service charge	6.321	6.511	3.0%
		Energy charge	5.389	5.522	2.5%
Controlled Energy	TAS61	Service charge	12.044	12.405	3.0%
		Energy charge	1.532	1.543	0.7%
	TAS63	Service charge	12.044	12.405	3.0%
		Energy charge	1.324	1.335	0.8%
Irrigation	TAS75	Service charge	244.823	252.168	3.0%
		Peak energy	9.313	9.897	6.3%
		Shoulder energy	5.589	5.941	6.3%
		Off-peak energy	1.396	1.484	6.3%
High Voltage	TAS15	Service charge	2,751.500	2,875.300	4.5%
		Peak energy	0.894	0.947	5.9%
		Shoulder energy	0.537	0.568	5.8%
		Off-peak energy	0.134	0.142	6.0%
		Specified demand	8.563	9.255	8.1%
		Excess demand	42.814	46.275	8.1%
		Connection specified demand	0.311	0.337	8.4%
		Excess connection specified demand	1.556	1.682	8.1%
	TASSDM	Service charge	335.188	350.271	4.5%
		Peak energy	1.168	1.138	-2.6%
		Shoulder energy	0.701	0.683	-2.6%
		Off-peak energy	0.175	0.170	-2.9%
		Specified demand	17.957	18.958	5.6%
		Excess demand	179.577	189.591	5.6%
Unmetered	TASUMS	Service charge	50.862	52.388	3.0%
		Energy charge	10.419	10.601	1.7%
Street Lighting	TASUMSSL	Demand charge	0.103	0.107	3.9%

Table 23 provides the difference in the charges between 2020-21 and 2021-22 for each ITC<sup>14</sup> network tariff component.

**Table 23 ITC tariffs – percentage price change**

Network tariff class	NMI / Tariff	Network tariff component	DUoS charge 2020-21 (cents)	DUoS charge 2021-22 (cents)	Change (%)
Individual Tariff Calculation	Individual Tariff Calculation	Service charge			
		Specified connection			
		Excess connection			
	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified connection			
		Excess connection			
		Specified demand			
		Excess demand			
	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified connection			
		Excess connection			
		Specified demand			
		Excess demand			
	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified connection			
		Excess connection			
		Specified demand			
		Excess demand			
	Individual Tariff Calculation	Service charge			
		Energy charge			
		Specified connection			
		Excess connection			
		Specified demand			
		Excess demand			

<sup>14</sup> ITC network tariff rates are confidential.

Network tariff class	NMI / Tariff	Network tariff component	DUoS charge 2020-21 (cents)	DUoS charge 2021-22 (cents)	Change (%)
	Individual Tariff Calculation	Service charge			
		Peak energy			
		Shoulder energy			
		Off-peak energy			
		Specified connection			
		Excess connection			
		Specified demand			
		Excess demand			
	Individual Tariff Calculation	Service charge			
		Peak energy			
		Shoulder energy			
		Off-peak energy			
		Specified connection			
		Excess connection			
		Specified demand			
		Excess demand			
	Individual Tariff Calculation	Service charge			
		Peak energy			
		Shoulder energy			
		Off-peak energy			
		Specified connection			
		Excess connection			
		Specified demand			
		Excess demand			
High Voltage	TAS15	Service charge	2,751.500	2,875.300	4.5%
		Peak energy	0.894	0.947	5.9%
		Shoulder energy	0.537	0.568	5.8%
		Off-peak energy	0.134	0.142	6.0%
		Specified demand	8.563	9.255	8.1%
		Excess demand	42.814	46.275	8.1%
		Specified connection	0.311	0.337	8.4%
		Excess connection	1.556	1.682	8.1%

Table 24 provides the difference in the charges between 2020-21 and 2021-22 for each locational TUoS charge.

**Table 24 Locational TUoS charges – percentage price change**

Transmission node description	Transmission node identifier	TUoS charge 2020-21 (c/kVA/day)	TUoS charge 2021-22 (c/kVA/day)	Change (%)
Arthurs Lake	TAL2	17.267	20.193	16.9%
Avoca	TAV2	15.798	12.280	-22.3%
Burnie	TBU3	13.643	12.954	-5.0%
Bridgewater	TBW2	15.223	14.101	-7.4%
Derwent Bridge	TDB2	123.839	150.142	21.2%
Derby	TDE2	34.153	29.700	-13.0%
Devonport	TDP2	16.289	14.987	-8.0%
Emu Bay	TEB2	19.152	14.549	-24.0%
Electrona	TEL2	21.215	18.443	-13.1%
Huon River	THR2	77.626	67.287	-13.3%
Kermandie	TKE2	30.039	24.706	-17.8%
Kingston 11kV	TKI2	16.782	15.365	-8.4%
Kingston 33kV	TKI3	19.786	18.357	-7.2%
Knights Road	TKR2	20.408	19.249	-5.7%
Meadowbank	TMB2	13.177	14.526	10.2%
New Norfolk	TNN2	16.972	15.782	-7.0%
Newton	TNT2	37.489	34.769	-7.3%
Port Latta	TPL2	17.572	17.353	-1.2%
Palmerston	TPM3	17.596	16.757	-4.8%
Queenstown	TQT2	26.465	24.992	-5.6%
Railton	TRA2	15.023	14.443	-3.9%
Rosebery	TRB2	11.148	13.751	23.4%
Scottsdale	TSD2	32.946	30.821	-6.4%
St Marys	TSM2	22.216	22.497	1.3%
Sorell	TSO2	19.409	17.635	-9.1%
Savage River	TSR2	16.430	15.695	-4.5%
Smithton	TST2	20.769	19.216	-7.5%
Triabunna	TTB2	28.152	28.136	-0.1%
Tungatinah	TTU2	59.090	50.857	-13.9%
Ulverstone	TUL2	13.717	12.679	-7.6%
Waddamana	TWA2	24.863	22.955	-7.7%
Wesley Vale	TWV2	16.261	14.136	-13.1%
Hobart Virtual	TVN1	15.445	14.162	-8.3%
Tamar Virtual	TVN2	13.127	12.292	-6.4%

## 8 Standard control services – tariff variations

Clause 6.18.2(b)(5) of the Rules requires that TasNetworks' Annual Distribution Pricing Proposal sets 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.

### 8.1 Adjustments to tariffs within a regulatory year

#### 8.1.1 ITC network 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 2021-22. In this case, TasNetworks would recalculate the charging parameters of the tariff.

New network tariffs will also be created for any new ITC customer that may connect during 2021-22, in line with the methodology set out in this Annual Distribution Pricing Proposal.

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

Section 2 of our TSS outlines our tariff strategy for the 2019-24 regulatory period, with Table 25 outlining the key tariff reforms we are continuing to implement by:

**Table 25 Networks tariff reforms**

Reform
Continuing to progressively reduce cross subsidies between customers and between tariffs.
Embedding the two new demand based time of use ( <b>ToU</b> ) tariffs introduced in TasNetworks' 2018-19 Annual Pricing Proposal (with a start date of 1 December 2018) to give households and small businesses who invest in distributed energy resources ( <b>DER</b> ) new opportunities to control their electricity costs.
Assigning new residential customers, residential customers who change their connection and residential customers whose existing accumulation meter is replaced with an advanced meter to a ToU consumption based network tariff on an opt-out basis.
Offering 'introductory' discounts for our demand based time of use tariffs for both residential and small business customers, to encourage customer take up of the new tariffs.

Table 26 shows the percentage change of the average DUoS, TUoS and overall NUoS price for each tariff class for 2020-21 to 2021-22.

**Table 26 Weighted average price movement by Tariff Class**

Tariff Class	DUoS price movement (%)	TUoS price movement (%)	NUoS price movement (%)
Residential	4.55%	-7.56%	2.59%
Small Low Voltage	7.06%	-7.50%	3.97%
Large Low Voltage	7.75%	-3.87%	3.68%
Uncontrolled Energy	7.87%	-7.78%	2.51%
Controlled Energy	3.77%	-7.64%	2.07%
Irrigation	7.38%	-6.82%	4.91%
High Voltage	7.23%	-3.24%	3.23%

Tariff Class	DUoS price movement (%)	TUoS price movement (%)	NUoS price movement (%)
ITC	2.40%	4.50%	3.59%
Unmetered	4.39%	-7.71%	2.14%
Street Lighting	7.79%	-7.69%	3.88%

## 8.2 Variations between the 2020-21 and 2021-22 regulatory years

TasNetworks' total revenue to be recovered for standard control services has risen by approximately 3.5 per cent between 2020-21 and 2021-22, while the consumption of electricity by customers of those services is expected to decline by 1.9 per cent, reversing part of the recent strong (COVID-19 related) growth.

TasNetworks has adopted the general strategies set out in Table 25 and our approach to setting network tariffs for the 2019-24 regulatory control period is explained in further detail in our TSS.

### 8.2.1 Reallocation between fixed and variable costs

In line with our tariff strategy, fixed service costs will increase as a proportion of total charges; from 21.9 per cent of total charges in 2020-21 to 22.3 per cent in 2021-22. Aggregate revenue from fixed charges is expected to rise by 4.1 per cent<sup>15</sup> in 2021-22, faster than the 3.5 per cent increase in total charges. This means that the variable components can increase at a slower rate, on average (subject to the requirement to reduce cross subsidies).

### 8.2.2 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 TasNetworks' Revenue Cap.

<sup>15</sup> This is a weighted average of the 3.0 per cent rise in service charges for residential and small business tariffs, and the 4.5 per cent rise for large business tariffs.

## 9 Alternative control services

‘Alternative control’ denotes a form of pricing control used by the AER 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 for TasNetworks 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;
- ancillary service – fee based services; and
- ancillary service – quoted services.

### 9.1 Overview of alternative control services

#### 9.1.1 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 7 in Section 3.4 above.

#### 9.1.2 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 (**public lighting**); and
- the maintenance of public lighting assets owned by customers (**contract lighting**).

These services include the provision, construction and maintenance of new/emerging lighting technology services.

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 an ancillary service – quoted service; and
- the installation of contract lights, which will be provided on a quoted service basis and is, therefore, categorised as an ancillary service – quoted 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.

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

These lighting types are shown in Table 8 and Table 9 of Section 3.4 above.

It is important to note that the total charge for the provision of public lighting services comprise 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 public lighting asset are alternative control services. Only the alternative control service component of public lighting tariffs is discussed in this section.

The 2021-22 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 for TasNetworks.

### 9.1.3 Ancillary service – fee based services

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 upon request 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 testing;
- supply abolishment – removal of meters and service connection;
- tee-up;
- other miscellaneous services;
- connection establishment charges;
- temporary disconnection/reconnection; and
- basic connection alteration.

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 10 of Section 3.4 above.

### 9.1.4 Ancillary service – quoted services

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 services may be received from a customer or retailer on behalf of a customer. TasNetworks provides a range of services on a quoted basis including, but not limited to the non-standard services set in out in Table 11 of Section 3.4 above.

## 9.2 Setting the 2021-22 tariffs

The alternative control 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 for TasNetworks. For metering services, public lighting services and ancillary service – fee based services TasNetworks' price caps are calculated in accordance with the following formula, given by the AER in its distribution determination for TasNetworks:

$$\bar{p}_t^i = \bar{p}_{t-1}^i \times (1 + \Delta CPI_t) \times (1 - X_t^i) + A_t^i$$



For ancillary service – quoted services, the price cap formula is:

$$Price = Labour + Contractor Services + Materials + Margin$$

Where Labour is escalated annual by  $(1 + \Delta CPI_t) \times (1 - X_t^i)$

In accordance with the AER's distribution determination for TasNetworks, we are only required to provide a calculation of labour rates for ancillary service – quoted services as a component of this Annual Distribution Pricing Proposal.

For the regulatory control period 2019-24 the AER has approved the addition of a margin for ancillary service – quoted services. The margin will be equal to the nominal vanilla WACC.

Table 27 provides details of the price cap calculation that TasNetworks has utilised in the preparation of its alternative control service tariffs.

**Table 27 Price cap calculation**

Component	Value	Comment
$\bar{p}_t^i$	Various	The cap on the price of service i in year t.
$p_t^i$	Various	The price of service i in year t. The initial value is to be decided in the AER's distribution determination for TasNetworks.
$\bar{p}_{t-1}^i$	Various	The cap on the price of service i in year t-1.
$\Delta CPI_t$	%	The annual percentage change in the Australian Bureau of Statistics Consumer Price Index (CPI) for All Groups, Weighted Average of Eight Capital Cities from the December quarter in year t-2 to the December quarter in year t-1.
$X_t^i$	%	The 'X' factor as specified in the AER's distribution determination for TasNetworks for the relevant alternative control service.
$A_t^i$	Various	Is the sum of any adjustments for services i in year t.
Labour	Various	The price for each quoted service labour rate as given in the AER's distribution determination for TasNetworks.
Margin	4.97%	The amount equal to TasNetworks' nominal vanilla WACC applied to the cost of labour, contractor services and materials.

### 9.3 Tariff variations

Clause 6.18.2(b)(5) of the Rules 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.

There have been no changes in 2021-22 to the tariffs applying to alternative control services.

Alternative control services will change in price in 2021-22, in accordance with the AER's distribution determination for TasNetworks.

### 9.4 Customer price impacts

The price changes between 2020-21 and 2021-22 for alternative control services are provided below:

- metering service prices have increased by 1.9%;
- public lighting service prices have increased by 2.6%;
- ancillary services – fee based service prices have increased by 1.3%; and
- the labour component for ancillary services – quoted services has increased by 1.3%.

## 10 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 attachment PP013 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.



## 11 Compliance review

Clause 6.18.8 of the Rules 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 including applicable tariff structure statement;
- (2) each proposed tariff set out in the proposal is broadly consistent with the corresponding indicative pricing levels for that tariff for the relevant regulatory year as set out in any previously applicable indicative pricing schedule, or else any material differences have been explained by the DNSP; and
- (3) all forecasts associated with the proposal are reasonable.

To assist the AER in this determination, we have undertaken a comprehensive review in Appendix A1 of this Annual Distribution Pricing Proposal to confirm that it is in accordance with the requirements of the Rules and the AER's distribution determination for TasNetworks. Further, KPMG has reviewed the pricing models underlying this Annual Distribution Pricing Proposal to confirm their appropriateness and validity.

## 12 Attachments

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

**Table 28 Attachments**

Reference	Title
PP001	Total Efficient Cost Methodology 2021-22
PP002	Network Tariff Application and Price Guide 2021-22
PP003	Metering Services Application and Price Guide 2021-22
PP004	Public Lighting Application and Price Guide 2021-22
PP005	Ancillary Services – Fee Based Services Application and Price Guide 2021-22
PP006	Ancillary Services – Quoted Services Application and Price Guide 2021-22
PP007	Tariff Reconciliation Model (confidential) 2021-22
PP008	Pricing Model – Alternative Control Services 2021-22
PP009	Annual Distribution Pricing Proposal Overview 2021-22
PP010	Indicative Pricing Schedule 2021-22
PP011	Network Tariff Summary 2021-22
PP012	Pricing Quantities Forecasting Methodology 2021-22
PP013	Confidentiality Template 2021-22

## Appendix 1: Compliance Checklist

**Table A1.1 Compliance obligations under the Rules**

Clause	Pricing Proposal Requirement	Relevant Section
<b>Part I: Distribution Pricing Rules</b>		
<b>6.18.2</b>	<b>Sub-threshold tariffs</b>	
6.18.1C(a)	No later than four months before the start of the regulatory years (other than the first regulatory year of a regulatory control period), a DNSP may notify the AER, affected retailers and affected retail customers of a new proposed tariff (a relevant tariff) that is determined otherwise than in accordance with the DNSP current tariff structure statement, if both of the following are satisfied:	Not applicable as no new tariffs proposed during the 2021-22 regulatory year
<b>6.18.2</b>	<b>Pricing proposals</b>	
6.18.2(b)	A pricing proposal must:	
6.18.2(a)2	A DNSP must submit to the AER, at least 3 months before the commencement of the second and each subsequent regulatory year of the regulatory control period, a further pricing proposal (an annual pricing proposal) for the relevant regulatory year.	This Annual Distribution Pricing Proposal
6.18.2(b)(2)	Set out the proposed tariffs for each tariff class that is specified in the Distribution Network Service Provider's tariff structure statement for the relevant regulatory control period.	Section 3
6.18.2(b)(3)	Set out, for each proposed tariff, the charging parameters and the elements of service to which each charging parameter relates.	Section 3
6.18.2(b)(4)	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 5 Attachment PP007
6.18.2(b)(5)	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 7 Section 8 Section 9
6.18.2(b)(6)	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 3 Section 6 Attachment PP007
6.18.2(b)(6A) & 6.18.2(b)(6B)	Relates to jurisdictional schemes.	There are no jurisdictional schemes applicable to TasNetworks.
6.18.2(b)(7)	Demonstrate compliance with the Rules and any applicable distribution determination, including the Distribution Network Service Provider's tariff structure statement for the relevant regulatory control period.	This Annual Distribution Pricing Proposal

Clause	Pricing Proposal Requirement	Relevant Section
6.18.2(b)(7A)	Demonstrate how each proposed tariff is consistent with the corresponding indicative pricing levels for the relevant regulatory year as set out in the relevant indicative pricing schedule, or explain any material difference between them.	Section 5
6.18.2(b)(8)	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 5 Section 7 Section 8 Section 9
6.18.2(d)	At the same time as a Distribution Network Service Provider submits a pricing proposal under paragraph 6.18.2(a), the Distribution Network Service Provider must submit to the AER a revised indicative pricing schedule which sets out, for each tariff and for each of the remaining regulatory years of the regulatory control period, the indicative price levels determined in accordance with the Distribution Network Service Provider's tariff structure statement for that regulatory control period and updated so as to take into account that pricing proposal.	PP010
6.18.2(e)	Where the Distribution Network Service Provider submits an annual pricing proposal, the revised indicative pricing schedule referred to in paragraph (d) must also set out, for each relevant tariff under clause 6.18.1C, the indicative price levels for that relevant tariff for each of the remaining regulatory years of the regulatory control period, updated so as to take into account that pricing proposal	Not applicable as no new tariffs proposed during the 2021-22 regulatory year
<b>6.18.3</b>	<b>Tariff classes</b>	
6.18.3(b)	Each customer for direct control services must be a member of one or more tariff classes.	Section 3 Attachment PP002
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 3
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 3
6.18.3(d)(2)	A tariff class must be constituted with regard to the need to avoid unnecessary transaction costs.	Section 3
<b>6.18.5</b>	<b>Pricing principles</b>	
6.18.5(a)	The network pricing objective is that the tariffs that a Distribution Network Service Provider charges in respect of its provision of direct control services to a retail customer should reflect the Distribution Network Service Provider's efficient costs of providing those services to the retail customer.	Section 4 Attachment PP001

Clause	Pricing Proposal Requirement	Relevant Section
6.18.5(b)	Subject to paragraph (c), a Distribution Network Service Provider's tariffs must comply with the pricing principles set out in paragraphs (e) to (j).	Section 4
6.18.5(c)	A Distribution Network Service Provider's tariffs may vary from tariffs which would result from complying with the pricing principles set out in paragraphs (e) to (g) only: <ul style="list-style-type: none"> <li>(1) to the extent permitted under paragraph (h); and</li> <li>(2) to the extent necessary to give effect to the pricing principles set out in paragraphs (i) to (j).</li> </ul>	Section 5
6.18.5(d)	A Distribution Network Service Provider must comply with paragraph (b) in a manner that will contribute to the achievement of the network pricing objective.	Section 4
6.18.5(e)	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 4
6.18.5(f)	Each tariff must be based on the long run marginal cost of providing the service to which it relates to the retail customers assigned to that tariff with the method of calculating such cost and the manner in which that method is applied to be determined having regard to: <ul style="list-style-type: none"> <li>(1) the costs and benefits associated with calculating, implementing and applying that method as proposed;</li> <li>(2) the additional costs likely to be associated with meeting demand from retail customers that are assigned to that tariff at times of greatest utilisation of the relevant part of the distribution network; and</li> <li>(3) the location of retail customers that are assigned to that tariff and the extent to which costs vary between different locations in the distribution network.</li> </ul>	Section 4
6.18.5(g)	The revenue expected to be recovered from each tariff must: <ul style="list-style-type: none"> <li>(1) reflect the Distribution Network Service Provider's total efficient costs of serving the retail customers that are assigned to that tariff;</li> <li>(2) when summed with the revenue expected to be received from all other tariffs, permit the Distribution Network Service Provider to recover the expected revenue for the relevant services in accordance with the applicable distribution determination for the Distribution Network Service Provider; and</li> <li>(3) comply with sub-paragraphs (1) and (2) in a way that minimises distortions to the price signals for efficient usage that would result from tariffs that comply with the pricing principle set out in paragraph (f).</li> </ul>	Section 4

Clause	Pricing Proposal Requirement	Relevant Section
6.18.5(h)	<p>A Distribution Network Service Provider must consider the impact on retail customers of changes in tariffs from the previous regulatory year and may vary tariffs from those that comply with paragraphs (e) to (g) to the extent the Distribution Network Service Provider considers reasonably necessary having regard to:</p> <ol style="list-style-type: none"> <li>(1) the desirability for tariffs to comply with the pricing principles referred to in paragraphs (f) and (g), albeit after a reasonable period of transition (which may extend over more than one regulatory control period);</li> <li>(2) the extent to which retail customers can choose the tariff to which they are assigned; and</li> <li>(3) the extent to which retail customers are able to mitigate the impact of changes in tariffs through their usage decisions.</li> </ol>	Section 4
6.18.5(i)	<p>The structure of each tariff must be reasonably capable of being understood by retail customers that are assigned to that tariff, having regard to:</p> <ol style="list-style-type: none"> <li>(1) the type and nature of those retail customers; and</li> <li>(2) the information provided to, and the consultation undertaken with, those retail customers.</li> </ol>	Section 3
6.18.5(j)	A tariff must comply with the Rules and all applicable regulatory instruments.	Section 5
<b>6.18.6</b>	<b>Side constraints on tariffs for standard control services</b>	
6.18.6(a)	This clause applies only to tariff classes related to the provision of standard control services.	Section 5
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 5
6.18.6(c)	<p>The permissible percentage is the greater of the following:</p> <ol style="list-style-type: none"> <li>(1) the CPI-X limitation on any increase in the DNSP's expected weighted average revenue between the two regulatory years plus 2%.</li> <li>(2) CPI plus 2%.</li> </ol>	Section 5



Clause	Pricing Proposal Requirement	Relevant Section
6.18.6(d)	In deciding whether the permissible percentage has been exceeded in a particular regulatory year, the following are to be disregarded: <ul style="list-style-type: none"> <li>(1) the recovery of revenue to accommodate a variation to the distribution determination under rule 6.6 or 6.13;</li> <li>(2) the recovery of revenue to accommodate pass through of designated pricing proposal charges to retail customers;</li> <li>(3) the recovery of revenue to accommodate pass through of jurisdictional scheme amounts for approved jurisdictional schemes.</li> </ul>	Section 5
<b>6.18.7</b>	<b>Recovery of designated pricing proposal charges</b>	
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.	Section 6
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 6
6.18.7(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 in the relevant distribution determination for the Distribution Network Service Provider;</li> <li>(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</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>	Section 6 Attachment PP007
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 6
6.18.7A(a), (b) & 9c)	Relates to jurisdictional schemes.	There are no jurisdictional schemes applicable to TasNetworks.

## Appendix 2: Glossary

**Table A2.1 Glossary**

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
DER	Distributed Energy Resources
Distributed Energy Resources	Electricity storage, generation or electricity management devices which have been deployed behind the meter.
Distribution determination for TasNetworks	AER, Final Decision, TasNetworks distribution determination 2019-24 – April 2019
DMIS	Demand Management Incentive Scheme
DNSP	Distribution Network Service Provider
DPPC	Designated Pricing Proposal Charges
DUoS	Distribution Use of System
EHV or Extra High Voltage	A voltage of 88 kV and above
ESI Act	<i>Electricity Supply Industry Act 1995 (Tas)</i>
ESISC	Electrical Safety Inspection Service Charge
GW	GigaWatt
GWh	GigaWatt Hour
HV or High Voltage	A voltage exceeding 1,000 volts
ISO 9001	Part of the ISO 9000 family of quality management system standards published by the International Organisation for Standardisation
ITC	Individual Tariff Calculation
kV	KiloVolt
kVA	KiloVolt Amp
kW	KiloWatt
kWh	KiloWatt Hour
LRMC	Long Run Marginal Cost
LV or Low Voltage	A voltage not exceeding 1,000 volts

Term	Definition
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
NEM	National Electricity Market
NEMC	National Energy Market Charge
NPV	Net Present Value
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.
OH	Overhead
Ombudsman Act	<i>Energy Ombudsman Act 1998 (Tas)</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. A house, unit, town house or apartment that, in the reasonable opinion of TasNetworks, is not classifiable under the Australian and New Zealand Standard Industrial Classification (ANZSIC) and is used wholly or principally as a place of residence for personal, household or domestic purposes. The ANZSIC system is used to classify businesses and applies to any entity which provides goods and services, including companies, non-profit organisations, government departments and enterprises.
PTRM	Post Tax Revenue Model
RAB	Regulated Asset Base
Regulator	The meaning given in the <i>Economic Regulator Act 2009 (Tas)</i>
Residential transitional feed-in tariff rate	The rate prescribed in section 44F of the ESI Act for residential customers
Rules	National Electricity Rules
Standard feed-in tariff rate	The rate determined by the Regulator in accordance with section 44G of the ESI Act
STPIS	Service Target Performance Incentive Scheme
TasNetworks	Tasmanian Networks Pty Ltd
TEC	Total Efficient Cost

Term	Definition
TNSP	Transmission Network Service Provider
ToU	Time of Use
TSS	<ul style="list-style-type: none"> <li>• TasNetworks Tariff Structure Statement Final – April 2019; and</li> <li>• TasNetworks Tariff Structure Statement – Background and Explanation Final – April 2019</li> </ul>
TUoS	Transmission Use of System
UMS	Unmetered Supply
VT	Voltage Transformer
WACC	Weighted Average Cost of Capital

## Appendix 3: Proposed Network Tariffs

Table A3.1 DUoS charges – standard control services

Distribution Use of System rates											
Network tariff description	Network tariff code	Service charge c/day	ToU energy rate c/kWh			Consumption Charge c/kWh	Demand rates c/kVA, kW, lamp watt/day			Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak		Day	Peak	Off-peak	Specified	Excess
Business high voltage kVA specified demand	TASSDM	350.271	0.309	0.185	0.046					15.891	158.921
Business high voltage kVA specified demand (> 2MVA)	TAS15	2,875.300	0.947	0.568	0.142					9.592	47.957
Irrigation low voltage time of use	TAS75	252.168	7.293	4.377	1.094						
Business low voltage kVA demand	TAS82	346.920				1.783	20.959				
Business low voltage time of use kVA demand large	TAS89	488.713						26.579	8.851		
Business low voltage general	TAS22	52.388				7.220					
Business low voltage time of use	TAS94	68.909	7.844	4.707	1.176						
Business low voltage distributed energy resources	TAS98	76.214						45.745	10.664		
Business low voltage time of use kW demand	TAS88	76.214						45.745	10.664		
Residential low voltage general	TAS31	52.688				6.532					
Residential low voltage pay as you go time of use	TAS92	57.601	11.290		2.202						
Residential low voltage pay as you go	TAS101	53.118				5.976					
Residential low voltage time of use	TAS93	57.601	11.290		2.202						
Residential low voltage distributed energy resources	TAS97	58.609						20.722	4.830		

Distribution Use of System rates											
Network tariff description	Network tariff code	Service charge c/day	ToU energy rate c/kWh			Consumption Charge c/kWh	Demand rates c/kVA, kW, lamp watt/day			Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak		Day	Peak	Off-peak	Specified	Excess
Residential time of use kW demand	TAS87	58.609						20.722	4.830		
Uncontrolled low voltage heating	TAS41	6.511				3.662					
Controlled low voltage energy off-peak with afternoon boost	TAS61	12.405				1.023					
Controlled low voltage energy with night period only	TAS63	12.405				0.920					
Unmetered supply low voltage general	TASUMS	52.388				7.992					
Unmetered supply low voltage public lighting (C/lamp watt/day)	TASUMSSL						0.083				

**Table A3.2 DUoS charges – standard control services (ITC customers)<sup>16</sup>**

Distribution Use of System rates										
Tariff description	Network tariff code	Service 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
Individual tariff calculation	TASCUS1									
Individual tariff calculation	TASCUS1									
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>16</sup> ITC network tariff rates are confidential.

**Table A3.3 TUoS charges – standard control services**

Transmission Use of System rates											
Network tariff description	Network tariff code	Service charge c/day	ToU energy rate c/kWh			Consumption charge c/kWh	Demand rates c/kVA, kW, lamp watt/day			Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak		Day	Peak	Off-peak	Specified	Excess
Business high voltage kVA specified demand	TASSDM		0.829	0.498	0.124					3.067	30.670
Business high voltage kVA specified demand (> 2MVA)	TAS15										
Irrigation low voltage time of use	TAS75		2.604	1.564	0.390						
Business low voltage kVA demand	TAS82					0.543	11.559				
Business low voltage time of use kVA demand large	TAS89							16.575	5.519		
Business low voltage general	TAS22					1.860					
Business low voltage time of use	TAS94		2.211	1.327	0.332						
Business low voltage distributed energy resources	TAS98							10.957	2.554		
Business low voltage time of use kW demand	TAS88							10.957	2.554		
Residential low voltage general	TAS31					1.860					
Residential low voltage pay as you go time of use	TAS92		3.517		0.685						
Residential low voltage pay as you go	TAS101					1.326					
Residential low voltage time of use	TAS93		3.517		0.685						
Residential low voltage distributed energy resources	TAS97							4.879	1.137		
Residential time of use kW demand	TAS87							4.879	1.137		



Transmission Use of System rates											
Network tariff description	Network tariff code	Service charge c/day	ToU energy rate c/kWh			Consumption charge  c/kWh	Demand rates c/kVA, kW, lamp watt/day			Capacity charges c/kVA/day	
			Peak	Shoulder	Off-peak		Day	Peak	Off-peak	Specified	Excess
Uncontrolled low voltage heating	TAS41					1.860					
Controlled low voltage energy off-peak with afternoon boost	TAS61					0.520					
Controlled low voltage energy with night period only	TAS63					0.415					
Unmetered supply low voltage general	TASUMS					2.609					
Unmetered supply low voltage public lighting (c/Lamp watt/day)	TASUMSSL						0.024				

**Table A3.4 TUoS – standard control services (ITC customers)<sup>17</sup>**

Transmission Use of System rates										
Tariff description	Network tariff code	Service 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
Individual tariff calculation	TASCUS1								Locational	Locational
Individual tariff calculation	TASCUS1								Locational	Locational
Individual tariff calculation	TASCUS1								Locational	Locational

<sup>17</sup> ITC network tariff rates are confidential.

**Table A3.5 Locational TUoS charges – standard control services**

Transmission node description	Transmission node identifier	Service charge c/kVA/day
Arthurs Lake	TAL2	20.193
Avoca	TAV2	12.280
Burnie	TBU3	12.954
Bridgewater	TBW2	14.101
Derwent Bridge	TDB2	150.142
Derby	TDE2	29.700
Devonport	TDP2	14.987
Emu Bay	TEB2	14.549
Electrona	TEL2	18.443
Huon River	THR2	67.287
Kermandie	TKE2	24.706
Kingston 11kV	TKI2	15.365
Kingston 33kV	TKI3	18.357
Knights Road	TKR2	19.249
Meadowbank	TMB2	14.526
New Norfolk	TNN2	15.782
Newton	TNT2	34.769
Port Latta	TPL2	17.353
Palmerston	TPM3	16.757
Queenstown	TQT2	24.992
Railton	TRA2	14.443
Rosebery	TRB2	13.751
Scottsdale	TSD2	30.821
St Marys	TSM2	22.497
Sorell	TSO2	17.635
Savage River	TSR2	15.695
Smithton	TST2	19.216
Triabunna	TTB2	28.136
Tungatinah	TTU2	50.857
Ulverstone	TUL2	12.679
Waddamana	TWA2	22.955
Wesley Vale	TWV2	14.136
Hobart Virtual	TVN1	14.162
Tamar Virtual	TVN2	12.292

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 A3.5 for this VTN is TVN1.

**Table A3.6 Hobart region virtual transmission node**

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 A3.5 for this VTN is TVN2.

**Table A3.7 Tamar region virtual transmission node**

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



## Appendix 4: Proposed Alternative Control Services Tariffs

### Metering services

The proposed 2021-22 prices for each of TasNetworks' metering services tariffs are outlined below:

**Table A4.1 Tariffs for metering services**

Tariff		Price (c/day)	Annual charge (\$)
Domestic LV – single phase	Capital	3.536	12.90
	Non-capital	3.201	11.68
Domestic LV – multi phase	Capital	7.339	26.78
	Non-capital	6.643	24.24
Domestic LV – CT meters	Capital	9.082	33.14
	Non-capital	8.221	30.00
Business LV – single phase	Capital	3.658	13.35
	Non-capital	3.311	12.08
Business LV – multi phase	Capital	7.318	26.71
	Non-capital	6.624	24.17
Business LV – CT meter	Capital	9.463	34.53
	Non-capital	8.565	31.26
Other	Capital	6.457	23.56
	Non-capital	5.845	21.33

### Public lighting services

The proposed 2021-22 prices for each of TasNetworks' public light tariffs are set out below:

**Table A4.2 Tariffs for public lighting by type**

Lighting type	Price (c/day)	Annual charge (\$)
New technology – minor	39.183	143.01
New technology – major	50.276	183.50
14W LED	39.183	143.01
18W LED (obsolete)	39.565	144.41
18W LED decorative (obsolete)	51.905	189.45
25W LED (obsolete)	39.777	145.18
25W LED decorative (obsolete)	52.119	190.23
42W compact fluorescent (obsolete)	41.464	151.34
42W compact fluorescent – bottom pole entry (obsolete)	41.464	151.34
70W sodium vapour (obsolete)	41.721	152.28
100W sodium vapour (obsolete)	48.356	176.49
150W sodium vapour (obsolete)	50.831	185.53

Lighting type	Price (c/day)	Annual charge (\$)
250W sodium vapour (obsolete)	51.999	189.79
400W sodium vapour (obsolete)	52.580	191.91
250W sodium vapour – flood light (obsolete)	55.506	202.59
400W sodium vapour – flood light (obsolete)	54.893	200.35
100W metal halide (obsolete)	48.747	177.92
150W metal halide (obsolete)	51.001	186.15
250W metal halide (obsolete)	51.877	189.35
400W metal halide (obsolete)	56.379	205.78
250W metal halide – flood light (obsolete)	56.619	206.65
400W metal halide – flood light (obsolete)	56.379	205.78
T5 fluorescent 2 x 24W (obsolete)	43.540	158.92
1 x 20W fluorescent (obsolete)	43.261	157.90
50W mercury vapour (obsolete)	39.349	143.62
80W mercury vapour (obsolete)	39.334	143.56
80W mercury vapour – decorative (obsolete)	54.799	200.01
125W mercury vapour (obsolete)	48.361	176.51
250W mercury vapour (obsolete)	48.777	178.03
400W mercury vapour (obsolete)	50.242	183.38

The proposed 2021-22 prices for each of TasNetworks' contract light tariffs are outlined below:

**Table A4.3 Tariffs for contract lighting by type**

Lighting type	Price (c/day)	Annual charge (\$)
New technology – minor	13.885	50.68
New technology – major	14.600	53.29
14W LED	13.885	50.68
18W LED (obsolete)	14.311	52.23
18W LED decorative (obsolete)	14.311	52.23
25W LED (obsolete)	14.311	52.23
25W LED decorative (obsolete)	14.311	52.23
42W compact fluorescent (obsolete)	19.831	72.38
42W compact fluorescent – bottom pole entry (obsolete)	19.831	72.38
70W sodium vapour (obsolete)	20.099	73.36
100W sodium vapour (obsolete)	23.914	87.28
150W sodium vapour (obsolete)	24.168	88.21
250W sodium vapour (obsolete)	24.336	88.82

Lighting type	Price (c/day)	Annual charge (\$)
400W sodium vapour (obsolete)	24.393	89.03
250W sodium vapour – flood light (obsolete)	24.336	88.82
400W sodium vapour – flood light (obsolete)	24.393	89.03
100W metal halide (obsolete)	24.169	88.21
150W metal halide (obsolete)	23.969	87.48
250W metal halide (obsolete)	23.969	87.48
400W metal halide (obsolete)	24.633	89.91
250W metal halide – flood light (obsolete)	23.969	87.48
400W metal halide – flood light (obsolete)	24.633	89.91
50W mercury vapour (obsolete)	19.662	71.76
80W mercury vapour (obsolete)	19.623	71.62
80W mercury vapour – Aeroscreen (obsolete)	19.623	71.62
125W mercury vapour (obsolete)	22.974	83.85
250W mercury vapour (obsolete)	22.974	83.85
400W mercury vapour (obsolete)	23.118	84.38
1 x 20W fluorescent (obsolete)	19.704	71.91
2 x 20W fluorescent (obsolete)	19.983	72.93
1 x 40W fluorescent (obsolete)	19.722	71.98
2 x 40W fluorescent (obsolete)	20.019	73.06
3 x 40W fluorescent (obsolete)	23.714	86.55
4 x 40W fluorescent (obsolete)	24.012	87.64
4 x 20W fluorescent (obsolete)	20.542	74.97
60W incandescent (obsolete)	19.543	71.33
100W incandescent (obsolete)	22.942	83.73



## Fee based services

The proposed 2021-22 prices for each of TasNetworks' fee based services tariffs are outlined below:

**Table A4.4 Tariffs for fee based services**

Service	Price (\$)
<b>Energisation, de-energisation, re-energisation and special reads</b>	
Site visit – no appointment (energisation, de-energisation, and re-energisation)	81.50
Site visit – no appointment (special reads)	51.73
Site visit – non-scheduled visit	136.37
Site visit – same day premium service	205.80
Site visit – after hours	326.98
Site visit – credit action or site issues	146.01
Site visit – credit action pillar box/pole top	255.18
Site visit – current transformer (CT) metering	131.13
Site visit – pillar box/pole top	255.18
Site visit – pillar box/pole top wasted visit	146.01
Transfer of retailer	-
<b>Meter test</b>	
Meter test – single phase	236.91
Meter test – multi phase	466.76
Meter test – current transformer (CT)	517.84
Meter test – after hours	913.84
Meter test –wasted visit	83.69
<b>Supply abolishment</b>	
Remove service and meters	259.42
Supply abolishment – after hours	639.91
Supply abolishment – wasted visit	160.17
<b>Truck tee-up</b>	
Tee-up/appointment	136.18
Tee-up/appointment – after hours	688.89
Tee-up/appointment – no truck – after hours	351.47
Tee-up/appointment – wasted visit	85.09
<b>Miscellaneous services</b>	
Open turret	121.99
Data download	262.45
Alteration to unmetered supply	198.61
Meter relocation	173.07



Service	Price (\$)
Tiger tails – standard single/multi-phase	638.22
Tiger tails – scaffolding single phase	1,016.92
Tiger tails – scaffolding multi-phase	1,119.07
Administration	49.46
Statutory right – access prevented	1,225.29
Tariff change	49.46
Emergency maintenance contestable meters	53.03
Emergency maintenance contestable meters – after hours	351.47
Meter recovery and disposal	96.46
Miscellaneous service	109.22
Miscellaneous service – after hours	538.92
Miscellaneous service – wasted visit	83.69
Connection establishment charges	
Creation of a NMI	40.42
Overhead service, single span – single phase	573.41
Overhead service, single span – multi-phase	819.57
Underground service in turret/cabinet – single phase	172.91
Underground service in turret/cabinet – multi-phase	226.61
Underground service with pole mounted fuse – single phase	436.00
Underground service with pole mounted fuse – multi-phase	556.18
Basic connection – after hours	1,090.83
Connection establishment – wasted visit	146.07
Temporary disconnection charges	
Disconnect/reconnect overhead service for facia repairs – single phase	425.58
Disconnect/connect overhead service for facia repairs – multi-phase	527.74
Temporary disconnect/reconnect – retailer requested outage	374.51
Temporary disconnect/reconnect – after hours	913.84
Temporary disconnect/reconnect – wasted visit	170.20
Basic connection alteration	
Connection alteration – overhead single phase	324.85
Connection alteration – overhead multi-phase	427.00
Connection of new consumer mains to an existing installation – underground single phase to turret	197.15
Connection of new consumer mains to an existing installation – underground single phase to pole	375.92

Service	Price (\$)
Connection of new consumer mains to an existing installation – underground multi-phase to turret	248.23
Connection of new consumer mains to an existing installation – underground multi-phase to pole	478.08
Augment single phase overhead service to multi-phase supply	896.19
Augment multi-phase overhead service to single phase supply	650.02
Augment single phase overhead service to underground supply (turret)	402.76
Augment multi-phase overhead service to underground supply (turret)	504.92
Augment single phase overhead service to underground supply (pole)	512.62
Augment multi-phase overhead service to underground supply (pole)	632.80
Basic connection alteration – after hours	1,176.28
Basic connection – wasted visit	158.84

### Quoted services

The proposed 2021-22 prices for each of TasNetworks' quoted services tariffs (labour price) are outlined below:

**Table A4.5 Tariffs for quoted services**

Labour	Price (\$/hour)
Asset Inspector	91.13
Asset Inspector – including vehicle	111.82
Cable jointer	116.76
Customer connections – commercial metering	140.05
Customer connections – service crew	126.60
Designer	125.11
Distribution electrical technician	105.57
Distribution electrical technician – including vehicle	126.27
Distribution linesman	114.41
Distribution linesman – live line	126.82
Distribution operator	118.89
Distribution operator – including vehicle	139.59
Engineer	135.03
Senior engineer	155.44
Field service co-ordinator	113.86
General administration	104.96
Labourer – overhead	103.47
Meter reader	97.44
Project manager	140.58