

Waipa Networks Ltd

Pricing Methodology 2019



14.8 Schedule 17: Certification for Year-beginning Disclosures

Clause 2.9.1 of section 2.9

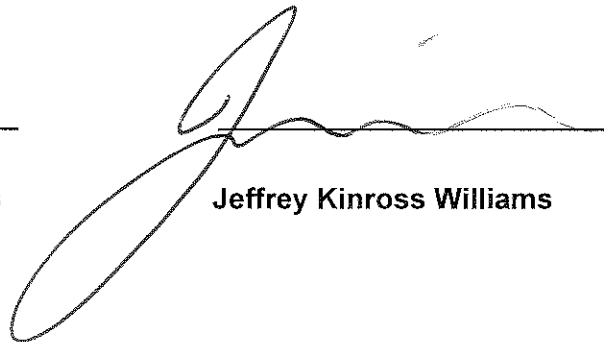
We, Richard Thomas Francis and Jeffrey Kinross Williams, being directors of Waipa Networks Limited certify that, having made all reasonable enquiry, to the best of our knowledge –

The following attached information of Waipa Networks Limited prepared for the purposes of clause 2.4.1, of the Electricity Distribution Information Disclosure Determination 2012 in all material respects complies with that determination.

The prospective financial or non-financial information included in the attached information has been measured on a basis consistent with regulatory requirements or recognised industry standards.



Richard Thomas Francis



Jeffrey Kinross Williams

26 March 2019

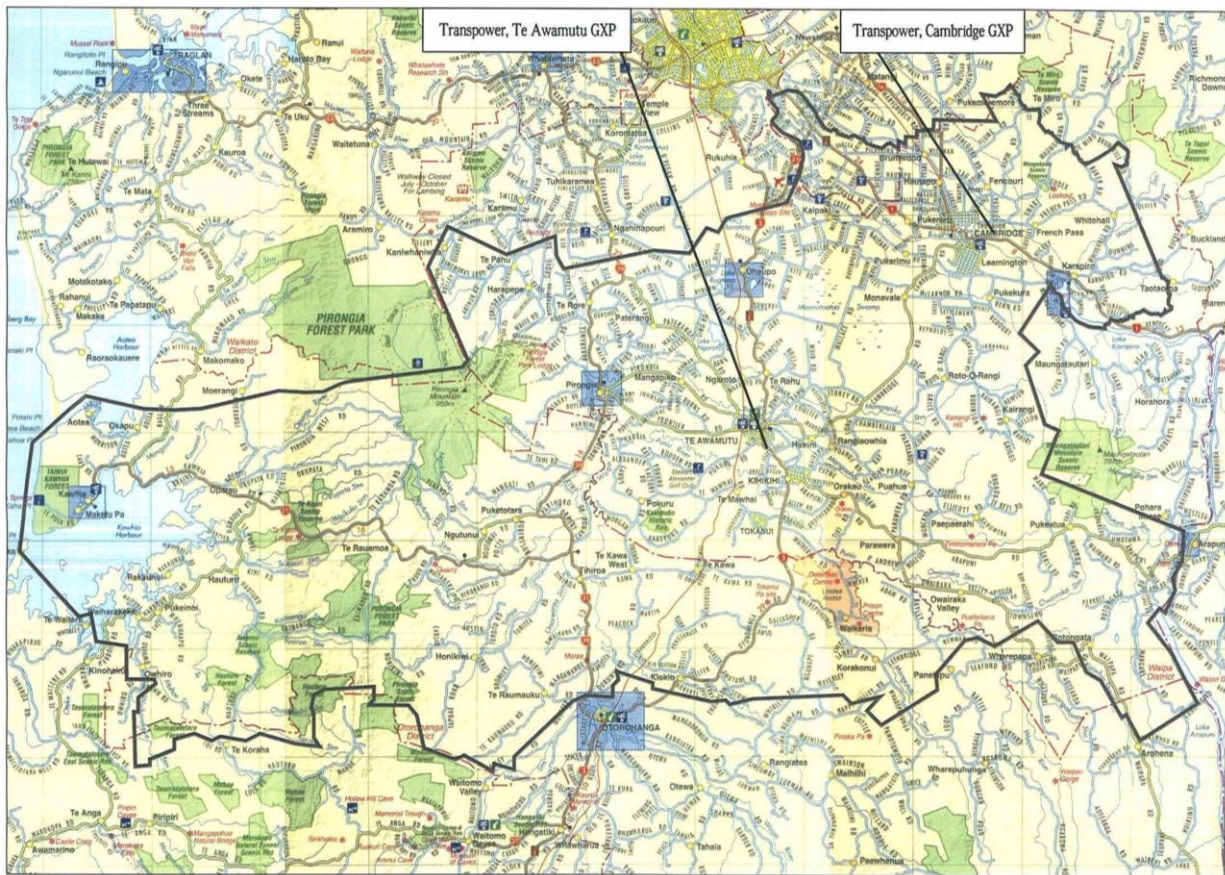
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Introduction

Waipa Networks Limited (Waipa) is the company responsible for distributing electricity to an area of approximately 1,865 square kilometers, servicing more than 26,500 customers; over 2,100 km of electricity lines. The area includes the two major rural service centres of Te Awamutu and Cambridge in a predominantly dairy farming region.

The pricing methodology described here relates only to the distribution area supplied by Waipa's electricity network illustrated below:



This document describes the process used by Waipa to develop line charges for the 2019/20 financial year. With the exception of customers who have a signed conveyance agreement with Waipa these line charges are levied on electricity retail companies who incorporate them in their charges to electricity consumers.

This document has been prepared to comply with Requirements 2.4.1 of the Commerce Commission's Electricity Distribution Information Disclosure Determination 2012 (NZCC 22) issued 1 October 2012 and the Distribution Pricing Principles and Information Disclosure Guidelines of the Electricity Authority.

The objectives of Waipa Networks Limited's pricing methodology are:

- To recover the costs of operating the electricity distribution system and make a sustainable return on and of the capital employed;
- To appropriately recover pass through costs such as transmission charges;
- To allocate costs fairly between consumer groups;
- To establish a fair range of charges;
- To provide demand based pricing signals where appropriate;
- To meet regulatory requirements relating to fixed daily charges / low-user rates;
- To provide discounts to reduce network charges.
- To enable Retailers to pass charges on to consumers in an understandable way

Accordingly this document discloses:

- The methodology used to calculate the prices charged;
- The key components of revenue required to cover costs and profits of the lines business activities;
- The consumer groups used to calculate the prices being charged, including:
 - The rationale for consumer grouping;
 - The method of determining which groups consumers are in;
 - The statistics relating to each consumer group;
 - The method and rationale by which components of the revenue are allocated to consumer groups;
- The numerical values of the different components;
- The rationale and method used to determine the proportions of charges which are fixed and the proportions which are variable.

Overview of Methodology

The purpose of Waipa's pricing methodology is to allocate the company's revenue requirements fairly and transparently across all network customers. In determining the annual revenue requirements, the company takes a long term view and seeks to offer price stability and predictability for customers.

Stability and predictability of prices is important to our customers who may be making long term investment decisions which may be influenced, in part, by our current and future charges.

No distinction is made between customers connected to the Te Awamutu GXP and those connected to the Cambridge GXP.

External Costs:

The Commerce Commission recognises Electricity Distribution Businesses (EDBs) are subject to a number of external costs over which they have no control. These costs are permitted to be passed through directly to customers.

The most significant of these are Transpower charges for connection to, and use of, the National Grid.

Other pass through costs are local body rates, and direct regulatory levies charged by the Commerce Commission and Electricity Authority.

In recent years Transpower charges have increased rapidly following investment in the National Grid. These charges have been passed through in the year in which they have been received and have been responsible for increases in Waipa's line charges in those years.

Waipa considers it would be inappropriate and unsustainable to try and smooth out these increases in ongoing operating costs. It would also create a subsidy from future network users to current users which would breach both the Commerce Commission's and Electricity Authority's pricing guidelines.

DER:

As indicated in the section on Consumer Categories customers' demands on the network are changing as a result of new technologies, the Pricing Methodology will need to reflect this over time.

From 1 April 2016 we implemented a new price structure option (Peak/Off Peak/Shoulder) to assist in avoiding subsidies between customers with and without new technologies e.g. solar generation, and electric vehicles.

The Plan in 2016 was to transition customers from existing pricing plans to new Peak/Off Peak/Shoulder plans over the next 4 years. Moving customers to these plans will encourage efficient use of the Network and therefore assist in efficient capital investment in the Network.

The Peak/Off Peak/Shoulder plans will be:

- Optional for all customers with advanced metering;
- Replace the day/night tariff for all new customers from 1 April 2017; and
- Be compulsory for all ICPs with Distributed Generation from 1 April 2017; and
- Be compulsory for all new ICPs from 1 April 2018
- Be compulsory for all ICP's from 1 April 2021

Capital Contributions:

Capital contributions are charged for new subdivisions and usually recover all low voltage and dedicated high voltage costs with the exception of distribution transformers.

The reinforcement of existing high voltage feeders from Transpower's GXP to the subdivision is normally exempted from capital contributions. It is treated as 'organic' network load growth, and recovered under this pricing methodology.

Subdivision reticulation costs are considered to be a part of the developer's risk (for example in the event where sections do not sell).

Capital contributions avoid cross subsidies between consumers and enable customers in new subdivisions to receive company discounts in a non-discriminatory fashion.

Cost Categories

EDBs costs can be identified as arising from:

- Transmission charges
- Capital employed
- Maintenance of assets
- Operations and overheads
- Pass through costs (excluding Transpower)
- Depreciation

Transmission Charges:

These are the charges levied by Transpower for connection to and use of the national grid.

They may also include transmission costs where similar assets are provided by alternative investors. The costs of Waipa's investment in a second supply for Te Awamutu will be recovered in this way.

Capital Employed:

This is the return on investment required by the owners of the company. The company is owned by Waipa Networks Trust, a consumer trust on behalf of all connected consumers. Not charging for the use of capital would be economically inefficient and would result in the transfer of wealth between the network owners and the network users and/or electricity retailers.

Maintenance of Assets:

The assets must be repaired and maintained in good working order to ensure a reliable supply of electricity to customers. An effective maintenance regime extends the life of assets.

Operations and Overheads:

These are the costs of operating the company: providing customer services, interfacing with electricity retailers, accounts and administration functions, and meeting extensive industry compliance requirements.

Pass Through Costs:

Pass through costs are Local body rates charged on the network, Commerce Commission and Electricity Authority costs.

While the Commerce Commission allows transmission costs charged by Transpower to be passed through transparently these are treated independently (see above) to enable their charging structure to be passed through. It would be inappropriate to use Transpower's methodology for other pass through costs.

Depreciation:

Depreciation is recovering the capital cost of the network in order to replace the assets at the end of their lives and hence maintain the network for future users.

Consumer Categories

Voltage Categories:

Customers are first classified according to the voltage at which they are supplied:

- 11kV
- Low voltage

This is necessary as 11kV customers do not require the use of any low voltage distribution assets and should not be charged for them.

Waipa Networks takes supply from Transpower at 11kV and has no 33kV or higher voltage consumers.

11kV Consumers:

11kV customers are further categorized as being:

- Standard, or
- Non-standard

Non-standard customers are those with dedicated assets from a Transpower GXP to their individual 11kV metering point.

Standard 11kV customers share the 11kV distribution network with other 11kV and low voltage consumers.

Low Voltage Consumers:

Low voltage customers are further categorized as being either:

- Residential,
- General, or
- Non-metered including street lighting

Residential customers are classified as such where the primary use of the electrical supply is for domestic or residential purposes, as determined by the electricity retailer. These are typically indicated on the Registry as having ANZIC code '000000'. Waipa reserves the right to challenge an electricity retailer's classification if it believes it is incorrect and backdate any charges in cases where a classification has been proven incorrect.

In rural areas residential customers may include individual ICPs required for domestic water pumps; excludes stock or irrigation pumps.

Residential customers are required to be identified to comply with the Government requirement to offer small residential customers a daily fixed charge limited to no more than 15 cents.

General consumers are all other metered low voltage ICPs not defined as being Residential.

Non-metered supplies are typically telecommunication repeater cabinets and similar low wattage ICPs. These small installations are charged at a fixed daily rate.

Street lighting is generally non-metered and consumption is calculated based on hours of operation and lamp wattage. Street lights are charged on their estimated kWh consumption.

Small Scale Distributed Generation:

Waipa does not currently distinguish ICPs with small scale (<10kW) generation.

The number of ICPs with distributed generation on the Network is relatively small and almost entirely PV. The Network capacity required to supply these ICPs is the same as those without PV, however the reduced revenue from volumetric charges means the cost of supply for PV is increasingly borne by others.

Waipa Networks charges an application fee for distributed generation to recover initial connection and administration costs in accordance with Part 6 of the Electricity Industry Participation Code 2010.

During 2015 Waipa consulted on a number of proposals to help address the challenges posed by small scale distributed generation.

Network voltage control particularly for subdivisions with significant PV installations will become increasingly challenging in the future. This is proposed to be addressed by an export tariff so PV generators meet the costs they impose on the network which are not imposed by non-generating consumers. For this reason from 1 April 2016 the company introduced a kWh export pricing plan applicable to all distributed generation. The initial charge is nominal and will contribute towards the cost of investigating problems and developing the solutions.

Distribution networks are constructed to meet the maximum demand placed on them by consumers at peak periods. There are other periods during which this capacity is underutilised. If customers with small scale generation are able to reduce their demand on the network during peak periods this will reduce future investment in the network. Consumers who add to the peak demand are driving future investment to increase the installed network capacity.

Typically, PV is not available to reduce demand when Waipa's network is experiencing peak demand, for example a winter evening. Waipa has therefore introduced a Peak/Off Peak/Shoulder tariff for all consumers from 1 April 2021; however this will apply to all distributed generation from 1 April 2017 and all new ICP's from 1 April 2018 to ensure consumers have good information upon which to base their investment decision.

The Export and Peak/Off-Peak/Shoulder plans will better reflect the cost of supplying distributed generation ICPs and ensure such costs are not subsidised by other connected consumers.

Retailers were consulted regarding these proposed plans and their feedback taken into consideration when finalising the implementation dates.

Electricity Distribution Network Diagram

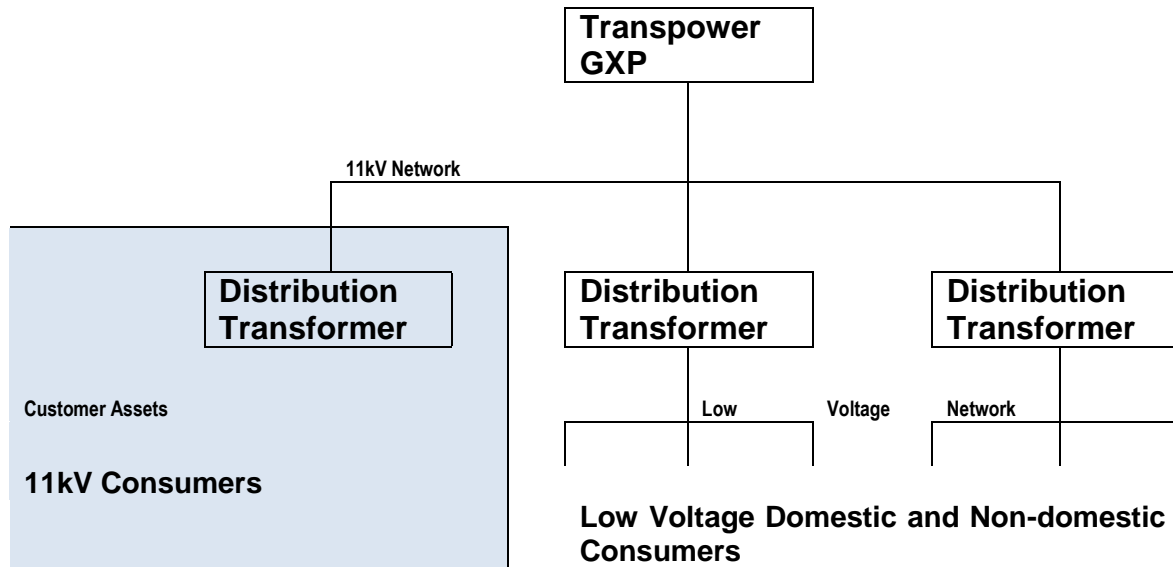


Figure 1.

The above diagram illustrates the assets employed by Waipa in distributing electricity from the Grid Exit Point (GXP) to individual customers.

Only those assets employed in distributing electricity to the consumer are charged to that Consumer Category

Allocation Factors

A number of factors are used to allocate the various cost categories across different customer groups.

Allocation Factor	Definition	Factor Name
Customer Numbers	Number of ICPs in each consumer category as a percentage of total number of ICPs. Refer to page 7 for definitions of the consumer categories we use.	%Consumers
Consumption	Metered consumption plus allocated network losses (voltage dependent) per consumer category as a percentage of total consumption and network losses.	%Consumption
AMD	Anytime Maximum Demand either metered or estimated per consumer category as a percentage of the total of all estimated/metered AMDs.	%AMD
CMD	Measured or estimated contribution of each consumer category to the average of the 100 coincident peaks in the Lower North island as defined by Transpower.	%CMD

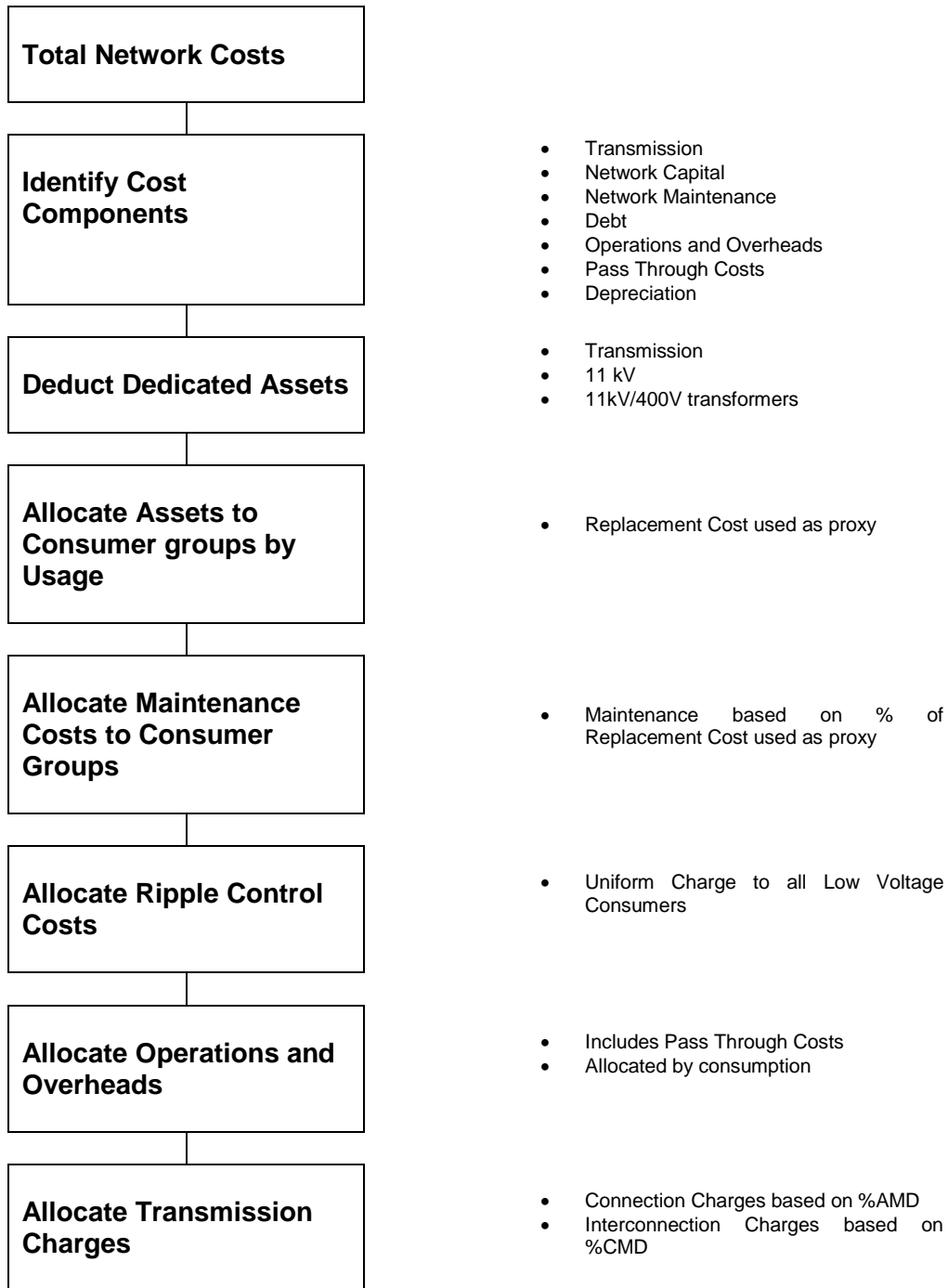
Appendix I provides details of the calculations used for the current year's pricing.

Allocation of Network Costs

The following process is used in allocating network costs:

1. Identify the following classes of assets:
 - a. 11kV assets dedicated to Non-Standard 11kV customers;
 - b. all remaining 11kV network assets;
 - c. 11kV to 400V distribution transformers;
 - d. low voltage assets; and
 - e. ripple control assets (transmitters and receivers).
2. Calculate the capital investment in the network using replacement cost of each of the above classes of assets.
 - a. Replacement costs are used for the following reasons:
 - i. The ODV process used to value the network for regulatory purposes has identified no redundant or uneconomic assets;
 - ii. Avoids rate shocks when old assets with little remaining book value are replaced by new assets;
 - iii. Is a proxy to spread the costs fairly and transparently.
3. Allocate maintenance costs for each of the classes of assets as a percentage of the asset replacement cost.
 - a. Replacement costs are used for the same reasons as in paragraph 2 above.
4. Allocate all dedicated assets to the consumers who have exclusive use.
 - a. Dedicated 11kV assets to Non-Standard consumers;
 - b. Dedicated transformers to 11kV consumers who lease these assets.
5. At each level of the network (11kV, low voltage, and distribution transformers) allocate the capital and maintenance charges to consumer groups based on their %AMD.
 - a. AMD is used because networks are sized to meet customer demand.
6. Ripple Control assets are allocated on a per consumer basis to all low voltage consumers.
 - a. Ripple receivers are individual assets installed at individual consumer premises and are therefore allocated on this basis.
 - b. The transmitter costs are allocated equally across all receivers.
7. Allocate Operations and Overheads based on Consumption (as defined on page 10).
 - a. Those customers who make greater use of the network pay more than small users.
8. Allocate Transmission services.
 - a. Connection Charges are allocated to consumer groups based on their %AMD because connection assets are provided to meet the AMD at each GXP;
 - b. Interconnection Charges are recovered on the consumer groups contribution to the Lower North Island Coincident Maximum Demand to mirror Transpower's charging methodology (%CMD).

Flow Chart of Cost Allocation



Consumer Charges

Consumer charges are composed of fixed and variable portions.

The methodology requires fixed costs to be recovered by fixed charges and variable costs by variable charges.

Fixed cost components are:

- Ripple Control costs, and
- All Charges based on maximum demands:
 - Asset charges including maintenance
 - Transmission charges.

Variable charges are limited to:

- Operations and Overheads, and
- Pass Through Costs.

As expected the majority of cost components are fixed and result in relatively high fixed and low variable charges.

Small Low Voltage Consumers:

Government legislation has capped fixed line charges at 15 cents per day for Residential Consumers using 8,000kWh per annum or less.

This legislation overrides the integrity of the above pricing principles. The result is some costs that would be recovered through the fixed charge have to be recovered through variable consumption charges for small Residential Consumers.

As a result the company has determined to charge all Residential Consumers 15 cents per day and avoid possible arbitrage of its charges.

Calculating the variable charges for Residential Consumers and applying these across all small low voltage consumers (excludes those on demand tariffs) results in the fixed charge for small General Customers being 30 cents per day.

At 30 cents per day the arbitrary nature and impact of applying General charges to businesses operated from a Residential dwelling is mitigated.

A check sum is calculated each year to ensure there is no significant cross subsidy between small low voltage consumer groups.

Large Low Voltage Consumers:

Large low voltage consumers fixed costs are recovered through a demand charge based on the maximum demand they place on the network. These demand charges are fixed for a minimum period of twelve months due to the seasonal nature of the dairy industry which is the predominant driver of GXP demands and network capacity.

Remaining costs are recovered from variable charges.

11kV Consumers:

Large 11kV customers are charged on a similar basis to large low voltage customers. Their charges exclude the costs of the low voltage network.

Non-Standard 11kV Consumers:

The methodology used is described in Appendix II.

Customer Consultation

The various forms of customer consultation employed by Waipa are described in Appendix V.

The results of consultation suggest our pricing strategy is easily understood, has a high level of community acceptance and should continue. With customers supporting price parity (through the Annual Customer Survey) there is no mandate to offer a more diverse (regional or GXP type) pricing structure.

In April 2016 the Company introduced 'Advanced Uncontrolled' time of use pricing with Peak/Off-Peak/Shoulder time periods and applicable prices. Initially only mandatory for Capacity Contract customer groups, in April 2017 it also became mandatory for customers with Distributed Generation and any new ICPs. The intention is to move all customers to this type of pricing over time however the initial groups were mandated as Waipa Networks recognised the importance of early price signaling for those making capital investment decisions. Customer consultation has been important during this time and we sent out newsletters to all customers in April 2016 & 2017 explaining the new pricing and our reasons for the change. We have also consulted with Electricity Retailers at that time and published a Pricing Roadmap on our website. We intend to continue consulting with customers and Electricity Retailers as we transition to the new pricing.

The Electricity Retail market has always provided challenges for Network companies wanting to send price signals to encourage efficient use of the Network. The bulk of Retailers do not specify the Distribution Pricing component on invoices and even retail electricity prices are being bundled together with other services such as gas and communications. Waipa Networks has been careful to ensure its consultation is cognizant of the Retail / Customer relationship and that end-consumer pricing is ultimately decided by the Retailer. With regards to our Advanced Uncontrolled pricing, our strategy is to engage with Retailers to encourage the creation of equivalent Retailer pricing on the basis that price signaling encourages efficient use of the Network and ultimately results in lower delivery prices to them and their customers.

Transmission

For mass market customers and small to medium businesses, transmission charges are bundled with the disclosed distribution charges, and included in the appropriate tariff component. For Waipa's large industrial customers, it has been possible to pass on transmission charges in a direct and transparent fashion which provides efficient pricing signals to those customers.

Waipa Networks pricing strategy is to pass through increases in Transmission costs and to increase the balance of the prices by CPI.

Distributed Generation

A nominal charge for inputting distributed generation into the distribution network was introduced in 2016 as described in the section on Small Scale Distributed Generation.

Waipa Networks believes its Line Charging Methodology is consistent with the Electricity Authorities Distribution Pricing Principles: refer Appendix III.

Appendix I – Pricing Statistics

Statistics of Customer Groups

	Residential	General	11kV	11kV Non Standard	Total
Customer Numbers	21,235	5,434	7	2	26,678
Units (kWh)	158,347,115	143,249,059	15,472,146	66,865,069	383,933,389
Transformer kVA	127,410	97,838	4,657	14,500	244,405
11kV Demand (kVA)	30,813	25,587	2,665	2,939	62,004
RC 11kV Assets (\$)	45,554,178	37,826,949	3,939,954	1,923,087	89,244,169
RC 400V Assets (\$)	36,827,962	28,854,216	386,472	-	66,068,649

Allocation Factors for Standard Customer Groups

	Residential	General	11kV	11kV Non Standard	Total
Customers	79.60%	20.37%	0.03%		100.00%
Units (kWh)	49.94%	45.18%	4.88%		100.00%
Transformer kVA	55.42%	42.56%	2.03%		100.00%
11kV Demand (kVA)	52.17%	43.32%	4.51%		100.00%
RC 11kV Assets (\$)	52.17%	43.32%	4.51%		100.00%
RC 400V Assets (\$)	55.74%	43.67%	0.58%		100.00%

Fixed and Variable Charges

	Residential \$	General \$	11kV \$	11kV Non Standard \$	Total \$
Fixed	1,162,616	1,534,811	407,610	1,284,743	4,389,780
Variable	13,647,755	11,539,141	655,052	-	25,841,948
Total	14,810,371	13,073,952	1,062,662	1,284,743	30,231,728

Fixed and Variable Charges Percentages

	Residential	General	11kV	11kV Non Standard	Total
Fixed	8%	12%	38%	100%	15%
Variable	92%	88%	62%	0%	85%
Total	100%	100%	100%	100%	100%

Appendix II - Allocation Factors 2019/20

Allocation Factor		Definition	Factor Name
Customer Numbers		Number of ICPs in each consumer category as a percentage of total number of ICPs.	%Consumers
	Residential	21,235	79.60%
	General	5,283	19.80%
	400V Capacity	23	0.09%
	Unmetered supplies	120	0.45%
	Street lights	8	0.03%
	11kV Standard	7	0.03%
	11kV Non-Standard	2	0.01%
	Total	26,678	100.00%
Consumption		Metered consumption plus allocated network losses (voltage dependent) per consumer category as a percentage of total consumption and network losses.	%Consumption
	Residential	158,347,115 kWh	41.24%
	General	109,343,443 kWh	28.48%
	400V Capacity	32,161,226 kWh	8.38%
	Unmetered supplies		
	Street lights	1,744,390 kWh	0.45%
	11kV Standard	15,472,146 kWh	4.03%
	11kV Non-Standard	66,865,069 kWh	17.42%
	Total	383,933,389 kWh	100.00%
AMD		Anytime Maximum Demand either metered or estimated per consumer category as a percentage of the total of all estimated/metered AMDs.	%AMD
	Residential	127,410 kVA	52.13%
	General	84,731 kVA	34.67%
	400V Capacity	12,709 kVA	5.20%
	Unmetered supplies		
	Street lights	398 kVA	0.16%
	11kV Standard	4,657 kVA	1.91%
	11kV Non-Standard	14,500 kVA	5.93%
	Total	244,405 kVA	100.00%

CMD	Measured or estimated contribution of each consumer category to the average of the 100 coincident peaks in the Upper North island as defined by Transpower.	%CMD
Residential	30,813 kVA	49.70%
General	20,492 kVA	33.05%
400V Capacity	4,749 kVA	7.66%
Unmetered supplies		
Street lights	346 kVA	0.56%
11kV Standard	2,665 kVA	4.30%
11kV Non-Standard	2,939 kVA	4.74%
Total	62,004 kVA	100.00%

Appendix III – Non Standard 11kV Pricing

Line Charging Methodology – Non Standard

The Non Standard Methodology is used when ICPs have assets allocated for the sole or primary use of the Customer from a Transpower GXP to the ICP's 11kV metering point.

This methodology applies to two 11kV customers with effect from 1 April 2019.

There is no difference in Waipa Networks obligations and responsibilities between non standard and standard customers when the supply of electricity to the customer is interrupted.

Waipa Networks Methodology for Allocating Transpower Charges

Dedicated switching assets costs including maintenance and operation are allocated 100% to the Customer.

Other connection assets costs including maintenance and operation are based on the ratio of the Customers average 12 Anytime Maximum Demands to the average 12 Anytime Maximum Demands at the relevant GXP at 11,000 volts (%AMD).

Interconnection costs are allocated on basis of coincident demand to the 100 peaks as defined by Transpower (%CMD).

All Transpower costs are recovered as a fixed monthly charge.

This passes on transmission charges in a direct and transparent fashion which provides efficient pricing signals to customers. The customer meets the full costs of connection at and supply from the Transpower GXP, there are no benefits or costs if the customer were to take a direct supply from Transpower.

This meets all the pricing methodology requirements of the Commerce Commission and Electricity Authority.

Waipa Networks Charges

All Waipa network assets have been provided in full consultation with the customer and provide the degree of future proofing the customer desired and was willing to pay for. Charges are based on value of the assets provided.

Maintenance charges are based on the Replacement Cost as used by the Company for all 11,000 volt assets.

Operations and Overheads are charged on an agreed formula that reflects the customer's impact on the activities covered by these charges.

All Waipa Network costs are charged as a fixed monthly fee.

The non-standard Line Charging Methodology is consistent with charges to all other Waipa Network customers and the Electricity Authorities Distribution Pricing Principles.

Appendix IV – Consumer Group Revenue Information

Waipa Networks Target Revenue by Price Component

	Tariff c/kWh	Revenue \$
Residential		
All Inclusive ¹	9.07	3,740,701
Uncontrolled	10.10	9,306,934
Controlled	2.13	501,042
Night only	1.45	9,119
Peak	14.95	77,370
Off Peak	1.45	2,655
Shoulder	9.55	9,934
Peak (All Inclusive) ¹	13.92	0
Off Peak (All Inclusive) ¹	1.45	0
Shoulder (All Inclusive) ¹	8.52	0
Fixed Daily Charge	15.00	1,162,616
Total Residential		14,810,371
General		
Uncontrolled	10.10	8,780,973
Controlled	2.13	274,105
Night only	1.45	12,943
Peak	14.95	690,548
Off Peak	1.45	30,656
Shoulder	9.55	122,420
BTS	11.35	71,119
Street Lights	9.10	158,739
Fixed Daily Charge	30.00	579,365
Unmetered Daily Charge	105.00	46,866
Total General		10,767,734
400V kVA Capacity Contract²		
Peak	6.26	744,040
Off Peak	1.45	113,573
Shoulder	4.34	540,025
Capacity Charge ² (per kVA)	\$6.71	908,580
Total 400V kVA Capacity Contract		2,306,218
11 kV Contract		
Peak	5.62	332,232
Off Peak	1.45	54,974
Shoulder	3.95	227,886
Service Charge (per month)	\$44.00	3,696
Demand Charge ² (per kVA/month)	\$7.52	403,914
Transformer Rental (per kVA/month)	55.50	39,960
Total 11 kV Contract		1,062,662
Non-Standard Customers		
Fixed Charge		1,284,743
Total revenue		30,231,728

¹ Requires water heating to be subject to ripple control; tariff closed to new customers since October 2001. New customers with ripple control water heating to have separate meters for Controlled and Uncontrolled usage.

² Minimum charge for 70 kVA applies.

Appendix V – Customer Consultation

Customer Consultation

Price versus Quality

Waipa Networks employs a number of methods to consult with customers:

- Annual customer survey
- Public meetings
- Customer Helpdesk and Website feedback forms.
- Social Media
- Complaints Resolution Process
- Membership of the Electricity Networks Association's Consumer Engagement Working Group (CEWG).

Annual Customer Survey:

Waipa's primary method of consultation with customers is an independent annual customer survey. The survey takes place midyear and consists of 400 telephone interviews with randomly selected customers. The overall results have a margin of error of +/- 4.8% at the 95% confidence level.

For analysis purposes, each customer/ICP is assigned one category from each of the following four consumer groupings:

- Grid Exit Point:
 - Te Awamutu
 - Cambridge.
- Feeder Type:
 - Urban Te Awamutu
 - Rural Te Awamutu
 - Urban Cambridge
 - Rural Cambridge.
- Tariff Type:
 - Residential
 - General

Grid Exit Point / Feeder Type have been identified as key indicators and quotas are enforced to ensure the survey sample reflects the population mix.

Some key results from the surveys:

- Customer satisfaction consistently exceeds 90%.
- On Price versus Quality, the 2018 survey found the following:
 - When customers were asked to think of the last time they had a power cut, 58% were not prepared to pay any extra to reduce the likelihood of it happening again.
 - Only 5% were prepared to pay extra;
 - 37% were unsure.

- Our Consultation has consistently shown that customers prefer that all customers pay the same regardless of the fact it cost more to supply rural customers than urban ones.

Public Meetings:

Several years ago we held some “proactive” public meetings in key locales across our Network for customers to discuss aspects of our operations, including price and quality. Despite the meetings being widely publicised and scheduled outside business hours we only had two attendees in total. This again was perhaps reflective of the high satisfaction rating and reasonable pricing, and proactive meetings were abandoned as a result.

Customer Helpdesk and Website Feedback Forms:

Waipa Networks maintains toll free numbers for customers to contact us regarding any issue of our operations. We also maintain e-mail contact details of key staff on our corporate website, and a feedback form for customers to use.

Fault calls and their resolution are recorded in the Company database. Network faults are analysed and reported to the Board.

Social Media

We created Social Media accounts on Facebook and Twitter in late 2015 and have found customers are increasingly using these as an information tool and feedback mechanism. The accounts are only monitored during business hours with afterhours queries being responded to the next business day. We expect to continue expand the use of Social Media as a communication tool in the coming year.

Complaints Resolution Process:

The Company operates a Complaints Resolution Process in accordance with the Utilities Disputes Ltd requirements. All complaints are assigned a case manager and complainants are fully involved and informed on the progress of their complaint.

Complaints are analysed by complaint type and customer type. Pricing-related complaints typically make up less than 1% of complaints received and are often motivated by the Retail price paid more than Waipa Network’s charges.

Consumer Engagement Working Group (CEWG)

The CEWG was formed by the Electricity Network’s Association in late 2016 and Waipa Networks is represented on the group. Through this membership we expect to help develop a standardised engagement strategy for EDBs and apply this to our own Network.

Trust Ownership:

The company is owned by a consumer trust which is elected by consumers once every three years. The Company meets with the Trust at least twice a year and receives feedback on its performance and the desires of the community regarding prices and service levels.

The Trust holds public Annual Meetings each year at which consumers are given the opportunity to ask questions of both the Trust and the Company. There are usually questions from the floor regarding progress on a second supply for Te Awamutu. Occasionally the Company is asked why there is no policy to underground street reticulation.

Underground versus Overhead Reticulation:

From time to time a local community has discussed with the company their desire to improve their environment by placing overhead lines underground. On only one occasion has the community group been prepared to make a small contribution to make this happen. Past annual surveys have shown there is generally no interest in undergrounding distribution lines if this will increase charges.

District Councils:

Discussions are held with the Waipa and Otorohanga District Councils from time to time concerning projects they are undertaking and supply quality overall.

Appendix VI- Electricity Authority Pricing Principles

Electricity Authority Pricing Principles

<p>a) Prices are to signal the economic costs of service provision, by:</p> <ul style="list-style-type: none"> i) being subsidy free (equal to or greater than incremental costs, and less than or equal to standalone costs), except where subsidies arise from compliance with legislation and/or other regulation; ii) having regard, to the extent practicable, to the level of available service capacity; and iii) signaling, to the extent practicable, the impact of additional usage on future investment costs. 	<p>Costs are allocated fairly and transparently to Consumer Categories. The rationale is described on page 11.</p> <p>Non Standard customers neither give nor receive cross subsidies as demonstrated in Appendix III.</p> <p>Waipa's treatment of small low voltage customers is designed to avoid arbitrage between tariffs and avoids cross subsidies between them as demonstrated on page 13. Other customers face the costs of supply in a fairly and transparently without subsidy as demonstrated on page 14.</p> <p>Small customers face increasing costs with increased usage.</p> <p>Larger customers face increased charges based on their increase in demand.</p>	<p>Complies</p>
<p>b) Where prices based on 'efficient' incremental costs would under recover allowed revenues, the shortfall should be made up by setting prices in a manner that has regard to consumers 'demand responsiveness' to the extent practicable.</p>	<p>Small consumers' prices have been influenced by legislation requiring minimal fixed daily charges and increased variable charges for small residential consumers as described on page 13.</p> <p>This provides an incentive for customers to manage their overall consumption this is easier for these customers to achieve than limit their maximum demand on the network at peak times which may be driven by a single large appliance.</p>	<p>Complies</p>
<p>c) Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to:</p> <ul style="list-style-type: none"> i) discourage uneconomic bypass; ii) allow fair negotiation to better reflect the economic value of services and enable 	<p>The use of a cost allocation model which ensures a price is set at (Non Standard 11kV Consumers) or below a stand-alone price for all other consumers as they share the costs of supply with a large number of other consumers.</p> <p>Larger consumers have a choice of tariffs:</p> <ul style="list-style-type: none"> • Load control provides a price/ quality option; 	<p>Complies</p> <p>Complies</p>

<p>stakeholders to make price/quality trade-offs or non-standard arrangements for services; and</p> <p>iii) where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives (e.g. distributed generation or demand response) and technology innovation.</p>	<ul style="list-style-type: none"> • Larger consumers can elect from demand and time of use options; • Non Standard arrangements are available to large stand alone consumers. <p>There are no impediments to the connection of small scale distributed generation (page 9).</p> <p>Large scale generation would be on an individually negotiated basis taking into account network conditions at the point of connection including possible savings in network assets where the generator is sufficiently secure for this to happen.</p>	<p>Complies</p>
<p>d) Development of prices should be transparent, promote price stability and certainty for stakeholders, and changes to prices should have regard to the impact on stakeholders.</p>	<p>There were been no changes to the tariff structure between 1 October 2001 and 31 March 2016.</p> <p>The introduction of the advanced uncontrolled tariff has been discussed with electricity retailers and their feedback incorporated. The new tariff will be introduced between 2016 and 2021 to allow sufficient time for all stakeholders to understand the impact of the change.</p>	<p>Complies</p>
<p>e) Development of prices should have regard to the impact of transaction costs on retailers, consumers and other stakeholders and should be economically equivalent across retailers.</p>	<p>Waipa Networks tariff structure is simple, limited to fixed daily and variable consumption tariffs for all but a small number of the largest consumers.</p> <p>All posted tariffs apply equally and without discrimination to all customers and all retailers.</p>	<p>Complies</p>

Glossary

AMD	Anytime Maximum Demand	the maximum demand (load) placed on the network by a customer or consumer group.
CMD	Coincident Maximum Demand	The maximum demand (load) placed on the network coinciding with the 100 highest peaks on Transpower's Grid in the Lower North Island.
CPI	Consumer Price Index	a measure of the increase in cost of a basket of goods typically consumed by a domestic household. A measure of general household inflation
EDB	Electricity Distribution Business	Waipa Networks is an EDB
GXP	Grid Exit Point	the place where the EDB's network is connected to Transpower's national grid
ICP	Installation Control Point	the customers point of connection to the Waipa's Network.
kV	Kilo-Volt = 1,000 Volts	a measure of electrical pressure or voltage
kVA	Kilo-Volt Ampere	a measure of power, is used to rate transformers and other electrical equipment used on electricity distribution networks
kW	Kilo-Watt	a measure of electrical power
kWh	Kilo-Watt hour	a measure of electricity consumption. Equals one kilowatt being consumed for one hour
ODV	Optimised Depreciated Value	a regulatory measure used to value electricity network assets. The ODV Handbook is a guide issued by the Commerce Commission.
RC	Replacement Cost	
V	Volt	a measure of electrical pressure or voltage