Waipa Networks Ltd

Pricing Methodology 2022

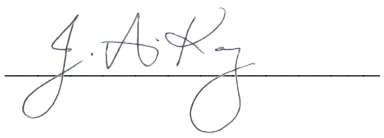
14.8 Schedule 17: Certification for Year-beginning Disclosures

Clause 2.9.1 of section 2.9

We, Jonathan Kay and Michael Marr, 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.



Jonathan Kay

Michael Marr

25 February 2022

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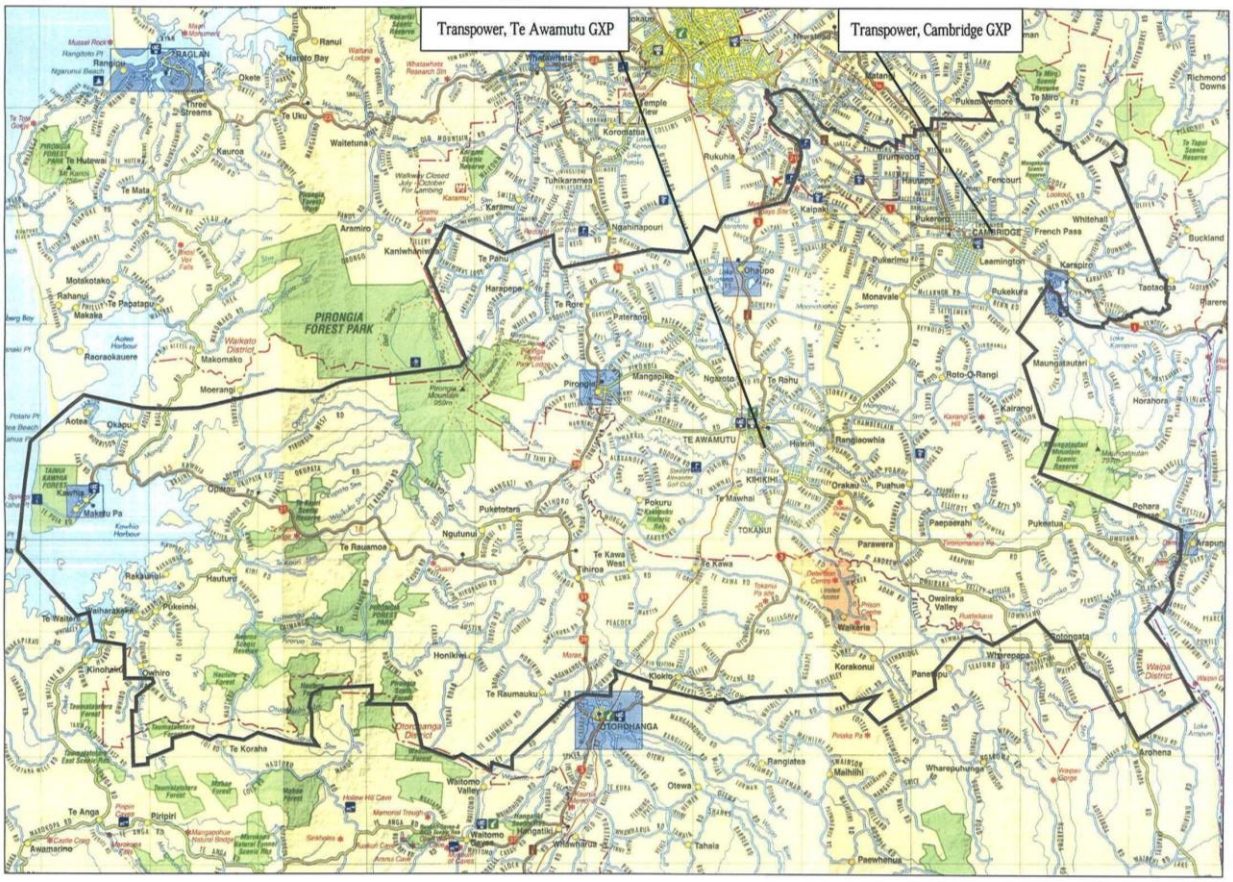
Introduction

Waipa Networks Limited (Waipa) is the company responsible for distributing electricity to an area of approximately 1,865 square kilometers, servicing more than 28,000 customers; over 2,268km 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 2022/23 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.

Objectives

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 costs;
- To allocate costs fairly between consumer groups;
- To establish a practical range of pricing options;
- 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; and
- To outline our transition to more cost-reflective pricing.

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; and
- The rationale and method used to determine the proportions of charges which are fixed and the proportions which are variable.

Overview of Methodology

The 2022/23 pricing methodology reflects a transitional period for Waipa Networks. We have recently completed an external review of our pricing to improve key pricing models and inputs and align our pricing strategy and structures more closely with the Electricity Authority's pricing principles and recent feedback provided in its review of our pricing methodology. We have taken a staged approach to implementing the recommendations in the external review to minimise price shock and any potential customer confusion around increasing complexity, while still ensuring momentum towards more cost reflective pricing.

Our key pricing adjustments for 1 April 2022 are as follows:

- Network prices have increased to recover a 7% increase in target revenues;
- Fixed Daily Prices for Residential and General customers have doubled reflecting the recently announced phase out of the LFC regulations, but consumption charges have generally decreased; and
- TOU pricing will be mandatory for all Residential and General consumers with advanced metering.

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 sets revenue to recover budgeted costs.

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 although costs will continue to be assessed should any differential be significant enough to justify increased complexity for customers.

The company budgets to rebate to customers $4,650,000 in the 2022/2023 year via two instalments. The company will also be rebating to customers any actual Transpower loss rebates received.

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.

Transpower charges can increase or decrease from year to year in response to investment in the National Grid and the costs allocated to each Electrical Distribution Company. These charges have been passed through in the year in which they are charged and have been responsible for increases in Waipa's line charges in those years.

Transition to Time of Use (Peak/Off Peak/Shoulder) & More Cost-Reflective Pricing

As indicated in the section on Consumer Categories, customer use of the network is changing in response to uptake of new technologies (eg solar PV) and 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. Moving customers to these plans will encourage efficient use of the Network and therefore assist in efficient capital investment in the Network.

The plan in 2016 was to transition customers from existing pricing plans to new Peak/Off Peak/Shoulder plans over the subsequent 4 years. Retailer consultation and review at each stage has seen the timetable refined and pushed out to 6 years:

Effective Date	Detail
1 April 2016 (*Completed*)	Advanced Uncontrolled plan introduced. Available to all ICPs with Advanced Metering. Compulsory for all existing ICPs with Time of Use (HHR) metering. Generation Export plan introduced. Compulsory for all ICPs with Distributed Generation. Existing Day/Night plan (WAx6 and WAx7) closed to new ICPs.
1 April 2017 *(Completed)*	Advanced Uncontrolled plan compulsory for all ICPs with Distributed Generation. Existing Uncontrolled plans (WAx2) closed – No ICPs may change to this plan. New requirements around 400V Capacity Contract. Existing Day/Night plan eliminated. New BTS price plan created for use during construction phase only.
1 April 2019 *(Completed)*	Advanced All Inclusive plan introduced as an option for All Inclusive ICPs with AMI.
1 April 2022	Advanced Uncontrolled or Advanced All Inclusive compulsory for all ICPs with advanced meters.
2022/23	Review Time of Use implementation and refine as necessary. Consultation with Electricity Retailers and customers around potential future pricing options.

Capital Contributions:

Capital contributions for new connections or upgrades are charged in accordance with our published Capital Contributions Policy available on our website.

Cost Categories

EDBs costs include:

- Transmission charges
- A return on capital employed
- Maintenance of assets
- Operations and overheads
- Pass through costs (excluding Transpower)
- Depreciation on assets

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.

Return on capital employed:
This is the return on investment (pre-tax) 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.

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.

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.
We demonstrate how our pricing methodology is consistent with the Electricity Authority's pricing principles in Appendix V.

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 categorised as being either:
- Residential,
- General,
- 400V Capacity Contract, 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 30 cents (as part of the staged phasing out of the LFC restrictions).

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.

<u>Small Scale Distributed Generation:</u>

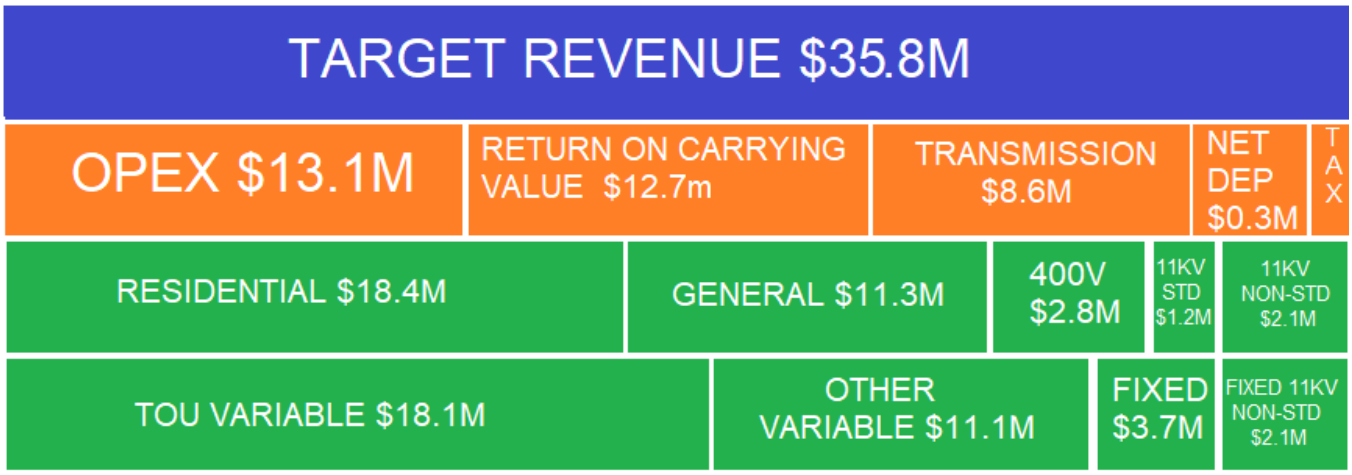
Waipa does not currently distinguish ICPs with small scale (<10kW) generation.
The number of ICPs with distributed generation on the Network is relatively small and almost entirely PV. The Network capacity required to supply these ICPs is the same as those without PV, however the reduced revenue from 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.

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.

Cost Allocations

The following diagram shows how costs are allocated across the various consumer groups.



2021 Pricing Review

As part of Waipa's external pricing review a cost of supply model was developed to disaggregate the cost of supplying electricity to different customer groups. The purpose of this was to understand any potential cross subsidisation between different customer groups. While many of the recommendations in the review were adopted and are represented in this Methodology, the Company has decided to consider a shift to the cost of supply model in the next pricing year rather than the current one. With the shift to TOU affecting a significant number of customers it was decided that deferring the cost of supply model would allow customers to better understand TOU versus previous plans, while also minimising any potential price shock.

Consumer Charges

Consumer charges are composed of fixed and variable portions.

Fixed daily charges were increased in accordance with the easing of LFC restrictions and the remainder were allocated across variable prices based on the previous year's proportions.

Residential and General Consumers

Government legislation has capped fixed line charges at 30 cents per day for Residential Consumers using 8,000kWh per annum or less (up from 15 cents per day in previous years). This reflects year 1 of the Government's 5 year phase out of the LFC regulations. The Company has traditionally applied the LFC cap to all Residential customers however the 2021 external review recommended the group of users above 8000kWh be separated out with a higher more cost-reflective fixed daily charge. The Company is considering implementing this recommendation for the 2023/4 pricing year.

We have increased the General Fixed Daily Charge to 60 cents to maintain the proportionality with Residential.

Cost analysis carried out as part of an external review indicated minor cross subsidies between the Residential and General groups however not significant enough to justify a change in pricing structure at this stage. Given the shift to TOU as well as changes being made due to the easing of LFC restrictions it was decided that adding a potential structure change in the current would have been too cumbersome for customer and this will be revisited at the next pricing review.

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 and Electricity Retailer Consultation

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

The results of consultation suggest our pricing strategy is easily understood, has a high level of community acceptance and there has been little interest in introducing added complexity. With customers supporting price parity (through the Annual Customer Survey) there has been 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 recognized 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 also consulted with Electricity Retailers at that time and published a Pricing Roadmap on our website and carried out further consultation at each stage of the roadmap. The Roadmap was modified on several occasions based on that feedback. In the latest consultation round with Electricity Retailers (September 2021) we consulted with Retailers about the implementation of the last part of our transition to TOU pricing. We received feedback from around a quarter of Retailers who were generally supportive of the transition on the proviso that exemptions were granted for ICPs that met criteria. These were agreed and with the last part of the transition to TOU now complete, the next part of consultation will be reviewing the success of TOU implementation along with any challenges that arose.

We will also consult with Electricity Retailers and customers on potential future pricing options.

The Electricity Retail market has always provided challenges for EDBs 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 TOU 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.

Appendix I – ICP and Consumption Forecasts

	Definition	
Customer Numbers	Estimated number of ICPs in each consumer category as a percentage of total number of ICPs.	%Consumers
Residential	22,698	80.78%
General	5,185	18.45%
400V Capacity	58	0.21%
Unmetered supplies	127	0.45%
Street lights	18	0.06%
11kV Standard	8	0.03%
11kV Non-Standard	3	0.01%
Total	28,097	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	176,953,363 kWh	43.63%
General	109,190,820 kWh	26.92%
400V Capacity	35,254,680 kWh	8.69%
Unmetered supplies		
Street lights	471,435 kWh	0.12%
11kV Standard	15,985,906 kWh	3.94%
11kV Non-Standard	67,705,631 kWh	16.69%
Total	405,561,835 kWh	100.00%

Appendix II – 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 three 11kV customers with effect from 1 April 2022.

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 III – Consumer Group Revenue Information

Residential	Units actual 31/03/2021	FY23 prices Distribution	FY23 prices Transmission	WNL revenue	Transmission revenue	Total price	Total revenue	% price change
All inclusive	37,626,541	6.31	2.94	291,147	135,745	9.26	426,892	0%
Uncontrolled	98,882,103	7.07	3.23	931,885	426,424	10.30	1,358,309	0%
Controlled	23,065,639	1.66	0.46	51,116	14,100	2.12	65,216	-2%
Night only	1,023,770	1.02	0.46	1,400	628	1.48	2,028	0%
Peak	4,098,766	10.63	4.56	3,408,821	1,462,245	15.19	4,871,065	0%
Off peak	2,268,495	1.02	0.46	288,884	129,671	1.48	418,555	0%
Shoulder	2,932,933	7.09	2.51	4,367,447	1,544,995	9.60	5,912,442	-1%
Peak (all inclusive)*	56,948	9.88	4.27	878,623	379,834	14.15	1,258,456	0%
Off peak (all inclusive)*	35,877	1.02	0.46	80,128	35,967	1.48	116,095	0%
Shoulder (all inclusive)*	48,913	6.34	2.22	1,082,972	379,091	8.56	1,462,063	-1%
BTS	-	8.17	3.33	-	-	11.50	-	-1%
Daily Fixed Price	22,340	30.00	0.00	2,542,756	-	30.00	2,542,756	100%
TOTAL RESIDENTIAL	**170,039,985**	**NA**	**NA**	**13,925,178**	**4,508,701**	**NA**	**18,433,879**	

General	Units actual 31/03/2021	FY23 prices Distribution	FY23 prices Transmission	WNL revenue	Transmission revenue	Total price	Total revenue	% price change
Uncontrolled	86,775,514	7.07	3.23	2,026,419	927,276	10.30	2,953,695	0%
Controlled	10,747,538	1.66	0.46	57,974	15,992	2.12	73,965	-2%
Night only	479,672	1.02	0.46	1,578	709	1.48	2,287	0%
Peak	2,211,520	10.63	4.56	2,113,772	906,722	15.19	3,020,494	0%
Off peak	1,575,044	1.02	0.46	177,980	79,890	1.48	257,870	0%
Shoulder	2,252,421	7.09	2.51	2,799,042	990,168	9.60	3,789,210	-1%
BTS	244,558	8.17	3.33	6,847	2,790	11.50	9,637	-1%
Street lights	1,392,577	6.39	2.88	30,118	13,595	9.27	43,713	0%
Daily Fixed Price (standard)	5,104	60.00	0.00	1,161,922	-	60.00	1,161,922	100%
Fixed unmetered supply	127	108.61	0.00	34,573	-	108.61	34,573	0%
TOTAL GENERAL	**105,678,843**	**NA**	**NA**	**8,410,225**	**2,937,140**	**NA**	**11,347,365**	

400V Capacity contracts	Units actual 31/03/2021	FY23 prices Distribution	FY23 prices Transmission	WNL revenue	Transmission revenue	Total		% price change
Peak	12,492,803	4.53	2.44	565,521	305,297	6.97	870,818	10%
Off peak	8,676,729	1.17	0.45	101,660	38,738	1.62	140,398	9%
Shoulder	12,981,305	3.38	1.43	438,306	186,070	4.81	624,376	10%
Controlled	960,171	1.91	0.45	18,306	4,287	2.35	22,593	8%
Capacity charges	11,973	5.07	2.44	742,256	357,775	7.51	1,100,031	
TOTAL GENERAL	**35,122,981**	**NA**	**NA**	**1,866,049**	**892,167**	**NA**	**2,758,216**	

11kV Contract	Units actual 31/03/2021	FY23 prices Distribution	FY23 prices Transmission	WNL revenue	Transmission revenue	Total		% price change
Peak	5,953,080	4.41	1.66	262,543	98,763	6.07	361,306	3%
Off peak	4,154,204	1.34	0.28	55,518	11,436	1.61	66,954	9%
Shoulder	5,811,206	3.41	0.96	198,392	55,993	4.38	254,385	6%
Service charge ($ /mth)	8	55.50	0.00	5,328	-	55.50	5,328	21%
Demand price ($/kVA/mth)	5,060	6.27	1.82	380,625	110,404	8.09	491,029	5%
Excess demand price ($/kVA/mth)	-	9.14	2.33	-	-	11.47	-	7%
Transformer rental (c/kVA/mth)	6,700	68.64	0.00	55,189	-	68.64	55,189	20%
TOTAL GENERAL	**15,930,258**	**NA**	**NA**	**957,594**	**276,597**	**NA**	**1,234,191**	

Appendix IV – Customer Consultation

Customer Consultation

Price versus Quality

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

- Annual customer survey
- Customer Helpdesk and Website feedback forms.
- Social Media
- Complaints Resolution Process
- Membership of the Electricity Networks Association's Consumer Engagement Working Group (CEWG) & Distribution Pricing Working Group (DPWG).
- Membership of the Northern Energy Group and its Pricing and Communications subcommittees.

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 is good at 58%. This was measured differently in 2021 to previous years using the Customer Value Management model as opposed to a "how satisfied are you" type question. Although the result is a significant drop from the previous mid-90% result the model provides more useful outputs.
- On Price versus Quality, the 2021 survey found the following:

- When customers were asked to think about current reliability levels, 87% wanted service levels to remain at current levels.
  - Only 10% wanted to pay extra for improved service;
  - 3% wanted to pay less with reduced service levels.
- Our Consultation has consistently shown that the majority of customers prefer that all customers pay the same regardless of the fact it costs more to supply rural customers than urban ones.

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 to 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.

Distribution Pricing Working Group (DPWG)

The DPWG was formed by the Electricity Network's Association in 2014 and Waipa Networks is represented on the group. The Company's representative in this group is also a member of the CEWG benefiting in particular the consultation component of the transition to more cost reflective pricing.

Northern Energy Group (NEG)

The NEG is a group of North Island EDBs that collaborate on a range of customer, pricing and regulatory matters. For 1 April 2022 Waipa Networks has aligned our TOU time periods with other members to assist in Retailer and customer uptake. The pricing subcommittee this year is also working on standardisation of pricing codes and structures, while also investigating potential new price plan options in response to DER.

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 point 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, Waikato and Otorohanga District Councils from time to time concerning projects they are undertaking and supply quality overall.

Appendix V – Electricity Authority Pricing Principles

Disclosure of pricing methodologies	**(a)**	Prices are to signal the economic costs of service provision, including by:	**Commentary**
	(i)	being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs);	This principle asserts that prices are subsidy free and economically efficient for each consumer group where consumer lines charges fall between Avoidable Costs and Standalone Costs. Various features of our pricing approach support pricing within this subsidy range: • allocating costs fairly and transparently to consumer categories. Prices are calculated using allocators that are reflective of economic costs of serving different consumer groups (eg demand and connections). The rationale is described on page 13. • non standard customers pay at least their incremental costs of connecting to the network. • Consumer charges generally increase in-line with connection capacity and use of the network at peak times. This broadly aligns costs to Standalone estimates ensuring customers face the costs of supply fairly and transparently without subsidy. We have recently completed a review of pricing quantifying Standalone Costs and Avoidable Costs and the economic costs of servicing each consumer group. This will be shared in our future pricing methodology disclosures as work progresses. In the meantime, we set out below our high level assessment of how our pricing aligns to these measures.

Standalone costs

Standalone costs represent the annualised cost that a group of consumers would incur to supply their energy needs from alternative energy sources. Practically this would be the cost of an "off-grid' energy solution. The Electricity Authority's (the Authority) pricing practice note provides guidance that Standalone Costs should be based on micro grid solutions where groups of consumers share energy resources. Using today's technology, off-grid micro-grid solutions might typically include a combination of Solar Photovoltaics (Solar PV), batteries, gas as a heating and cooking fuel, and diesel backup generation.

The Ministry of Business Innovation and Enterprise quarterly survey of electricity prices suggests average residential retail charges are 29.25c per kWh, of which lines charges comprise about 30% of the average retail bill. We understand that the per unit cost of a micro-grid scheme capable of serving a group of typical residential consumers is much higher than this average price. The cost of going off-grid for larger consumers is even higher, if not prohibitive, due to the desire to have high levels of security of supply to meet their energy needs.

Avoidable costs

The Authority's practice note describes Avoidable Cost as the annualised cost that would be avoided if a consumer group was no longer served (while still supplying all other remaining groups). If a consumer group is charged less than avoidable cost, it would be beneficial to stop supplying that consumer group as revenue would not cover avoidable costs.

Consistent with the Authority's practice note, avoidable costs include short-term variable cash costs, such as repairs and maintenance, billing and customer service costs, future avoidable capex, and transmission charges. Network asset costs are excluded as they are fixed in nature and are not avoided if a consumer group disconnected from the

			network. We consider that prices are likely to be much higher than avoidable cost for the following reasons: • Avoidable costs are likely to be low. For example, non-network operating costs comprise about 16% of our total costs and are the majority of avoidable costs. The addition of other non-asset related costs such as maintenance, transmission and pass-through costs increases this to 53%, however not all of these costs are avoidable. This is because a significant base level of business support, maintenance and transmission costs would be incurred in serving remaining consumers. • It is unlikely that any one pricing group would not be making a contribution to avoidable costs through the combination of fixed and variable prices. o Fixed charges comprise about 13% of prices and are likely to recover a significant proportion of avoidable costs. o Variable charges, even at low levels of usage, are likely to recover the remaining proportion of avoidable costs.
	(ii)	reflecting the impacts of network use on economic costs;	We have developed new pricing structures that better signal to consumers the economic costs of using different network assets. As consumers move to these advanced pricing structures over time, our pricing will become more reflective of economic costs. A key consideration is the significant recent growth in connections and peak demand on our network. This is putting strain on the network during peak times and in maintaining power quality to rural customers. The investment costs of installing additional capacity to serve future peaks and improve power quality are significant. In the last 6 years we have moved to pricing structures that provide sharper signals of the cost of providing peak capacity in the network and which encourage consumers to shift load to off-peak periods when the cost to serve is lower. This is a key reason for why

			we have made TOU pricing mandatory for all Residential and General consumers with advanced metering. Other drivers of economic costs include circuit length and voltage and connection capacity. We have decided not to distinguish consumers by circuit length or density (eg through rural/urban or GXP groupings) as our consumer research shows a preference to have no differentiation for rural connections. Our recent pricing review also found that the cost to serve the Te Awamutu and Cambridge GXPs was currently similar. This may change in coming years, due to planned investments in the Cambridge West GXP, and will continue to be monitored. Our pricing structures have regard to the impact of network use on economic costs as follows: • **Use of peak network capacity –** Advanced Time of Use (TOU) pricing is available for the Residential, General and 400V pricing groups. Higher prices are applied at the peak time periods of 7am to 9:30am and 5:30pm to 8pm and lower prices during off-peak and shoulder time periods. This encourages efficient use of network capacity. Consumers are charged more for using assets during high cost peak periods or are rewarded for reducing or shifting their consumption to lower cost periods. Demand based prices are applied to 11kV connections and include an excess demand charge. Similar to TOU pricing, demand based prices reflect a consumer's maximum anytime use of capacity and therefore signal the cost of using additional capacity in the network. Further work is required to fine tune the ratios applied between peak, off-peak and shoulder prices and the levels of demand charges against the economic costs of providing network capacity at peak times. • **Connection voltage -** Pricing groups are distinguished by their connection voltage. Consumers either receive a low voltage (400V) or distribution (11 kVA) voltage service. Prices for 400V connections are allocated costs associated with

providing low voltage assets.

- **Connection capacity -** Differences in connection capacity costs are reflected in the 400V pricing category, through kVA capacity charges. Differences in connection capacity is also recognised through structuring pricing groups by typical connection sizes (eg residential, >70kVA).

- **Night only -** A night only pricing option applies discounted prices to permanently wired and separately metered equipment that is predominantly used at night. Night store heaters are a common example. This equipment can be controlled to only run during off-peak night periods, encouraging consumers to use network capacity during off-peak periods when the cost of network use is low.

- **Load control -** Discounted pricing is applied to all low voltage connections that offer up interruptible hot water heating load. This signals network cost savings that are realised from shifting consumption away from network peaks and during security of supply events.

- **Use of dedicated equipment -** Transformer rental charges are applied to 11 kVA connections to reflect the costs of providing dedicated transformers to these consumers.

- **Non-standard customers -** Non-standard customers are those with dedicated assets connected to a Transpower GXP from their individual 11kV metering point. The three non-standard customers are priced to reflect the limited use of the distribution network. Transmission charges are also passed on directly.

- **Streetlights -**Street lighting is generally non-metered and consumption is calculated based on hours of operation and lamp wattage. Street lights are charged based on estimated kWh consumption. The streetlight charges seek to directly recover the cost of streetlight specific assets.

- **Generation** – The costs of providing export services are recognised through a generation export charge, and the TOU charges which better reflect the cost of providing capacity in the network for these customers.

	(iii)	reflecting differences in network service provided to (or by) consumers; and	The key service provided is access to the network. Distinctions are made between different consumer service categories by connection capacity, asset use, quality of supply, and use of the network during peak periods as follows: • **Connection capacity -** Differences in service capacity are reflected in the pricing groups, the connection voltage, and explicitly in 400V pricing of kVA capacity. • **Time of use pricing -** Higher prices are charged at peak periods to reflect the cost of providing access services at periods of network congestion. • **Load control -** Consumers can choose an uninterrupted service (ie Uncontrolled) or a service where hot water load can be interrupted by the network for use in managing the network (Controlled). • **Non-standard customers -** Non-standard customers, primarily large connections connected to a GXP via an 11 kVA circuit, can negotiate specific services that are relevant to their circumstances. • **Non-metered -** The service that streetlights and other unmetered loads receive reflects their use of network assets, captured in a separate pricing category • **use of dedicated equipment** – rental services associated with dedicated transformers are reflected in 11 kVA pricing. Other asset and equipment requirements are reflected in industrial pricing and the network connections policy. • **generation** – customers that require generation network-export services are charged separately through the generation export charges.

	(iv)	encouraging efficient network alternatives	• Network pricing should encourage efficient investments in alternatives to the network provided. • Small scale distributed generation such as roof-top Solar Photovoltaic (Solar PV) is the main network alternative to grid connected electricity. The number of distributed generators connected to the network is relatively limited and is almost entirely solar PV. Natural gas and LPG energy sources are also a partial substitute for electricity. • Although investments in Solar PV are encouraged on our network, this generation load is not typically available to reduce demand at the network peak when our cost to serve is highest, for example a winter evening. Anytime consumption charges encourage inefficient investments in Solar PV as consumer charges decrease with onsite generation, but costs to serve do not. Under this pricing approach costs to serve increase for non-solar connections. • We recognised this issue by introducing advanced TOU pricing. These recover a greater proportion of our charges in the morning and evening peaks when solar load is typically lower, ensuring Solar PV connections contribute to the economic costs of the network. It also encourages efficient investments in batteries which can store solar energy during the day and release it during peak periods. Any customer with solar PV is required to have TOU pricing. • Our strategy is also to increase the proportion of charges recovered from fixed charges. When combined with TOU and demand based pricing, this will help to better reflect the costs of providing network services to connections with Solar PV. • As discussed above, our charges are below the standalone cost of off-grid solar solutions. This discourages inefficient investments in off-grid solutions and disconnections from the network. It also allows us to compete with gas and LPG energy solutions on cost.
	(b)	Where prices that signal economic costs would	Residual costs are the remaining costs to recover through prices after deducting economic costs which have been recovered through service based charges in under

		under-recover target revenues, the shortfall should be made up by prices that least distort network use.	Principle (a) above. For example, these costs might reflect general business administration or investments in existing base network assets that are largely unrelated to investments in capacity or network use. Guidance provided in the practice note suggests residual costs should be recovered in a non-distortionary way, such as through a broad based fixed charge. That is, residual based prices should not encourage consumers to change their usage behaviour. We currently do not set prices based on explicit economic and residual costs. We have completed a pricing review that will help address this topic and look to improve pricing alignment with residual costs in future pricing. However, our current pricing structures are non distortionary in the following ways: • Our Daily Fixed Price applied to Residential, General and Unmetered loads is consistent with non-distortionary cost recovery. We have undertaken a review of the appropriate level of fixed charges in response to the recent amendments to the Low Fixed Charge regulations and have increased fixed charges this year, with further changes being considered for future pricing changes. • Our off-peak TOU prices and Night charges also recognise the residual costs of using the network during off-peak periods. Together these residual charges reflect only a relatively small proportion of our total target revenue. In the 2020 pricing year, these charges comprised only 13% of lines revenue. This is partially due to the Low Fixed Charge regulations which limit daily fixed charges for consumers using less than 8.000kWh per annum to 15 cents per day. A lower proportion of non-distortionary charges is generally consistent with the higher economic costs the network faces as a result of recent connections and demand growth.

	(c)	Prices should be responsive to the requirements and circumstances of end users by allowing negotiation to:	
	(i)	reflect the economic value of services; and	Waipa Networks are open to negotiating non-standard arrangements for very large connections that are at risk of bypassing the network or which may require different levels of service. Non-standard pricing more accurately reflects the avoided costs of providing services to these large consumers. We allow larger connections to specify their connection capacity requirements through capacity prices and the provision of dedicated transformers. Other specialist assets are addressed through our connection contribution policy.
	(ii)	enable price/quality trade-offs.	Price/quality trade-offs are inherent in the pricing options. The trade-off relates to the key service offered which is unlimited and uninterrupted access to the network. Consumers should be able to make price/quality trade-offs based on the level of service they are willing to accept. The level of service reflects availability of supply, reliability and connection capacity. This is recognised as follows: ○ **Advanced Uncontrolled time of use pricing**. Consumers receive more cost-effective access to the network by consuming during off-peak periods. ○ **Uncontrolled pricing plans** have higher prices recognising the benefits of uninterrupted supply. Controlled pricing plans have lower prices recognising consumers' acceptance of lower service quality through interrupted load. ○ Consumers can select the **capacity of service** they require through the kVA pricing bands and additional kVA charges. ○ Waipa Networks allows for **non-standard connections** or asset costs to be recovered through capital contributions. This allows consumers the

			opportunity to select their service quality based on their willingness to pay. Non-standard consumer connections are able to negotiate the level of service they require which is reflected in the contract price.
	(d)	Development of prices should be transparent and have regard to transaction costs, consumer impacts, and uptake incentives.	• The pricing methodology and annual price changes are uploaded on the website each year. These disclosure documents comply with the regulatory standards so that consumers and retailers have sufficient information about prices and to understand how prices are determined. • Pricing structures are limited to fixed daily and variable consumption tariffs for all but a small number of the largest consumers. All posted tariffs apply equally and without discrimination to all customers and all retailers. • We have closed legacy pricing structures and plan to transition these out over time, which will simplify pricing structures. • We have sought to reduce retailer transaction costs by developing pricing to reflect industry standard terminology, consumer profiles and connection characteristics, where possible. TOU pricing, has been developed to align with typical daily load profiles and neighbouring EDBs.

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 Gird 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