WAIPĀ NETWORKS

PRICING METHODOLOGY

2024

WAIPĀ NETWORKS

CLAUSE 2.9.1 OF SECTION 2.9

We, Jonathan Kay and Jonathan Cameron, being directors of Waipā Networks Limited certify that, having made all reasonable enquiry, to the best of our knowledge.

The following attached information of Waipā 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

Jonathan Cameron

26 March 2024

WAIPĀ NETWORKS

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INTRODUCTION

Overview

Waipā Networks is a consumer trust-owned Electricity Distribution Business based in Te Awamutu and supplying customers in Cambridge, Te Awamutu and surrounding areas. Each year it publishes a Pricing Methodology outlining its principles and objectives, approach to allocating costs and setting its pricing strategy.

The methodology in recent years has focused on transitioning to more cost-reflective prices, including the staged introduction of mass market Time of Use Pricing which was completed in 2022.

2023 saw the commencement of a three-year transition towards a cost of supply model where prices better reflect the economic costs associated with different pricing groups. That transition continues this year along with an even more pronounced distinction in prices between the Residential and General pricing groups, and a higher proportional price increase for the 400V Contract group.

2023 also saw the development of a new five-year Pricing Roadmap which, for the 2024/25 pricing year, sees the Company developing a price plan tailored for electric vehicle charging as well as initiating projects to evaluate pricing options based on demand, capacity and location. Our Pricing Roadmap is a "live" document and can be viewed on our website: https://waipanetworks.co.nz/partners/retailers/pricingroadmap/. The Roadmap timeline at publication of this document is found in Appendix II.

Our community – key characteristics

Waipā Networks is responsible for distributing electricity to an area of approximately 1,865 square kilometers servicing more than 40,000 customers and a population of around 59,000 (at the 2018 census):

(Source – 2018 Census Data)

Our supply area has a relatively high dwelling occupation rate with the exception being Kawhia (Pirongia Forest) which has an equal mix of permanent residents and holiday homes:

TOTAL DWELLINGS	OCCUPIED	UNOCCUPIED	UNDER CONSTRUCTION
23,667	21,654	1,815	189

PIRONGIA FOREST	TAMAHERE	CAMBRIDGE AREA	TE AWAMUTU AREA
Occupied: 411 Unoccupied: 414	Occupied: 1,989 Unoccupied: 120	Occupied: 7,374 Unoccupied: 420	Occupied: 5,691 Unoccupied: 345

(Source – 2018 Census Data)

As at September 2023, Waipā Networks had a total of 29, 500 commissioned connections to our Network with approximately 19% of these being non-residential. Our business community has a significant proportion of dairy and horticulture accounting for approximately 70% of non-residential connections (source – Electricity Registry ANZSIC codes).

These characteristics impact both our Network planning and pricing.

Our network – key statistics

Waipā Networks' distribution system comprises (as of 31 March 2023):

Cambridge area

- 14 x 11kV feeder circuits connected to Cambridge GXP,
- 457km 11kV circuit (341km overhead line, 116km underground cable),
- 350km 400V circuit (150km overhead line, 200km underground cable),
- 1,455 11kV/400V transformers (137,657kVA capacity) and
- 6,958 Poles (6,036 – Concrete, 922 – Wooden, 14% of the total).

Te Awamutu area

- 15 x 11kV feeder circuits connected to Te Awamutu GXP,
- 948km 11kV circuit (895km overhead line, 53km underground cable),
- 500km 400V circuit (354km overhead line, 146km underground cable),
- 2,196 11kV/400V transformers (141,059kVA capacity) and
- 15,150 Poles (14,564 – Concrete, 586 – Wooden, 4% of the total).

Transmission

Waipā owns a 33km 110kV transmission line from Hangatiki GXP providing security of supply to Te Awamutu GXP.

Network demand

The network has had a steady demand growth and the growth rate is expected to increase in the medium term reflecting a strong economy and proposed developments within the region. There has been slight downward pressure over the past year due to an overall slowdown of the New Zealand economy, however this is expected to only have a short term impact.

Cambridge area load forecast

The historical demand growth profile shows that Cambridge demand is growing at a sustained rate. Several high-load customers have indicated significant load step changes, highlighting the need for a capacity increase at GXP level.

Over the past five years, the average growth in energy (kWh of electricity) imported through Cambridge was +1.67% per annum. The Maximum Demand growth over the next 10 years at Cambridge is forecast at between 2.5% and 4% and is higher than the growth experienced within the last couple of years.

Te Awamutu area load forecast

Te Awamutu has had steady load growth which reflects the rate of change of economic activity in the areas for the period. Over the past 5 year the average growth in energy (kWh of electricity) imported through Te Awamutu GXP was +1.82% per year. Over the same period the 5-year average growth in maximum demand at Te Awamutu GXP (with full load control) was 2.14%.

PRICING PRINCIPLES & OBJECTIVES

Waipā Networks pricing principles and objectives were updated in 2023 and these have carried through for 2024. These principles have been used to define Waipā Networks Limited's pricing roadmap and determining annual network pricing:

- **Fair and equitable** – pricing is fair across customers and equitable – supporting both the network's need for investment while ensuring that costs are prudently managed.
- **Transparent** – Waipā Networks' pricing should be transparent so that customers, if they choose, can adapt their behaviour to optimize their electricity costs.
- **Reflective** – Waipā Networks' pricing should reflect our expenditure profile and drivers.
- **Simple** – pricing should be as simple as practical, facilitating both customer understanding and Retailer uptake.
- **Consistent** – pricing should be predictable and year on year volatility should be avoided.
- **Reliable** – the return from network income should enable Waipā Networks to invest in network reliability and generate an acceptable return for Waipā Networks Trust.

REGULATORY CONSIDERATIONS

Commerce act

The Commerce Commission regulates electricity distribution services under the Commerce Act 1986. 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 Information Disclosure Guidelines of the Electricity Authority (EA).

Low fixed charge (LFC)

The Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 required Electricity Distributors to offer residential consumers a price option at their primary place of residence, with a fixed price of no more than 15c per day (excluding GST), and where the sum of the annual fixed and volume charges on that price option equals any other price option available to those consumers when they use 8,000kWh per annum.

The LFC restrictions are being removed over a five-year period from 1 April 2022 allowing fixed daily prices to be increase by 15 cents per day each year until 1 April 2027, when Low Fixed Charge Regulations are removed.

The 2024/25 pricing methodology continues to reflect the phasing out of these restrictions with a residential price of 60c per day, up from 45c per day in the previous period. This, combined with a higher proportional increase in kWh rates for the Residential price groups, sees an average* Residential price increase of 14% compared to the overall increase of 10.6% across all groups.

(an average consumer is considered as using 8000 kWh per annum, of which 60% is at the Uncontrolled price and 40% at the Controlled price).*

Electricity authority pricing principles

The Electricity Authority publishes both pricing principles and practice notes. EDBs are required to either demonstrate alignment with the principles or explain the rationale for any inconsistency. A detailed commentary on our alignment with the principles is covered in Appendix III.

INDUSTRY COLLABORATION & DEVELOPMENT

Waipā Networks believes that to ensure customer, regulatory and decarbonisation needs are met then collaboration and systems development across the electricity industry is essential.

EDB collaborative working groups

We are a member of the Electricity Networks Aotearoa (ENA), and have active representation on their Communications & Engagement, Distribution Pricing, and Regulatory working groups. We are also a member of the Northern Energy Group and their respective subcommittees. These groups allow the pooling of resource to help meet industry challenges, increase efficiency, and provide a more informed approach to regulatory matters.

Retail data agreements

One of the more challenging factors for EDBs when planning Network development and pricing has been a lack of detailed customer data due to the interposed nature of the customer relationship. Thanks to the prevalent uptake of Smart Meters, Half hour consumption data has become available to meter owners and Retailers however only available to the handful of EDBs who own meters. 2022 was a pivotal year in freeing up this data for EDB use with an ENA/ERANZ endorsed data agreement gaining traction. In late 2022 Waipā Networks signed agreements with several Retailers for the provision of ongoing monthly half-hour data. In late 2023 the Electricity Authority consulted on bringing the ENA/ERANZ agreement into the Code, which Waipā Networks believes will accelerate provision of consumption data. This data will enable more meaningful demand forecasts, pricing analysis, and Network asset planning.

Information systems

Waipā Networks has continued its investment in ICT systems to meet the needs of our growing network or industry and regulatory challenges. 2023/24 saw the implementation of:

- An upgraded Finance & Payroll system.
- A new Outage Notification & reporting system.
- GIS Enterprise Integration.

Work will continue in 2024/25 with the implementation of a CRM and foundational work carried out for a new Information Management System.

GridSight project

Waipā Networks has partnered with GridSight to pilot the first implementation of the GridSight application. The pilot's initial focus is to gather data on Waipā Networks low voltage network through use of Retailer-provided consumption data within the GridSight platform.

From this data the platform will enable:

- Identification and detection of solar PV, battery and EV installations.
- Visualisation of LV quality issues.
- Pre-warning or identification of broken neutrals.
- Distribution Transformer Utilisation analysis.
- Visualisation of network loading to inform future upgrades and AMP production.
- Better understanding of LV network behaviour.
- Analysis of peaks by customer group and location to inform both network investment and pricing strategy.

WAIPĀ NETWORKS PRICING

Overview of methodology

Waipā Networks pricing has traditionally centred on providing a simple and low cost offering to customers reflecting the relatively low-cost nature of its 11kV network. Demand growth, regulatory changes and the increasing prevalence of DER have seen a shift in recent years towards more cost-reflective pricing. The first step in this was the staged introduction of mass market Time of Use pricing which was completed in the 2022/23 pricing year resulting in approximately 22,376 (76%) of ICPs on a TOU price plan as at March 2023. With new connections and continued upgrades to existing connections this figure is now approximately 78% at March 2024. The balance of ICPs have exemptions due to no smart meter being present, there is a non-communicating smart meter, or Retailer billing system issues, recognising the limitations of data availability.

The next few years will see a significant change in the way costs are allocated as we shift from traditional target revenue-based allocations to a cost of supply model.

Overview of changes for 2024/25

The 2024/25 pricing methodology continues the move towards more cost-reflective pricing with not only further increases in the fixed daily prices (in keeping with the LFC phase out) but also a differential in the volumetric prices between Residential and General groups. The cost of supply model had indicated a significant cross-subsidy between the Residential and General groups suggesting the Residential rates should be increased and the General rates reduced. To minimise the potential for price shock for customers, Waipā Networks decided to gradually reflect this differential over a 3-year period with 2024/25 pricing being Year 2 of this strategy. This gradual shift towards the cost of supply model also applies to the capacity contract pricing groups. The prices and revenue tables are published in Appendix I.

In 2023/24, Waipā Networks is expected to recover approximately 82% of its distribution revenue through variable prices and this is inefficient for a business whose costs are largely fixed. We are therefore also transitioning prices gradually in coming years to recover a higher proportion of fixed charges, again while cognisant of any potential price shock. The General category is not restricted by the LFC regulations and so the fixed daily charge is higher than Residential however this contributes to the comparatively lower General variable rates.

We continue to make no distinction however 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. There is currently no difference in the prices charged to Cambridge and Te Awamutu customers.

Overall Network prices have increased to recover a 10.6% increase in target revenue to $42.8M.

The company budgets to rebate to customers $5.3M in the 2024/2025 year via two instalments.

Pricing inputs/factors

The following outlines the process Waipā Networks employs to set prices using its cost of supply model. These and other inputs/factors are then discussed in more detail:

1. Target revenue for the year is determined.
2. Cost components are determined and allocated to customer groups
3. Prices are set for non-standard customers.
4. The balance of target revenue is allocated to standard pricing groups and prices calculated based on:
   a. The cost of supply per group.
   b. The previous year's revenue per group.
   c. A % weighted average between a. & b.

The weighted average % provides a mechanism to transition to prices to the cost of supply model while lessening the impact of any price shock. For our 3-year transition to remove cross-subsidies, in 2023/24 the weighting was 33% to a) and 67% b) and for 2024/25 the weighting is 67% to a) and 33% to b). The 2025/26 methodology will see 100% weighting to a).

Target revenue

Target revenue is determined by Waipā Networks with consideration of cost components, prior year revenue and price increases. The cost components which are to be recovered through line charge revenue include:

- Transmission charges
- Maintenance of assets (Opex)
- Operations and overheads (Opex)
- Pass through costs (Opex)
- Depreciation on assets
- Tax
- Asset revaluations (treated as revenue)
- Return on investment

For the 2024/25 year Waipā Networks has set a target revenue of $42.8M before customer discounts. This figure excludes any revenues received through capital contributions and fees which are treated separately.

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. 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 Waipā Networks' 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.

The principles and calculation of transmission are covered by Transpower's Transmission Pricing Methodology (TPM) and govern how Transpower can recover its transmission revenue from generators, distributors and direct-connected customers using its grid.

The new TPM therefore consists of:

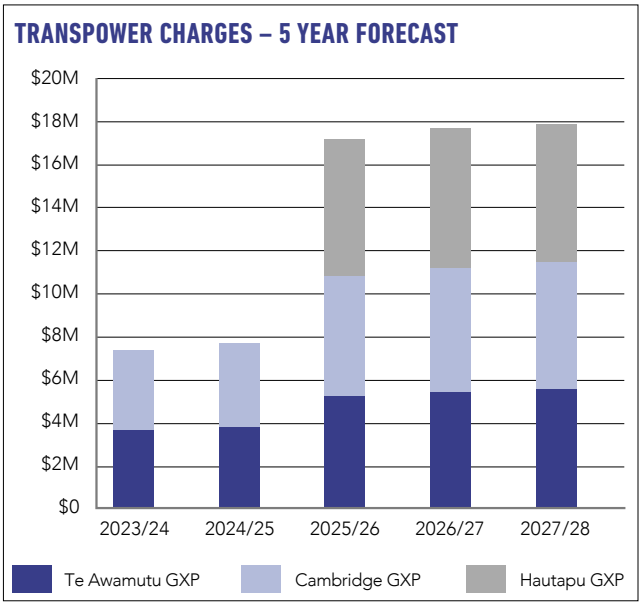
- Connection Charges
- Benefit-based Charges
- Residual Charges
- A Transitional Price Cap

The TPM does not specify how EDBs are to allocate these charges however Waipā Networks has taken note of guidance from both the Electricity Authority and Electricity Networks Association (ENA) which suggest these should be relatively fixed so they do not drive changes in customer behaviour. Transmission costs are included in fixed prices for all standard customer groups. The allocation method for Non-Standard customers is detailed in the Pricing Groups section.

In addition to these charges, Transpower recovers the cost of customer-initiated works through Transpower Works Agreements (TWA) and Network Investment Contracts. Waipā Networks recovers the cost of these as part of the Transmission component of our pricing. A significant agreement was signed in late 2022 for the construction and connection of a new substation GXP at Hautapu to meet the growth needs of the Cambridge area. Once commissioned, the GXP will incur approximately $3M per annum in transmission charges over a 30-year period, on top of the ongoing TPM charges.

Significant increase in transmission charges forecast

The Transmission charges for 2024/25 are $7.7M, which is a 4% increase on the previous year. In November 2023 Transpower released it's indicative pricing through to 2029 which forecasts a significant increase for most EDBs from 1 April 2025. The forecast increase for Waipā Networks is 43% with the average over all EDBs at 39.5%. Although the timing of the Hautapu GXP charges is still to be finalised, it is expected that these will commence in the 1 April 2025 pricing year which will also increase transmission costs going forward. The graph below shows the five year forecast of Transpower charges.



The above graph assumes that some of the Hautapu GXP costs will be offset by a reduction in Cambridge GXP costs however Transpower are unable to confirm detail around that pricing until commissioning. For more information on Transpower's pricing please visit their website https://www.transpower.co.nz/.

Maintenance of assets (opex)

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 (opex)

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 (opex)

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.

Depreciation and revaluations

Depreciation recovers the costs of past asset investment in the network from the current users of those assets. Revaluations of assets are deducted from target revenue to avoid over recovery as these are reflected in the depreciation and return on capital components.

Return on capital and tax

The return on capital and associated tax payable cost components are derived as the residual amount after the cost components described above are deducted from target revenue.

Pricing groups

Customers are first classified according to the voltage at which they are supplied. The ICP numbers below are derived from registry data as at 30 September 2023. (approximate number of ICPs shown in brackets):

- 11kV (14)
- Low voltage (29,436)

This is necessary as 11kV customers do not require the use of any low voltage distribution assets and should not be charged for them. Waipā Networks takes supply from Transpower at 11kV and currently has no 33kV or higher voltage consumers. However, 33kV zone substations will be introduced in coming years to meet network demand growth and this approach will be reviewed accordingly.

11kV customers

11kV customers are further categorized as being:

- Standard, or (11)
- Non-standard (3)

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

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

Low voltage customers

Low voltage customers are further categorised as being either:

- Residential (23,725),
- General (5,566),
- 400V Capacity Contract (70), or
- Non-metered including street lighting (125)

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'. Waipā Networks 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 excluding 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 60 cents (as part of the staged phasing out of the LFC restrictions).

General customers are all other metered low voltage ICPs not defined as being Residential, except those who have C&I TOU metering (as indicated on the Registry) with a maximum demand of 70kVA or higher, who are classified as 400V Capacity Contract.

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.

Cost allocation

The cost of supply model allocates cost components to customer groups, excluding major customers, using forecasts of causal cost drivers, as follows:

COST COMPONENT	COST DRIVER (FORECAST FOR 2024/25)
Transmission	Coincident maximum demand and ICPs
Maintenance	ICPs and asset depreciation
Operations and overheads	Electricity volumes and ICPs
Pass through costs	Electricity volumes and ICPs
Asset related costs and returns	Asset value

These allocations derive a target revenue for each customer group, which is then allocated between fixed and variable charges, as described above, and in Appendix III.

Non-standard customers

The non standard customer pricing 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. The charges consist of both Transmission and Distribution components and are reviewed annually.

Transmission component

Connection charges

Connection Charges are determined using Transpower's latest Connection Charge Components asset schedule. For assets used exclusively by the customer, 100% of Connection Charges are applied.

For non-exclusive assets, a percentage share of Connection Charges are calculated as follows:

(Site Contracted Demand / GXP Capacity) x (Sum of % Share of Asset Connection Charges)

For Te Awamutu GXP only, the customer pays an additional charge for the percentage share of switchgear charges for the 110kV line calculated as:

(Site Contracted Demand / GXP Capacity) x (% Share of 110kV Line Switchgear Asset Connection Charges)

Residual charge

The Residual Charge is determined using Transpower's latest Rates Schedule, calculated as:

Site Anytime Maximum Demand x Residual Charge Rate

The Anytime Maximum Demand for each site is determined based on the latest 12 months' dataset available at the time of calculation, typically being the September to August period.

Benefit based charges

The Benefit Based Charges use Transpower's latest Annual Price Summary, calculated as:

(Site Contracted Demand / GXP Capacity) x GXP Total Benefit Based Charges

Distribution component

Asset charges

Charges for assets used solely by the customer are calculated as follows:

Regulatory Asset Base (RAB) Value x WACC return rate

- The WACC return rate used for 2024/25 is 6.5%.

Depreciation

Depreciation costs for assets used solely by the customer are calculated as follows:

Replacement Cost x Depreciation Rate

- The Depreciation Rate for 2024/25 is 2.5%.

Replacement Cost is determined at the time of purchase of the asset, with annual inflation adjustment. Waipā Networks occasionally resets Replacement Cost for an asset if market rates become out of step with inflation adjustments. These costs were updated in November 2023 for the 2024/25 pricing period.

Maintenance

Maintenance charges are calculated as follows:

Replacement Cost x Maintenance Rate

- The Maintenance Rate used for 2024/25 is 2.2%.

Operations and network management

The Customer's share of Operations and Network Management costs for each site is calculated using ratios based on line length, asset replacement cost, and kWh sales. Asset data and values were updated in November 2023 while kWh sales were forecast using a 12-month dataset to 31 August 2023. Total Forecast Network Overhead Expenses are for 2024/25.

Each of the components are calculated as follows:

(Customer line length / Network Line Length) x
(Total Forecast Network Overhead Expenses / 3)

+

(Dedicated assets RAB value / Network RAB value) x
(Total Forecast Network Overhead Expenses / 3)

+

(Site kWh sales / Network kWh sales) x
(Total Forecast Network Overhead Expenses / 3)

= Operations and Network Management Charge

110kV Hangatiki Line

For Te Awamutu customers only, a charge for the 110kV Hangatiki line is applied and calculated as:

(Site Contracted Demand / GXP Capacity) x 110kV Line Total Charges

The 110kV Line Total Charges are calculated annually by Waipā Networks using the WACC return rate on RAB value plus maintenance and site costs.

Prices for large customers effective 1 April 2024 are as follows:

	ICP A	ICP B	ICP C
Transmission	$541,392	$830,641	$215,298
% Change from 2023	14%	6%	10%
Distribution	$443,843	$777,485	$330,410
% Change from 2023	32%	14%	2%
Total	$985,235	$1,608,126	$545,708
% Change from 2023	22%	10%	5%

Summary

The following diagram gives an overview of costs and price group revenue in relation to target review (totals are rounded).

<table>
<tr><th colspan="7">TARGET REVENUE $42.8M</th></tr>
<tr><td>Opex $17M</td><td colspan="2">Return on Capital $12.7M</td><td colspan="2">Transmission $7.7M</td><td>Net Dep $3.2M</td><td>Tax</td></tr>
<tr><td colspan="2">Residential $22.9M</td><td colspan="2">General $11.1M</td><td>400V $4.2M</td><td>11KV Std $1.5M</td><td>11KV Non-Std $3.1M</td></tr>
<tr><td colspan="4">Variable $31.9M</td><td colspan="2">Fixed Std $7.8M</td><td>Fixed 11KV Non-Std $3.1M</td></tr>
</table>

Other pricing considerations

While not specifically factored into our cost of supply model, there are other considerations Waipā Networks makes when setting its pricing strategy.

Congestion

One factor that will become increasingly important in the shift to more cost-reflective pricing is the issue of congestion. Prices will need to respond to congestion to not only ensure costs are recovered to target investment but also provide customers with meaningful signals to encourage efficient use of the Network.

Congestion is identified through desktop modelling based on existing peak load and verified by field measurements. Feeder capacity limits are set in SCADA too allow controllers to monitor for congestion.

A feeder is considered congested by way of:

- **Voltage:** where voltage at HV terminals of a transformer consistently drops below 10.5kV and cannot be compensated by local tap setting, and/or
- **Thermal:**
  - Where it is possible to offload to two adjacent feeders: if load exceeds 66% of thermal rating more than 3000 half-hours per year (to provide margin for backfeed).
  - All other cases: Load exceeds 100% of thermal rating more than 10 consecutive half-hours per year.

There are several feeders on the Waipā Network that are constrained and experiencing voltage issues. The Cambridge GXP itself exceeds the transformer n-1 post contingency firm capacity, requiring intervention from the recently commissioned 3MVA diesel generation facility and ripple control to manage GXP loads. The Te Awamutu GXP has several constrained feeders with voltage issues reducing the usable capacity.

The following table indicates which Feeders have been identified as congested and the proposed solution:

FEEDER	ISSUE	SOLUTION	TIMING
CAMBRIDGE			
Roto-o-rangi	Voltage	Voltage regulator	FY25
Kaipaki	High Growth	Hautapu GXP + Voltage Regulator	FY26
Leamington	Thermal	Off load with new feeder	FY27
Tamahere	Voltage	Hautapu GXP	FY26
Pencarow	Thermal	Hautapu GXP + Voltage Regulator	FY26
Cambridge Town	Thermal	Off load with new feeder	FY26
St Kilda	Voltage	New Voltage Regulator	FY25
French Pass	Voltage	New Voltage Regulator	FY25
TE AWAMUTU			
Pirongia	Thermal and voltage	Reconductoring and voltage regulator	FY25
Mystery Creek	Voltage	Offload to new Hautapu GXP feeder	FY26
Paterangi	Voltage	Capacitor	FY25
Pokuru	Voltage	Capacitor	FY24
Kihikihi	Voltage	Under Investigation	TBC
Kawhia	Voltage	Under Investigation	TBC
Pukeatua	Voltage	Under Investigation	TBC

There are some current limitations in approach to identifying congestion:

- Accuracy of the existing network model, which is being addressed through:
  - Data logging at selected points in the field to augment observations from the model.
  - New modelling software that can be tied to other data sources such as GIS for equipment parameters.
- Feeder load monitoring in SCADA with measurements from the feeder circuit breaker and from reclosers, however, measurements at the reclosers need to be recalibrated.
- Impact of new loads cannot be readily confirmed. Impact assessment is based on assumptions on capacity utilisation and assuming and industry average capacity utilisation.

Congestion analysis will become more granular and informed in coming years due to the recently signed Retail Data agreements along with improved systems such as our new Network Information Model. Initiatives such as the GridSight project will also aid detailed congestion mapping.

This analysis will be crucial in considering new pricing structures and signals beyond Time of Use and will inform our new Pricing Roadmap.

Distributed energy resources (DER)

DER brings both challenges and opportunities for EDBs in terms of network management and service delivery. Waipā Networks was an early mover in introducing Time of Use pricing for new connections and distributed generation customers first to ensure those making investment decisions were able to factor in costs and plan accordingly. This also reduced cross-subsidy between those who did have solar and those who did not. Waipā Networks will in coming years develop pricing further tailored to those with distributed generation, battery storage and/or electric vehicles.

Consultation

Customer

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

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

Annual customer survey

The Waipā Networks annual customer survey is a key method by which Waipā Networks consults with customers. The purpose of this survey is to gather customer's feedback on key elements of Waipā's performance during the year. The independent survey covers a range of operational and communication aspects of Waipā's work with a particular focus on overall satisfaction, reliability, image and reputation, value for money and communication.

A number of other Electricity Distribution Businesses (EDB's)'s also use the same survey including The Lines Company, Top Energy, Counties Energy, Northpower and Network Waitaki. This allows key performance indicators to be benchmarked against other EDB's.

For analysis, each customer/ICP is assigned a category from four customer groups:

- Grid Exit Point (Te Awamutu, Cambridge)
- Feeder Type (Urban Te Awamutu, Rural Te Awamutu, Urban Cambridge, Rural Cambridge)
- Tariff Type (Residential, General)
- GXP / Feeder Type have been identified as the key indicators and so quotas are enforced for the survey to ensure the survey sample reflects the population mix.

The latest survey results (June 2023) are summarised in the table below; Waipā Networks is performing well in areas such as value for money and reliability however the overall satisfaction is below the average benchmark score and improvements are required in image and reputation and communication.

Table 1: Annual customer survey results

TARGET	WAIPĀ RESULTS	AVERAGE BENCHMARK	PROPOSED TARGET
Overall satisfaction	63%	61%	67%
Reliability	79%	72%	80%
Image & reputation	65%	58%	70%
Value for money	56%	49%	55%
Communication	46%	49%	55%
Enquiry Handling	63%	70%	70%

Some key results from the surveys:

- Customer satisfaction is 63%, which is above the average of 8 other EDBs we benchmark with. This indicates improvement over the last 12 months and a target of 67% for the upcoming year has been set as indicated in the above table.
- On Price versus Reliability, the 2023 survey found the following:
  - When customers were asked to think about current reliability levels, 83% wanted service levels to remain at current levels. This is an 7% increase on the 2022 results.
    - Overall there has been a five percentage point increase in the proportion of customers who are willing to pay extra for the increased level of service.
    - Commercial customers are more likely to support an increase of price in exchange for increasing the service levels.
    - 2% wanted to pay less with reduced service levels, a decrease from 2022.
  - 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 support, feedback and reporting

Waipā Networks maintains a toll-free number and online feedback form for customers to use to identify any operational or service issue. Fault calls and their resolution are recorded in the Waipā Networks database. Network faults are analysed and reported to the Board.

Customer groups – face to face meetings

We have begun a programme to more regularly engage with our customers face to face, allowing for wider discussions and ability to gather feedback. An example of this is our regular meetings with electricians to discuss and gather feedback about our processes and services.

Social media

We have had social media accounts since 2015 and have steadily increased the level of content we publish on these channels (Facebook and Instagram). Customers are increasingly looking to social media for up-to-date information and a feedback mechanism. We are increasing our monitoring of these accounts, previously only monitored during work hours are now monitored later into the evenings and across weekends.

Complaints resolution process

We operate 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 Waipā Network's charges.

Communications & engagement working group (CEWG)

The CEWG was formed by the Electricity Network's Association in late 2016 and Waipā 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 point consumers are given the opportunity to ask questions of both the Trust and the Company.

District councils

Discussions are held with the Waipā, Waikato and Ōtorohanga District Councils from time to time concerning projects they are undertaking and supply quality overall.

Electricity retailers

Engagement with Electricity Retailers is key in both determining practical and customer-centric pricing options as well as obtaining meaningful data to aid network planning and future price development. Waipā Networks has consulted comprehensively with Electricity Retailers during its recent pricing structure changes and intends to lift this further as new options are developed in response to DER and decarbonisation.

RELATED POLICIES AND STANDARDS

This pricing methodology should not be viewed in isolation as there are other key policies that both feed into this methodology and receive input from it. All documents referenced below are available on our website www.waipanetworks.co.nz

Capital contributions policy

This policy document outlines Waipā Networks approach to customer-initiated new connections, upgrades, and reconfigurations where the customer is required to contribute all or part of the cost. Its purpose is to ensure these costs are borne by those gaining direct benefit of the investment rather than the broader customer base.

Connection fee

Introduced in the 2023 calendar year as an addition to the Capital Contributions Policy, this fee applies to all new connections and most connection upgrades. Whereas a Capital Contribution covers the physical infrastructure for the connection, the Connection Fee covers the upstream cost associated with new network load.

Network connection standards

These standards are referred to in the Distribution Agreements with Electricity Retailers who in turn reference them in their supply agreements with customers. They cover a wide range of topics that govern the use of our Network such as technical standards, property access and power outages.

Distributed generation policy

Waipā Networks' Distributed Generation policy complies with Part 6 of the Code and covers connection costs, equipment standards, and approval processes.

LOOKING FORWARD

With the completion of the mass market transition to Time of Use pricing Waipā Networks now broadly looks forward to:

- Engaging with customers to better understand their needs and plans in particular with regards to DER and decarbonisation.
- Engaging further with Retailers to secure consumption data to allow better asset planning and develop new pricing approaches.
- Working with our industry cohorts to standardise new pricing structures while reducing development costs.

APPENDICES

Appendix I: Price & revenue tables

	FY25 PRICES		DISTRIBUTION	TRANSMISSION	TOTAL		%
RESIDENTIAL	DISTRIBUTION	TRANSMISSION	REVENUE	REVENUE	PRICE	REVENUE	PRICE CHANGE
All inclusive	0.0868	0.0163	967,305	182,140	0.1031	1,149,444	9%
Uncontrolled	0.0971	0.0179	2,806,531	518,731	0.1150	3,325,262	9%
Controlled	0.0228	0.0025	537,607	60,238	0.0253	597,844	10%
Generation export	0.0012	0.0000	3,565	–	0.0012	3,565	12%
Night only	0.0141	0.0025	4,970	904	0.0166	5,874	9%
Peak	0.1458	0.0254	5,038,330	877,603	0.1712	5,915,933	9%
Off peak	0.0141	0.0025	334,495	60,867	0.0166	395,362	9%
Shoulder	0.0973	0.0140	3,476,627	499,386	0.1113	3,976,013	10%
Peak (all inclusive)*	0.1356	0.0237	1,058,624	184,998	0.1593	1,243,622	9%
Off peak (all inclusive)*	0.0141	0.0025	73,308	13,340	0.0166	86,648	9%
Shoulder (all inclusive)*	0.0870	0.0123	734,001	104,386	0.0993	838,387	10%
Builders Temporary Supply	0.0703	0.0109	–	–	0.0812	–	-23%
Daily Fixed Price	0.4941	0.1059	4,400,706	943,494	0.6000	5,344,201	33%
TOTAL RESIDENTIAL	**0.1102**	**0.0195**	**19,436,068**	**3,446,086**	**0.1297**	**22,882,153**	

	FY25 PRICES		DISTRIBUTION	TRANSMISSION	TOTAL		%
GENERAL	DISTRIBUTION	TRANSMISSION	REVENUE	REVENUE	PRICE	REVENUE	PRICE CHANGE
Uncontrolled	0.0609	0.0105	3,642,216	631,280	0.0714	4,273,496	-23%
Controlled	0.0143	0.0015	160,264	17,024	0.0158	177,288	-22%
Night only	0.0141	0.0025	4,952	804	0.0166	5,757	9%
Peak	0.1189	0.0575	1,747,216	845,472	0.1764	2,592,687	6%
Off peak	0.0088	0.0025	95,405	27,679	0.0113	123,084	-17%
Shoulder	0.0610	0.0152	1,200,198	299,285	0.0762	1,499,483	-15%
Builders Temporary Supply	0.0703	0.0109	60,427	9,318	0.0812	69,745	-23%
Street lights	0.0551	0.0094	16,611	2,835	0.0645	19,446	-23%
Daily Fixed Price (standard)	0.9881	0.2119	2,080,564	200,816	1.2000	2,281,379	33%
Fixed unmetered supply	0.8944	0.1917	43,605	9,349	1.0861	52,953	0%
TOTAL GENERAL	**0.0795**	**0.0179**	**9,051,457**	**2,043,862**	**0.0974**	**11,095,319**	

All values are in dollars and exclude GST.

	FY25 PRICES		WNL	TRANSMISSION	TOTAL		%
400V CAPACITY CONTRACTS	DISTRIBUTION	TRANSMISSION	REVENUE	REVENUE	PRICE	REVENUE	PRICE CHANGE
Peak	0.0723	0.0320	601,567	266,001	0.1043	867,569	27%
Off peak	0.0187	0.0060	190,680	61,561	0.0247	252,242	25%
Shoulder	0.0539	0.0189	939,097	328,107	0.0728	1,267,205	25%
Controlled	0.0303	0.0060	6,396	1,271	0.0363	7,667	22%
Capacity charges	8.10	3.20	1,301,533	515,054	11.30	1,816,587	
TOTAL 400V	**0.0840**	**0.0324**	**3,039,275**	**1,171,994**	**0.1164**	**4,211,269**	

	FY25 PRICES		WNL	TRANSMISSION	TOTAL		%
11KV CONTRACT	DISTRIBUTION	TRANSMISSION	REVENUE	REVENUE	PRICE	REVENUE	PRICE CHANGE
Peak	0.0447	0.0333	167,872	125,306	0.0780	293,179	16%
Off peak	0.0134	0.0058	61,761	26,747	0.0192	88,508	5%
Shoulder	0.0347	0.0192	243,410	135,164	0.0539	378,574	10%
Service charge ($/mth)	57.64	12.36	6,804	1,459	70.00	8,263	8%
Demand price ($/kVA/mth)	6.35	3.64	395,228	227,044	9.99	622,272	10%
Transformer rental (c/kVA/mth)	0.6944	0.0000	81,664	–	0.6944	81,664	-14%
TOTAL 11kV	**0.0621**	**0.0335**	**956,740**	**515,720**	**0.0904**	**1,472,460**	

All values are in dollars and exclude GST.

Appendix II: Pricing roadmap timeline

This table shows our Pricing Roadmap Timeline at the time of publication. For the full up to date Roadmap and commentary please visit https://waipanetworks.co.nz/partners/retailers/pricingroadmap/.

WAIPĀ NETWORKS PRICING ROADMAP								
		2022	2023	2024	2025	2026	2027	ENGAGEMENT APPROACH
1	Final Stage of Time of Use Implementation							Completed
2	Align Time of Use Time Periods							Completed
3	Adjust pricing in accordance with LFC removal							Discuss rationale and price shock management with Customers throughout the process. Mediums: social media, website.
4	Removal of cross-subsidies across price groups							
5	Implement CRM System							Involve Customers and Community Groups in post implementation review and development. Mediums: CRM system, social media, website, surveys.
6	Develop pricing products for load control/EV plan							Identify and understand Customer needs alongside Network growth projections. Work with Retailers and Service Providers to develop Customer-facing options that benefit all parties. Mediums: social media, surveys, focus groups, meetings.
7	Explore locational based pricing							Analyse cost of supply by location and develop pricing scenarios. Identify and understand Customer and Retailer impacts and preferences. Mediums: focus groups, meetings and surveys.
8	Explore mass market pricing options based on capacity and demand							

Initiate (identify and review) Develop (test, analyse, consult) Manage (roll out, implement)

Appendix III: Alignment with 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 stand-alone 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 7. • 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. • New connection & existing connection upgrade costs are recovered through the Capital Contribution Policy. This sees the physical connection costs recovered as capital contributions and the upstream connection costs through a Connection Fee. In 2021 we completed a review of pricing quantifying Standalone Costs and Avoidable Costs and the economic costs of servicing each consumer group. In 2023 we commenced a 3-year transition to better align consumer groups with their cost of supply. **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 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 33.7 cents per kWh, of which lines charges comprise about 36% of the average retail bill (as at November 2023). 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.

Disclosure of pricing methodologies	(a)	Prices are to signal the economic costs of service provision, including by:	**Commentary**

			Avoidable costs
			
			The EA'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 EA'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 29% 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 63%, 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.
			  ▪ Fixed charges comprise about 25% of prices and are likely to recover a significant proportion of avoidable costs.
			  ▪ 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 7 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 ICPs 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 with Te Awamutu having 52% of the cost to supply compared to Cambridge's 48%. This will likely switch in coming years due to planned investments in the Hautapu GXP, and will continue to be monitored.

Disclosure of pricing methodologies	(a)	Prices are to signal the economic costs of service provision, including by:	**Commentary**
			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.

Disclosure of pricing methodologies	(a)	Prices are to signal the economic costs of service provision, including by:	Commentary
	(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 under-recover target revenues, the shortfall should be made up by prices that least distort network use.	Residual costs are the remaining costs to recover through prices after deducting economic costs which have been recovered through service based charges in under 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 are currently in year two of a three-year transition which will see us set prices based primarily on explicit economic and residual costs. 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 and shoulder TOU prices and Night charges also recognise the residual costs of using the network during off-peak periods. Together these residual charges reflect only 39% our total target revenue however this will increase again next year.

	(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	Waipā 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. • Waipā 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.

Appendix III: Glossary

AMD	Anytime Maximum Demand	The maximum demand (load) placed on the network by a customer or consumer group.
AMI	Advanced Metering Infrastructure	Also known as smart meters. These are capable of recording how much power is used in half-hour time periods over the course of a day.
Code	Electricity Industry Participation Code	Sets out the duties and responsibilities for all electricity industry participants. It also sets out the responsibilities of the Electricity Authority.
CRM	Customer Relationship Management system	The software that Waipā Networks uses or will use to management its engagement with customers.
DER	Distributed Energy Resource	Includes small scale generation such as solar, batteries, electric vehicles connected to smart two-way chargers, and other new smart technologies.
EA	Electricity Authority	The government agency responsible for the governance and regulation of the electricity industry.
EDB	Electricity Distribution Business	Waipā Networks is an EDB.
ENA	Electricity Networks Aotearoa	The organisation that represents and advocates for New Zealand EDBs.
ERANZ	Electricity Retailers Association of New Zealand	The organisation that represents and advocates for New Zealand electricity retailers.
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 Waipā's Network.
kV	Kilo-Volt = 1,000 Volts	A measure of electrical pressure or voltage
kVA	Kilo-Volt Ampere	A measure of power for electrical load and is used to rate transformers and other electrical equipment. It is also used to calculate prices for capacity or demand-based price plan.
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
LFC	Low Fixed Charge	The regulated maximum fixed daily price that can be applied to Residential low electricity users.
RC	Replacement Cost	This is the current value of Waipā Networks' distribution assets.
RAB	Regulated Asset Base	This is the value of Waipā Networks distribution assets.
Registry	Electricity ICP Registry	The Electricity Authority's central database of all ICPs.
SCADA	System Control and Data Acquisition	The type of computer software Waipā Networks uses to monitor and control its' electricity network.
TOU	Time of Use	A method where kWh usage is priced according to the time of day it is used.
TPM	Transmission Pricing Methodology	The approach taken by Transpower when recovering costs from those connected to its grid.
V	Volt	A measure of electrical pressure or voltage
WACC	Weighted Average Cost of Capital	The average rate that a business pays to finance its assets. Waipā Networks has estimated its current WACC as 6.5%.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THANK YOU!

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