DS1002

Centralines' Pricing Methodology Disclosure 2022

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DS1002 Centralines' Pricing Methodology Disclosure

Overview

Document status	Draft ☐ **In Service** ☒ Under Review ☐ Archived ☐
Document purpose	Pricing Methodology Disclosure for the 2022-23 pricing year, provided pursuant to the Electricity Distribution Information Disclosure Determination 2012.
Intended audience	This disclosure document is supplied to the Commerce Commission (Commission) and made publicly available at www.centralines.co.nz.

Document contributors

Contributors	Name and Position Title	Approval Date
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Approver	Nathan Strong General Manager Commercial	31/03/2022

Board certification

Refer to *Appendix B – Certification for Year Beginning Disclosures.*

Key dates

Published Date 31/03/2022

Related references

Legislation

Centralines' pricing methodology and prices are guided by, and comply with key legislation, regulations and guidelines governing the electricity industry, including:

- Commerce Act 1986
- Electricity Distribution Information Disclosure Determination 2012 (consolidated April 2018)
- Electricity Industry Act 2010
- Electricity Industry Participation Code 2010
- Electricity Authority: Distribution Pricing: Practice Note – August 2019

Related references (cont)

- Electricity Authority Pricing Scorecard reports
- Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004

Policy

- CM0002 Centralines' Pricing Policy and Schedules 2022 to 2023

Clarification

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Content

This document contains the following topics:

Topic	See Page

1. Definitions/Abbreviations

Anytime Maximum Demand (AMD)	Anytime Maximum Demand (AMD) – is a measure of consumers' peak use of Centralines' network at any time in a given month. AMD is measured in kilowatts (kW). Centralines calculates AMD by multiplying by two the energy in kilowatt-hours (kWh) it delivers over the half hour period when the consumer's peak use of its network occurred in that month.
Avoided transmission	The expenses incurred by Centralines as a direct result of payments to: • generators for generation, or • any other activity, which substitutes for the use by Centralines of the national grid transmission system.
Coincident Maximum Demand (CMD)	Coincident Maximum Demand – a measure of peak consumer use during the 100 key dates/times that Centralines' transmission charges from Transpower are based on. These represent the 100 periods of maximum peaks in kW over the lower North Island.
Commerce Commission (Commission)	The Commission sets the regulation for cost recovery and price setting known as the Default Price-Quality Path.
Consumer	An end-user who buys their electricity from a retailer and has that electricity delivered to them via Centralines' network.
Consumer group	A category of consumers for which Centralines develops its pricing. These categories reflect groups of consumers with a common: • site usage (e.g. place of residence versus place of business), and • capacity and metering.
Cost Allocation Model	The methodology used by Centralines to allocate costs to their consumer groups.
CPI	Consumer Price Index
Customer	A direct customer of Centralines receiving line function services or a retailer whose customers use Centralines' (the distributor) network.

Default Price-Quality Path (DPP)	The DPP is set by the Commerce Commission to control the level of revenue and prices that regulated distributors can set.
Demand	The rate at which electricity is being used expressed in kilowatts (kW).
Distributor or Electricity Distribution Business (EDB)	Centralines is a distributor. Centralines owns and operates the distribution network that delivers the electricity covered by this methodology.
Electricity Authority (Authority)	The electricity regulator who ensures distributors apply and comply with key regulations governing the electricity industry.
Electricity Industry Participation Code 2010 (the Code)	The Code sets out the rules made by the Electricity Authority under section 36 of the Electricity Industry Act 2010.
Embedded generation or Distributed generation (DG)	Electricity generation that is connected and distributed within the Centralines' network.
Generator	An organisation that owns or operates generating units that inject electricity into the network.
Grid Exit Point (GXP)	A point of connection where Centralines' network connects to, and receives electricity from the national transmission system run by Transpower.
Installation Control Point (ICP)	Point of connection on Centralines' network, where: • Centralines nominates as the point where a consumer receives the electricity Centralines delivers, and • the connection point has the attributes set out in the Electricity Industry Participation Code 2010.

Kilovolt Amp (kVA)	A unit of measure for how much power is being provided through a business or home's electrical circuits or technology.
Kilovolt-Amps hour (kVArh)	An hourly measure of the KVAr described below.
Kilovolt-Amps reactive (kVAr)	A measure of how efficiently power flows or is used between the network and consumers technology. It measures the lag between the flow (current) of electricity and the pressure (voltage) of that flow along a consumer's electrical circuit.
Kilowatt (kW)	Kw (1000 x watts) – a unit of measure of power or electricity.
Kilowatt hour (kWh)	The amount of electricity consumed in an hour.
LFC Regulations	Electricity (Low Fixed Charge Tariff Option for Domestic Electricity Consumers) Regulations 2004
LNI-RCPD	Transpower's cost allocation area, the Lower North Island, and the 100 highest regional coincident peak demand (RCPD) periods in kW for the year September to August.
Loss code	Distributors determine loss factors applying on their networks against which traders should submit consumption to the reconciliation manager. Each loss factor has a specified loss code that is stated on Centralines' public website under Loss Factors Methodology and Disclosure.
N-1 supply	An alternative routing for supplying electricity to give a backup in case of primary routing being damaged or failing.
Network	The lines and associated equipment owned or operated by a distributor in a continuous geographic area or areas.
Non-Time of Use (Non-TOU)	Non-TOU means a consumer's site where electricity is metered over a period (e.g. month).

Power factor	kW divided by kVA.
Price category	A category of charges identified as a price category in Centralines' Pricing Policy and Schedules (CM0002). It defines the delivery charges applicable to a particular group of ICP's with a common capacity need or usage behaviour.
Price option	The price option within a price category that gives consumers a choice of how the energy they consume is collated and charged. The options available are usually determined by the configuration of metering and load control equipment used by the consumer.
Pricing period	1 April to 31 March year.
Regulatory Asset Base	The regulatory value of Centralines' network assets that Centralines is allowed by regulation to generate a return on. Refer to as RAB in document.
Replacement cost (RC)	The cost to replace the value of network assets.
RCPD	Regional Coincident Peak Demand.
Retailer	The supplier of electricity to consumers with installations connected to the distributor's network.
Time of Use (TOU)	A consumer's site where half hour metering is installed. These values are used for the calculation of charges.
Transmission charge	Charge incurred by Centralines for transmission of electricity from the national grid operated by Transpower to Centralines' network. This enables Centralines to deliver power to its network users. In this document this term also has the meaning defined under Recoverable Costs in Part 3 of the Electricity Distribution Services Input Methodology Determination 2012 dated 20 May 2020. It excludes transmission rebates passed on to consumers and retailers.
Weighted Average Cost of Capital	A measure of the return on shareholder capital that distributors can achieve under the Default Price-Quality Path regulations set by the Commerce Commission. Refer to as WACC in document.

2. Introduction

2.1 Context

This document sets out Centralines' methodology for setting its price structure and prices for the 2022/23 pricing year. The disclosure document is prepared pursuant to requirement 2.4 of the Electricity Distribution Information Disclosure Determination 2012 (consolidated in 2018) (Disclosure Determination).

Centralines' Pricing Methodology Disclosure provides information to assist interested parties to understand how Centralines' delivery prices are set. This includes the methods used to determine revenues, consumer groups and allocation of costs of providing and maintaining the network.

In developing Centralines' prices, we have been mindful of the importance of transitioning in a timely way to more cost-reflective pricing approaches.

Residential pricing approaches have not been as effective in signalling network cost structures due to:

- legacy pricing approaches (especially under the constraint of the LFC Regulations), and
- limits on the measurement capabilities of residential consumers' meters (i.e. non-smart meters).

Centralines is actively engaged with its industry peers to develop new approaches and to seek residential pricing reform. With a transition process now in place to remove LFC Regulations, residential pricing can move towards a position that is more reflective of costs, whereby variable prices will be able to reduce to reflect marginal costs.

The transition is phased over a five-year period, and this will allow Centralines to plan with more certainty on the progress that can be made while minimising any rate shocks for consumers during the transition.

In developing this Pricing Methodology Disclosure, Centralines' has considered the Electricity Authority's guidelines and industry scorecards. Where the Authority has identified specific areas of improvement and highlighted best practice, we have sought to incorporate this feedback into this Disclosure Statement.

2.2 Centralines

Centralines serves the Central Hawke's Bay region with the majority of consumers in the main towns of Waipukurau and Waipawa. An extensive rural region is served in the surrounding areas as shown in Figure 1.

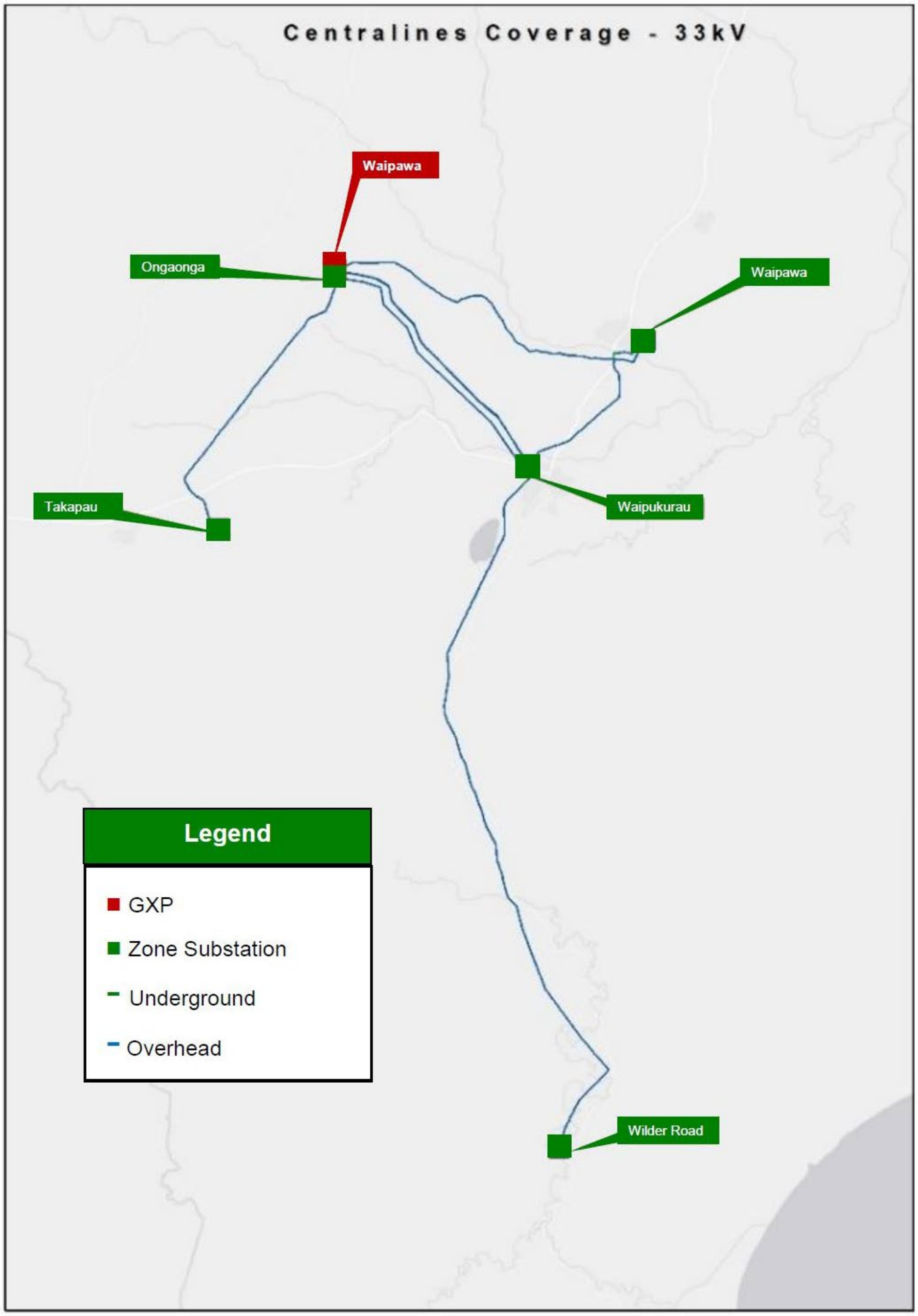

Figure 1 – Centralines' GXPs and Substations

2.2 Centralines (cont)

Centralines' network is relatively lightly loaded, with much of the load being relatively small and spread over a large geographic area. This is reflected in the low connection point density at 4.9 ICPs per km, the third least dense network in New Zealand. The major load types are:

- three large commercial consumers in excess of 435kVA connection size
- 190 Commercial connections
- 2000 small commercial connections situated in the business districts of the small towns and throughout the rural area, and
- 6600 residential consumers in urban and rural locations.

2.3 Future development

Centralines has observed a recent lift in residential building activity in its major towns. However, it is not at levels that require upgrades in capacity of the network to meet new demands.

The other area of growth that has occurred in recent years has been related to irrigation connections. There are more than 70 connections where irrigation is the prime or sole type of use. The advantage of this type of load, however, is that it occurs at a time that does not coincide with residential peak loads.

The dominant large connection on the network is Silver Fern Farms meat processing factory based close to Takapau. This connection uses over 20% of the total consumption and 8% of the maximum demand in the network.

2.4 Pricing review

Centralines reviews its pricing annually to meet company, industry, legislative and regulatory requirements.

2.5 Pricing Policy and Schedules

The methodology does not contain full details of eligibility for price categories, price options or capital contributions. These details can be found in Centralines' Pricing Policy and Schedules (CM0002) available on Centralines' website (www.centralines.co.nz).

3. Regulatory Context

3.1 Introduction

The Commission regulates distribution businesses because they are natural monopolies. Due to economies of scale a competitor could not profitably duplicate Centralines' network. Part 4 of the Commerce Act requires the Commission to periodically set default price-quality paths for electricity distributors, which in turn requires Centralines to:

- limit the amount of revenue collected from consumers, while maintaining quality of supply, and
- disclose certain information about its business, including this Pricing Methodology Disclosure Statement.

During the 2021/22 pricing year, Centralines became an exempt EDB, which means that Centralines must now determine its own level of revenues. Centralines has elected to use the Commission's financial model, with updated cost inputs to determine a reasonable level of revenues to cover the costs of delivering its network services.

3.2 Information disclosure requirements

Centralines must comply with the Electricity Distribution Information Disclosure Determination 2012 (Disclosure Determination) which includes the requirement for the annual disclosure of its pricing methodology.

The key requirements in complying with the disclosure of pricing methodologies are outlined in 2.4.1 – 2.4.5 of the Disclosure Determination.

The purpose of this regulation is to ensure that sufficient information is readily available to interested persons to assess whether the purpose of Part 4 of the Act is being met.

3.3 Distribution Pricing Principles

The Authority has a monitoring role in respect of distributors' price setting approaches. Centralines has developed its prices with reference to the Authority's 2019 Distribution Pricing Principles.

The Authority's recent reform of the Pricing Principles was to make changes that:

- promote cost reflectivity
- focus on the essential elements of efficient pricing, and
- continue to recognise that distributors should have regard to transaction costs, consumer impacts and uptake incentives.

While compliance with the Pricing Principles is voluntary, the Disclosure Determination requires each distributor to either:

- demonstrate consistency with the Pricing Principles, or
- provide reasons for any inconsistencies.

3.3 Distribution Pricing Principles (cont)

The Authority has provided an updated Practice Note to assist with the practical interpretations of the Pricing Principles.

The Authority has also developed a scorecard approach to monitor and comment on distributors' pricing structures and pricing reform. The pricing scorecards evaluate distributors' pricing plans against the Authority's Pricing Principles.

The Authority's intention is for the scorecards to form a basis for regular, constructive engagement with distributors on their price reform aspirations, efforts and roadblocks. Centralines has considered the Authority's commentaries on distributors' previous pricing methodology disclosures. Centralines has sought to address the Authority's recommendations and observations on distributor best practices in redeveloping this disclosure.

Appendix A sets out how Centralines has addressed the Pricing Principles.

3.4 LFC Regulations

Centralines is required to make available low user prices in line with the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 (LFC Regulations).

The key requirements of this regulation are as follows:

- Centralines must offer a fixed daily charge to residential consumers of no more than $0.30 per day excluding GST, and

- a consumer on the low fixed charge daily rate should pay the same or less than a residential consumer on a comparable non-low fixed charge price plan at an annual consumption of 8,000kWh.

These requirements have a significant impact on Centralines' prices and price structure as outlined in *Section 4*.

The Government has passed an amendment which has the effect of phasing out the LFC Regulations over a five- year period. This is the first year where the amendment has taken effect with the fixed daily charge for low users increasing from 15c per day to 30c per day. Centralines has offset this increase with a corresponding reduction in variable prices. Each year this daily charge will be able to be increased if desired.

At this stage it is the expectation that this will occur through to the end of the transition period. As the revised daily charges are implemented Centralines will assess the effect on residential consumers and will consider if any additional revisions to the overall residential pricing plans are needed, including to standard price plans, where fixed charges have not been constrained to artificially low levels.

The Authority's scorecard on Centralines' pricing approach in 2021 noted that there are risks associated with Centralines reliance on volumetric charging, with potential for inefficiency associated with higher c/kWh prices relative to low marginal costs of delivering additional electricity.

3.4 LFC Regulations (cont)

Through the course of the LFC transition and beyond, Centralines intends to take the opportunity to lift fixed charges and reduce variable prices (all else equal) as permitted by the LFC Regulations. This will also be reflected in standard plans, given the linkage between LFC and standard plans at the 8,000 kWh cross-over.

The LFC Regulations effectively require variable prices to be above efficient levels in order to provide for low fixed charges, so the transition path for the LFC Regulations to be removed is a critical enabler of more cost-reflective variable prices.

The Authority also provided feedback that it did not understand why Centralines considers that on an uncongested network it is desirable to have time-of-use signals that provide value to consumers of shifting loads from peak to off-peak times.

Centralines considers that such pricing has two valuable features, even on an unconstrained network:

1. It provides a long-term value proposition for consumers to consider when making appliance choices, noting that demand is expected to grow over time, so encouraging time-insensitive loads to be scheduled for off-peak times creates a long-term behavioral incentive;

2. Because of the LFC Regulation constraint on the use of fixed charges to recover fixed costs, Centralines has no choice but to recover revenues from variable charges. As is established by the Pricing Principles, this recovery should be least distortionary to consumers consumption and appliance choice decisions.

   Time of use prices are considered superior to flat variable prices because demand is considered more inelastic at peak times (morning and evening peaks), whereas there is likely to be a degree of elasticity during the middle of the day and over-night where the network is more lightly loaded.

   It is not necessary or desirable to signal to consumers the need to reduce demand (e.g., it would be beneficial overall to charge electric vehicles over-night) and Centralines does not want to signal to consumers that there is a network benefit for substituting grid electricity for solar electricity.

3.5 Electricity Industry Act 2010

The Electricity Industry Act provides a framework for the regulation of the electricity industry, including:

- establishing the Authority, and
- incorporating provisions from the now revoked Electricity Industry Reform Act.

3.6 Distributed generation

Centralines' policies and procedures for installation and connection of distributed generation are in accordance with the requirements of Part 6 of the Electricity Industry Participation Code 2010.

4. Strategic Intent

4.1 Introduction

This section describes the:

- context in which Centralines has set its prices, and
- strategic considerations that will impact on future changes in the structures of Centralines' prices.

New technologies, changes in regulatory requirements and changing consumer opportunities and preferences will have a significant impact on Centralines' pricing over the next several years, especially at the residential level.

4.2 Network characteristics

Centralines has a single grid exit point (GXP) connection to the National Grid at Waipawa. This is connected south via Dannevirke from Woodville, and north to Fernhill.

Transpower has load scenarios in place that suggest a small increase in load from the current 23MW peak demand to 27MW by 2035.

There is recognition by Transpower that some upgrade work is required on the GXP including an outdoor to indoor conversion and the installation of an 'Overload Protection Scheme'. This upgrade work has current indicative costs of $500,000 and a possible implementation within the planning period prior to 2030. While this would be a pass-through cost that would increase prices, the impact is not significant.

Transpower recognised that low voltage and transformer capacity issues will affect the Waipawa GXP. These are planned to be managed without additional investment.

Centralines continues to monitor load growth and maintains some pricing measures that can be used to incentivise movement of load where possible. The removal of the Irrigation category should assist in this by requiring the largest of the irrigation connections to be priced on demand instead of consumption methods.

The demand and peak demand pricing options will reflect the consequences of use during peak periods and allow consumers to make informed decisions on the timing of their activity.

4.2 Network characteristics (cont)

Residential load and irrigation load are somewhat complimentary, so very strong signals in one or other load type are unlikely to solve future constraints. Cost reflective pricing for Centralines is therefore to emphasise the use of fixed charges and other pricing approaches that have limited impact on consumption decisions.

Nevertheless, Centralines also recognises that there may be longer term benefits to encouraging low-value discretionary loads to be shifted to off-peak times. Centralines is considering the most effective pricing structure to encourage this (for example, Time of Use pricing with modest differentials between peak and off-peak prices that are mandatory for all residential consumers).

4.3 Changes to 2022/23 pricing

Centralines have made no changes to distribution pricing for the 2022/23 year aside from:

- the increase in the daily fixed charge for LFC compliant price plans, CH1 and CH1T, along with small reductions in the variable rates to maintain an overall unchanged residential revenue.

- The removal of the residential Generation price plans, CH1G and CH2G. With LFC reform now in place the need for these plans will reduce. Centralines wanted to reduce complexity in our price offerings for both consumers and retailers.

- A small adjustment to the balance of residential Peak and Off-peak rates was made as increased amounts of accurate data continue to be made available. The peak rates were decreased slightly, and the off-peak rates increased to deliver annual charges that more closely match the non-TOU rates.

Note:
Centralines' overall level of revenues from 1 April 2022 will remain essentially the same as the prior year with any increase in revenue a result of connection growth. Because forecast revenues at existing prices are equivalent to the modelled revenue requirement from the Commerce Commission's regulatory financial model, Centralines determined it was not necessary to make any price adjustments.

4.3 Changes to 2022/23 pricing (cont)

Revenue 2022/23 ($000)	
Target Distribution Revenue	10,507
Pass-through Costs	2,811
Wash-up Balance	-651
Total Target Revenue	**12,667**
2022-23 Forecast Revenue	12,270
2021-22 Forecast Revenue	12,332
Change	-0.5%

Table 1 – Revenue 2022/23

Note:
The revenue forecast through pricing is the amount received after the posted consumer discount is applied. It is assumed that the full discount will be taken up by consumers, but acceptance of the discount is voluntary to consumers and may not be fully applied.

4.4 Strategic consider-ations

In the context of the capacity available on the network, Centralines' strategic intention is principally to ensure:

- that prices are set in a way that does not create undue signals for consumers to change their use of the network, and
- equity between consumers.

For example, Centralines does not need to set strong price signals for consumers to reduce their demand during peak periods. Centralines can rely on existing use of residential hot-water load control and commercial demand price signals to manage periods of high demand.

Accordingly, Centralines intention is to provide over the longer term a weak signal for consumers to consider shifting discretionary loads to off-peak times where there is limited or no cost to consumers from doing so (e.g., setting a dishwasher to wash dishes outside of the peak 5-9pm winter period or charging of electric vehicles at low demand periods).

Apart from this weak price signal the key role of Centralines' prices is to recover the fixed costs of providing the network service in a manner that is equitable across users.

4.5 Strategic consider-ations (cont)

Over the longer term, increasing penetration of electric vehicles (EVs) may place pressure on parts of the network, especially if consumers choose to recharge their vehicles at peak times.

Centralines expects that uptake of EVs in its region will follow the rest of New Zealand, so intends to monitor pricing approaches used by other EDBs to determine an optimal pricing approach to encourage off-peak pricing. Centralines have residential time of use plans available and have set the peak/off-peak pricing to provide a modest incentive for consumers to consider time-shifting discretionary loads to off peak periods.

Centralines intends to lift residential fixed charges in alignment with the LFC Regulations transition allowances, with commensurate reductions in variable charges to achieve better cost-reflectivity in residential plans.

This rebalancing of residential pricing is expected to continue beyond the eventual removal of the LFC Regulations in a progressive manner to ensure consumer impacts can be well-managed.

Centralines has not yet determined the optimal balance between fixed and variable prices for recovering revenue requirements but notes that decisions on this are not required for the next few years given the five-year transition path for the LFC Regulations.

The Commercial pricing options are relatively cost reflective in their current form so little change of note would be expected in this area. The Commercial categories involve relatively low numbers of connections and there is little anticipated growth.

The two areas of potential significance in the commercial sector are firstly in irrigation, and secondly the single large industrial connection. There has been growth in numbers of irrigation-focused connections in the last 10 years and while this growth has tapered off there remains potential for continued increases.

The Silver Fern Farms meat processing facility is a significant consumer and changes to the nature of this connection, either increases or decreases, would affect Centralines to a considerable degree.

5. Centralines' Pricing Methodology

5.1 Purpose

In this section we explain the specific basis for setting Centralines' prices.

5.2 Guiding industry principles

As well as meeting the above considerations described in *Section 4*, Centralines endeavours to ensure its pricing methodology is consistent with the Authority's Pricing Principles and guidance provided by the Authority's Practice Note for all electricity distributors. These principles are as follows:

a) *Prices are to signal the economic costs of service provision, including by:*

   (i) *being subsidy free;*

   (ii) *reflecting the impacts of network use on economic costs;*

   (iii) *reflecting differences in network service provided to (or by) consumers.*

   (iv) *encouraging efficient network alternatives.*

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.*

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*

   (ii) *enable price/quality trade-offs.*

d) *Development of prices should be transparent and have regard to transaction costs, consumer impacts, and uptake incentives*

Full details of how Centralines applies these principles to its pricing methodology can be found in *Appendix A*.

5.3 Core methodology

To achieve the objectives and principles listed above, Centralines uses the following core process to drive its pricing methodology and annual review of prices.

1. Establish a target distribution allowable revenue using the current DPP determination as a guideline but applying Centralines-specific costs and forecast growth.

2. Determine the value of pass-through costs to be recovered through prices.

3. Establish allocators for each component of Centralines' costs/revenue requirement to allocate to consumer groups where costs cannot be directly attributed.

   Each cost component should be allocated as accurately as is practical to ensure connections are priced as closely to their ideal level of total revenue. A detailed table of the allocator used for each cost component is found in *Section 7*.

4. Set or adjust prices to ensure forecast revenues from each consumer group equate to the allocated costs.

The Authority has provided in the practice notes an idealised 'cost-reflective price-setting methodology' whereby marginal prices are set first to reflect marginal costs. Once these prices and likely revenues from those prices have been established, the balance of the revenue requirement should be recovered in as non-distortionary manner as possible.

This sequence differs from Centralines' historical approach. Centralines believes this makes no practical difference to the end result because marginal costs are effectively close to zero on a distribution network that is not capacity constrained. Centralines' approach is to:

- use direct attribution and cost allocators to allocate costs and revenue requirements to each customer category, then

- determine cost-reflective pricing elements within each price category as far as possible, and finally

- make adjustments to ensure the overall revenue requirement is met.

Note:
In addition, information is not available to accurately deploy the method suggested by the Authority, because price-elasticity information is not available to determine efficient mark-ups.

5.3 Core methodology (cont)

Where there is currently a relatively cost-reflective pricing option in place this pricing option has been set at returning the approximate revenue for the cost it reflects.

For example, the On Peak Demand price options for commercial connections are set to recover the Interconnection charge that relates to the connections in question.

A considerable portion of network costs are essentially fixed. The assets that are currently available for use are long-life assets that are used by many individual connections of varying size and with a diversified pattern of use. The value of the existing asset base is distributed using a Cost Allocation Model.

This model allocates each asset on the network based on a nominal demand value. This is a stable measure that is not a reflection of use but of anticipated use profiles. The network is built to manage expected future loads and therefore the allocation through the Cost Allocation Model reflects this.

Residential and non-residential connections of a similar connected size are allocated a similar level of demand with consumer group separation occurring later.

A truly cost reflective price option would be a fixed charge for all these connections at the same rate to recover fixed costs. The current limitations of the LFC Regulations, even with reform in progress, prevent this from occurring.

The final step in the core process is to set or adjust the range of prices and options available to consumers so that they:

- achieve the desired cost allocations/revenue requirement
- establish relativities that can assist in reflecting future costs, and
- will generate income as close as reasonably possible to Centralines' allowable revenues.

Note:
Sections 7 and *8* cover the key price categories and how prices for each category are determined.

5.4 Consumer considera-tions

When applying the above process to the annual setting of prices Centralines takes account of several consumer considerations. These considerations are listed below.

- Prices are as transparent as possible to aid consumer understanding of how their prices are determined.
- Prices logically relate to each other:
  - progressions between load groups follow a consistent pattern
  - within a price category, prices consistently reflect the costs and benefits of the consumption at different times (e.g. lower rates for controlled load)
  - options are priced to reflect future benefits, i.e. night rates are at a level that would encourage additional load to be concentrated at these times, and
  - peak and off-peak prices reflect that while there is no broad congestion on Centralines' network, there is recognition that it is advantageous to move load into non-peak times.
- Avoiding price shocks to individual consumers or groups of consumers. Stability and consistency of prices is one of Centralines' objectives. In line with the industry norm, Centralines aims to limit price increases to a maximum of 10% per annum for individual consumers. Centralines in practice enacts much lower levels of change.

Note:
Centralines has historically not differentiated pricing between rural and urban consumers. Centralines does not intend to, unless there is a clear understanding that Centralines' consumers would be broadly agreeable.

6. Cost/Revenue Recovery

6.1 Overview

This section sets out the amount of revenue that Centralines are expected to recover through prices (total forecast revenue) in the 2022/23 financial year and breaks this down by key cost components.

Centralines is not subject to a revenue cap but applies a similar methodology to establishing overall revenue and prices. The target distribution revenue is established using a building block of required revenue and including costs that are passed through into pricing.

Centralines' total forecast revenue for the 2022/23 year is shown in Table 2, net of posted discounts.

Components of Revenue	$000
Target Distribution Revenue	10,507
Transmission	2,690
FENZ Levy	12
Local Body Rates	47
Commerce Commission Levy	34
Electricity Authority Levy	24
Utilities Disputes Levy	5
Wash-up Allowance	-651
Total Target Revenue	**12,667**

Table 2 – Components of Allowable Revenue

6.2 Target distribution revenue

The 'Forecast Net Allowable Revenue' provided by the Commission is calculated incorporating a number of factors involved in operating an electricity distribution business. The key components are:

- depreciation
- operating expenditure
- return on investment on the regulated asset base (RAB), and
- regulatory tax.

Each of these cost component is discussed in more detail below.

- **Depreciation** – Depreciation is calculated on a straight-line basis in accordance with ID Determination using a standard life for the asset[1]. Depreciation costs for the year ending 31 March 2022 are forecast using historical depreciation on our regulatory asset base.

- **Operating Expenditure** – The two main costs components of operating expenditure are:

  - network OPEX including maintenance and inspections, and
  - non-network OPEX including the overhead costs of running the network.

- **Return on Investment** – Centralines' permitted return on investment has been calculated using the regulated weighted average cost of capital (WACC) on a forecast value for network regulatory asset base (RAB) as at 31 March 2020. The Commerce Commission applies a vanilla WACC of 4.57% to determine allowable return on investment, from which revaluation gains (essentially capital gains) are deducted at the rate of 2.9% for 2022/23, based on RBNZ forecasts current at the time of setting prices.

Centralines' RAB value, which determines the asset value that Centralines can make returns on, was forecast to be $69.4 million as at 31 March 2022.

- **Regulatory Tax** – The assessed value of tax payable is determined in the Commerce Commission's DPP reset financial model, which is based on a deemed efficient capital structure.

[1] Standard lives for each asset group is determined by the Commerce Commission, *Handbook of Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses,* 30 August 2004.

6.2 Regulated revenue (cont)

The network costs that Centralines can recover for 2022/23 are shown in the Table 3.

Network Cost Element	$000
Depreciation	2,794
ROI	2,373
OPEX	4,655
Tax	685
Total	**10,507**

Table 3 – Costs of Providing Centralines' Network

6.3 Pass-through costs

In addition to the core costs of operating the network, Centralines also makes allowance for Pass-through costs.

These are costs paid to third parties who provide essential services in the electricity value chain to allow Centralines' to operate a distribution network, over which Centralines has little or no control. These pass-through costs include:

- **Transmission** – The primary pass-through cost is for the operation of the national grid that moves electricity around the country, and to and from Centralines' network.

  In November each year, Centralines receives a notice of the coming year's transmission pricing from Transpower for the network. The transmission charges through Transpower comprise approximately 20% of the total revenue Centralines will receive through prices.

- **Fire and Emergency Levies** – These are levies charged as part of Centralines insurance cover for the network.

6.3 Pass-through costs (cont)

- **Local Body Rates** – Centralines operates within a number of local body jurisdictions and where rates are charged on the site of network equipment required to deliver distribution services, these are recovered through prices.

- **Commerce Commission Levy/Electricity Authority Levy/Utilities Disputes Levy** – These government agencies charge levies to each industry bodies, including distributors, to cover costs of operating.

The table below shows the expected costs Centralines is seeking to recover in the 2022/23 year.

Pass-through Costs	$
Transmission	2,690,234
FENZ Levy	11,813
Local Body Rates	47,009
Commerce Commission Levy	33,548
Electricity Authority Levy	23,678
Utilities Disputes Levy	5,000
Total Pass-through Costs	**2,811,282**
Wash-up Allowance	**-650,987**

Table 4 – Pass-through Costs

6.4 Wash-up allowance

Prices are set each year using forecasts of the volumes that will occur in the coming year. There are a number of factors that can occur during the year that will influence many of the volumes.

A wash-up methodology is used under DPP regulation and although Centralines is not subject to this regulation any more Centralines believes it is appropriate to factor increased or decreased revenue in the prior completed year as part of the forecast target revenue.

Centralines received more revenue than forecast in the 2020-21 year and have reduced the target revenue for 2022-23 by this amount adjusted at the cost of debt.

The calculations for the wash-up allowance are:

Wash-up Allowance	$
Actual Allowable Revenue 2021	12,866,507
Actual Revenue 2021	13,465,728
Difference	-599,221
67% WACC (post tax)	4.23%
Cost of Debt	-51,766
Wash-up Allowance	**-650,987**

Table 5 – Pass-through Balance Allowance

7. Consumer Groups and Cost Allocation

7.1 Rationale for consumer grouping

Centralines groups consumers firstly, by the size of their connection to the network. As connection size increases the demands placed on the network and the level of build required to support the connection increases.

Residential connections generally have different load profiles from other small connections where a residence is not the dominant form of use. Residences have similarities with each other that allow more specific price options to be applied, such as recognition of controlled hot water load, in order to deliver a more tailored solution for these consumers. Accordingly, they are separated into their own group.

Centralines' consumer groupings are illustrated in the following diagram:

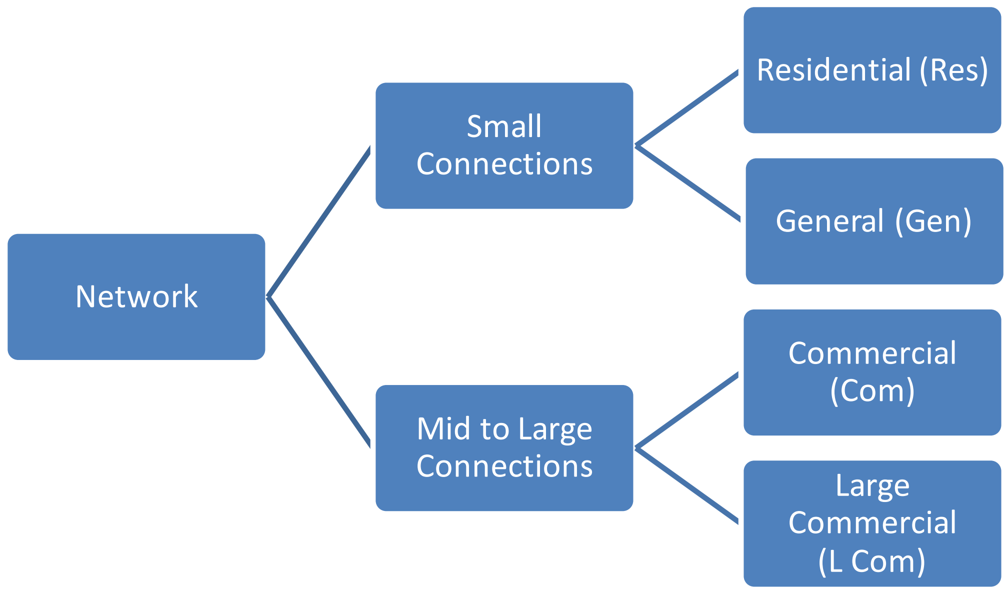

Figure 2 – Consumer Groupings

7.2 Method and criteria of allocating consumers

Consumers are assigned to a load group based on:

- fuse size at the installation control point (ICP)
- type of use, and
- meter type – for example, half hour metering is mandatory for consumers within the Time of Use (TOU) load group.

7.2 Method and criteria of allocating consumers (cont)

Although Centralines has price categories for a number of different consumer groups as identified in *point 7.1*, cost allocations are made to two broad consumer groups: residential and commercial.

Because of the small scale of the network, Centralines has found that to allocate at any higher degree of disaggregation would cause discontinuities in price structures, so it is only practical to allocate to the two groups.

Cost allocators are chosen to reflect as reasonably as possible the key underlying drivers for each cost component so that the allocation can be reflective.

The table below shows the cost component and the allocator used along with the reason chosen:

Cost Component	Allocator	Reason for Allocator
Operating Expenditure	Installed Asset Value	All connections are subject to these costs. The more assets that are required to deliver the required energy, the greater the allocation of costs.
Depreciation		
Return on Investment		
Fire and Emergency Levies		
Commerce Commission Levies	Installed Asset Value	These levies are assessed on network asset value.
Transpower Interconnection	Coincident Maximum Demand (CMD)	Charges are based on the coincident demand during the 100 half hour periods of maximum demand in the Lower North Island.
Distributed Generation Allowance		
Transpower Connection	Assessed/Actual Maximum Demand	The level of Transpower investment is based on the demand requirements of the network.
New Investment Contracts		
Local Body Rates	Number of Connections	All connections are subject to these costs, which are location based.
Electricity Authority Levy	kWh Consumption	The dominant method of basis for the levy.
Utilities Disputes Levy	Number of Connections	Levies are based on the number of connections.

Table 6 – Cost Components

7.3 Cost allocation

The value of each allocator for each consumer group is shown in the table below:

Allocator	Residential	Commercial
Connections	6,570	2,200
Consumption (000 kWh)	44,215	67,015
Asset Value ($000)	55,324	51,283
Max Demand (kW)	25,600	34,100
Coincident Demand (kW)	1,436	561

Table 7 – Relative Value of Allocators for Consumer Groups

7.4 Basis for selection of allocators

Centralines approach to the allocation of costs has been to ensure allocators are:

- reasonable
- fair, and
- simple to measure and apply.

Where a cost is directly driven by a variable, costs are allocated in proportion to that variable. For example, transmission interconnection costs are directly driven by regional peak demands, so interconnection costs are allocated in proportion to each consumer's share (directly calculated or estimated) of those demand peaks.

Asset driven allocators make up the biggest share of total costs allocated to each region and consumer group. Centralines uses a combination of assets utilised by ICP's and an assessed demand to proportionately allocate a representative share of assets.

Centralines:

- traces all assets utilised in the connection of the network to each ICP

- allocates the replacement value of these assets using the assessed demand, and then

- aggregates firstly to each connection, and then to a consumer group level.

Note:
This approach takes account of the distance of consumers from the GXP and therefore the length, number and value of assets needed to connect them to the network.

7.4 Basis for selection of allocators (cont)

The network is built to service the types of connection prevalent in that part of the network. In a residential area the assets employed to build the network to meet criteria, allowing for diversity, is not dependent on the consumption of individual connections.

Likewise, as commercial connections require larger capacity, they are allocated a larger portion of the existing assets than smaller sized connections. While the demand and consumption at a particular site will vary from year-to-year, the assets employed do not, therefore an assessed level of demand produces a more stable asset allocation.

While pricing, particularly of smaller connections, is generally based on consumption this is not a good proxy for allocating assets. Distribution assets are installed to meet demand requirements, not volumes consumed.

7.5 Forecast revenue allocation

The Commission designate the level of regulated revenue that Centralines can achieve through pricing based on the:

- asset value of the network, and
- other costs inherent in operating the network.

In addition, the Pass-through and Recoverable costs that Centralines' pay can be recovered through prices. These costs are allocated to consumer groups to provide a target revenue for each consumer group.

A comparison of target revenues and forecast revenues (before discount) is set out in Table 8.

Consumer Group	Target Revenues ($000)	Forecast Revenues ($000)
Residential	7,657	7,832
Commercial	6,485	5,914
Total	14,142	13,746

Table 8 – Comparison of Target Revenues and Forecast Revenues

This table indicates that Residential revenues are forecast to be close to the target revenue established. Residential volumes, and therefore revenues, are more predictable than Commercial volumes especially those that deal with highly volatile loads such as irrigation.

Centralines seeks to manage price volatility, so forecast and target revenues do not match perfectly in any given year but are within reasonable levels of tolerance.

7.5 Forecast revenue allocation (cont)

The table below shows a more detailed breakdown of the forecast revenue by consumer group for the 2022/23 year.

Consumer Group	Forecast Revenue	% of Total Revenue
Residential	7,832	57.0%
General	2,854	20.8%
Commercial	2,139	15.6%
Large Commercial	920	6.7%
Region	**13,746**	

Table 9 – Breakdown of Forecast Revenue by Consumer Group for the 2022/23

8. Price Categories

8.1 Converting cost allocations to prices

Once costs have been attributed and/or allocated to Centralines' consumer groups, Centralines forecasts whether existing prices and activity levels will generate the revenue needed for Centralines to fully collect those allocated costs.

If there is a difference, Centralines adjusts its prices to better align forecast revenue to allocated costs. This alignment of revenue and prices is not an exact match. Centralines must estimate variables like:

- environmental factors
- changes in consumer usage, and
- responses to price incentives to reduce demand on the network.

Note:
Centralines reconciles the final price structure to the DPP regulations to ensure that the amount of revenue Centralines forecasts to collect does not exceed allowable revenues.

8.2 Price categories and price options

Centralines sets prices at a category level for groups with common needs or usage. Centralines then offers consumers within each category price options so that they have some choice and control over the end cost of their electricity.

Price categories reflect groups of consumers with a:

- common site usage (e.g. place of residence versus place of business), and
- common capacity and metering. Centralines' price categories are detailed below.

Price options represent the choices in each category consumers have on how they will be charged for the use of Centralines' network. These prices are structured in such a way as to:

- maintain equality between consumers who create similar costs for the network
- signal to consumers the benefits and costs of different patterns of consumption
- maintain relativities between options to incentivise desirable behaviour, e.g., consuming outside of peak hours, and
- minimise opportunities for arbitrage i.e., seek to gain a cost advantage by using a price option for a purpose for which it was not intended.

Note:
Details of price options available to Centralines' consumers are detailed in *Section 9*.

8.3 Fixed and variable components to prices

Centralines recovers costs for most price options through a mix of:

- a fixed daily charge to the consumer, and
- a variable charge that is based on their accumulated or Time of Use consumption over a given billing period.

The fixed component is designed to give some certainty of cost to consumers and cost recovery to Centralines. It also reduces the revenue risk to Centralines' and its shareholders should there be:

- material and unforeseen changes to consumption quantities, or

- major movements of ICP's between price categories and price options.

Fixed charges also better reflect the fixed nature of the underlying costs Centralines incurs in operating a network to distribute electricity.

Centralines offers consumers multiple price options and combinations for the variable component of prices. This includes options for both uncontrolled and controlled load services.

This range of options allows individual consumers to control their total electricity costs through their patterns of consumption. It provides incentives to reduce Centralines' recoverable costs by reducing demand and loads on network assets.

Large Commercial customers may also pay a daily fixed charge to recover specific network investments made to meet the needs of customers on individual contracts with Centralines.

8.4 Residential price categories

8.4.1 Overview

Centralines seeks to clearly categorise ICPs as either residential or non-residential. ICPs that are places of residence versus business show similarities in:

- their patterns of consumption, and
- the demand they place on the network.

Demand responsiveness mechanisms, such as control of hot water heating, are applied for ICPs in this category, as are prices compliant with the LFC Regulations.

Centralines offers both accumulative and TOU pricing to customers in the Residential category. Accumulative is where a meter records consumption accumulated over the billing period. TOU is where consumption is recorded at half-hourly intervals.

8.4 Residential price categories (cont)

8.4.2 Accumulative Pricing
The following price categories apply to places of residence that are charged on accumulative price options (i.e. non-TOU):

- Permanent Residence (CH1 and CH2R), and

Under the LFC Regulations, Centralines is required to offer a price option with a maximum fixed daily charge of 30c, this is catered for with the CH1 price category. The low fixed charge categories, when compared to other comparable permanent residential plans (i.e. CH1 compared to CH2R) should have total charges that are the same or less based on 8,000kWh annual consumption.

8.4.3 TOU Pricing
The following price categories apply prices based on the time of the day when consumption occurs.

8.4.3 Permanent Residence TOU (CH1T and CH2T)
In a move to encourage the application of TOU pricing to residential consumers, Centralines has in place two price categories for 'Permanent Places of Residence'. The CH1T option offers a low fixed rate equivalent to the CH1 category.

8.5 General categories

8.5.1 Non-Residential <30kVA
This category includes connections with a wide range of types of use. There are very diverse consumption patterns, some with very occasional use. Historically, the category has been split into high and low use connections with the low use connections paying a higher daily charge.

The additional fixed rate returned a level of revenue that was closer to the cost of connection for these sites that returned very little revenue on the variable rates.

From last year these two categories were merged into one. This delivers a simpler pricing message for consumers and is less administrative for both Centralines and retailers.

8.5.2 Temporary (Builders Supply)
The General category also includes a category for Temporary (Builders Supply) connections. This caters for connections that are temporary in nature due to the initial build or renovation. Once the build is complete the connection will be priced according to the final connection requirement and the type of use.

8.5 General categories (cont)

8.5.3 Unmetered Supply

Where a connection does not have individual metering and they fit a tight guideline they can be charged under the Unmetered category. These connections have small but relatively predictable consumption where a reasonable estimation of total consumption can be made without needing to individually meter each connection. Typically lighting and communications cabinets are included.

Where streetlighting is connected and is managed via a database, generally through a local authority, the connections will be priced under the U03 category where the majority of revenue is collected via a fixture per day price. This is more reflective of the costs placed on the network as they do not directly corelate with the level of consumption.

8.6 Designated irrigator

Last year the Designated Irrigator price category was re-integrated with Commercial price categories. Centralines engaged directly with a number of consumers with Irrigation focused connections to assist in the transition across to the standard commercial categories.

While there were some teething issues the process has progressed well and will allow more accurate forecasting in both load and consumption for Centralines and also deliver a more transparent and reflective pricing model to those consumers with varied size and types of connection.

8.7 Commercial price categories

Centralines prices commercial connections according to the size of the fused connection. As the size increases, the applicable category will be subject to a higher fixed daily charge.

8.7 Commercial price categories (cont)

The CH3 and CH4 Commercial categories (up to 138kVA capacity) have both accumulative and demand-based pricing options available, and the choice is defined on the metering available on-site.

Demand pricing is considerably more cost reflective as the units of measure relate more accurately to the costs placed on the network than for accumulative where consumption is the unit of measure. The larger Commercial connections are required to have full TOU metering and are therefore on the more cost reflective demand pricing options.

Centralines have three large Commercial connections, over 436 kVA capacity. They are priced on an individual basis relating to their specific characteristics.

8.8 Forecast revenue by price category

The following table shows the forecast revenue for 2022-23 by price category.

Centralines	Forecast Revenue ($,000)	% of Total Revenue
Low Fixed Charge - CH1	2,772	20.2%
Std Fixed Charge – CH2R	4,773	34.7%
Time of Use LFC – CH1T	149	1.1%
Time of Use Std – CH2T	138	1.0%
Residential	**7,832**	**57.0%**
Non-Residential – CH2	2,757	20.1%
Temporary – T1P	11	0.1%
Unmetered – U01, U02 & U03	86	0.6%
General	**2,854**	**20.8%**
Commercial to 69 kVA – CH3	729	5.3%
Commercial to 138 kVA – CH4	873	6.4%
Commercial to 276 kVA – CH5	421	3.1%
Commercial to 435 kVA – CH6	115	0.8%
Commercial	**2,139**	**15.6%**
Large Commercial	**920**	**6.7%**
Region	**13,746**	

Table 10 – Forecast Revenue, by Price Category and Consumer Group

9. Price Options

9.1 Price Options

Within each price category, there are different price options. These options seek to signal the value of consuming outside of network peaks, while aiming to cover Centralines allowed revenues under the price path. Depending on whether consumers have TOU or non-TOU metering and their price category, the following price options are available:

Non-TOU metered consumers:

- 24UC – no ability to control load (e.g. water heating)
- AICO – controllable load, but no separate data stream (cannot identify exactly how much load is reduced)
- CTRL – separately controlled and recorded load
- NITE – controlled to be available from 11pm to 7am
- CTUD – controlled to be available from 7am to 11pm, and
- DEFT – for ICPs required to have TOU meters but have accumulative.

TOU consumers:

- ONPK – consumption occurring during the periods 7am to 11am and 5pm to 9pm each day
- OFPK – consumption occurring outside of peak periods
- SOPD – highest peak load occurring within on peak periods on a working day, during a summer month
- WOPD – highest peak load occurring within on peak periods on a working day, during a winter month
- DMND – maximum load during the month, and
- KVAR – a charge for consumption having less than .95 power factor.

Note:
Refer to Centralines' Pricing Policy and Schedules for full details of the applicability of each price option.

9.2 Relativities between Residential price options

9.2.1 Residential Uncontrolled – 24UC

The residential low user 24UC rate forms the basis where all other small user variable rates are derived. The 24UC option is a single charge for a continuous supply where there is no load that is controllable by Centralines on that meter register or equipment.

9.2.2 Residential Night – NITE

The NITE option is a separate charge for electricity consumed between the hours of 11pm and 7am. The NITE rate is set at 33% of the 24UC rate.

9.2.3 Residential Day – CTUD

CTUD is a separate day time charge for electricity consumed between 7am and 11pm. It can only be used in conjunction with the NITE option above.

The CTUD (day only) rate is set so a consumer with a day/night meter who has the standard day/night consumption split of 70/30 will pay the same as an equivalent consumer with a 24UC meter. Consumers can benefit by having a day/night meter if they direct more than the average proportion of their load out of day periods. This benefit to the consumer reflects the network benefit of moving load out of higher demand periods.

9.2.4 Residential Controlled – CTRL

This option allows Centralines to offer a different price for consumption of load that Centralines can control for the consumer under Centralines' Load Management Service.

9.2.5 Residential All Inclusive – AICO

Centralines currently offers an AICO price option, i.e., a single price which applies to both controlled and uncontrolled load where the controlled load is not separately metered. This option is offered in residential price categories. A residential consumer on an AICO price would pay approximately 15% less than if they were on an uncontrolled option.

This option, while providing valuable incentive for the provision of controlled load, is complex from an administration perspective, and creates a significant enforcement task. Centralines has no visibility as to what, if any, controlled load a consumer is providing. As such, this price option is likely to be withdrawn at some point in the future.

9.2.6 Residential On-Peak and Off-Peak

The residential Time of Use options are set so that a typical allocation of consumption between peak and off-peak would result in an equivalent cost to a consumer on an uncontrolled rate. As with the Day/Night option, a consumer can elect to reduce their line charges if they can move typical peak load across to off-peak periods.

9.3 Incentive for load control

The Controlled (CTRL) price option is set so a typical mix of uncontrolled and controlled consumption would result in a 15% discount compared to a connection solely on uncontrolled rate.

Offering a price incentive to consumers, to allow load control and therefore move demand from peak to non-peak times, benefits the network in managing future network investment

9.4 General

The General price category, CH2, encompasses a large range of connections with a small connection size, less than 30kVA. Being of a small connection size they typically have standard accumulative metering and are charged on kWh of consumption with a daily fixed charge.

A controlled price option is available although the level of discount available is reduced as these connections have a reduced level of controlled load available to them. Day/Night options remain available as encouraging consumption outside of the daytime period should offer network benefits.

9.5 Temporary

Temporary connections are used when premises are under construction before the final connection is confirmed. Because of the administrative work involved, and the relatively short time of connection a 10% margin is charged on the standard residential (CH2R) rates.

9.6 Commercial fixed rates

The fixed daily rates are set within connection size bands. Moving up to the next band will see an increase in the daily rate. The margin between these bands has progressively been reduced with the aim of reflecting close to a $/kVA of connection price.

9.7 Commercial variable options

Accumulative options are established on the same principles as the equivalent Residential and General options.

Demand-based options are available for all commercial categories. This type of pricing is mandatory for connections in the CH5 category and above.

At this size the levels of network impact are of a nature that the additional information attained from the meter, and the additionally reflective pricing will allow the consumer to recognise the financial costs and benefits that behaviour incurs.

The demand option (AMD) is an expression of the monthly impact on the network while the On Peak demand (SOPD and WOPD) options relate to the interconnection charges that Transpower pass-through.

10.Specific Methodologies

10.1 Non-standard pricing use

Centralines does not currently have any ICPs subject to non-standard contracts.

10.2 Embedded generators

Centralines currently does not have any embedded generators on its network.

Embedded generators are sites/customers on the network who generate power periods of peak demand, reduce the demand on Centralines' network and hence the investment required in the network. This includes those who are generators only, and those who generate for their own consumption.

Regulatory arrangements have changed for new embedded generators. New generators must now apply to Transpower directly for payments for assisting to defer or avoid transmission upgrades. Previously any new embedded generators could have sought avoided transmission charges directly from Centralines.

For those who generate for their own consumption, consumers are financially rewarded for this in the following ways:

- variable network charges based on kWh consumption reduce
- the interconnection charge component used in calculating their price is reduced as their contribution to Transpower's peak demand calculations is reduced, and
- the proportion of network asset values allocated to the consumer is reduced as the AMD that they place on the network is reduced.

Note:
Centralines also recognises the reduced costs associated with serving larger users who build close to the GXP, hence minimising the network investment required to service them. This is achieved via the pricing derivation which calculates the value of assets assigned to the ICP.

10.3 Distribution generation

Centralines introduced price categories that apply to residential connections on its network with distribution generation (DG) installed from 1 April 2016.

The installation of DG, especially solar PV, does not reduce the use of the network by these sites. While the total amount of electricity consumed from the network reduces, typically the maximum demand does not.

This means that the cost to service this installation is essentially unchanged, yet revenue received based on consumption can reduce markedly.

From 1 April 2022 the DG price categories have been discontinued and the existing connections moved to the appropriate residential categories.

With Centralines now having the ability to increase fixed prices for LFC compliant categories in line with the regulation transition amendment the future requirement for this category diminished.

While the initial increase of 15c per day will not fully compensate for the reduced variable revenue Centralines wanted to take this opportunity to simplify the residential plans for both the consumers and retailers benefit.

11. Customer Feedback

11.1 Survey of consumer price awareness

Centralines, in conjunction with Unison Networks, instigated pricing focused research during January 2020. Consumers were contacted through an online survey or by telephone. The key focus for this research was seeking input into various pricing methods for distribution charges.

Centralines are aware there are a number of pricing options available that can be used for delivering distribution revenue with more or less cost reflective consequences.

The pricing methods described to consumers were Peak/Off Peak, Monthly Demand and Capacity pricing along with a fixed monthly price option. While these options can be technically difficult for non-industry people to understand, Centralines intentionally used a non-industry research organisation to improve the 'plain English' aspect of the communication.

When presented with these options a flat fixed monthly fee was preferred marginally over Peak/Off-peak pricing, 30% to 24%. The feedback around the other options presented was that simplicity was a key factor with the lack of current understanding of demand and capacity proving a major negative. There was a strong 'fairness' attitude.

This translated to 'user pays' being important, with any charge based on how much energy used seen as fairer than a flat rate for connection. While this was slightly at odds with the 30% preference for a flat monthly fee, it essentially illustrated that those consumers not in favour of a flat fee, were strongly in favour of an energy use model.

Overall most consumers when asked what changes they would desire were more concerned with a reduced level of price than any change in how calculations were made or allocated.

This research has encouraged Centralines to maintain the current broad pricing model, particularly in the residential space.

As changes are made, especially with the transition away from the LFC regulations, Centralines will be looking to maintain simplicity and transparency with communication in 'plain English' over a variety of different channels.

Appendix A – Pricing Principles

Principles guiding pricing approach

As noted earlier in this document, Centralines has prepared this disclosure considering the Distribution Pricing: Practice Note – August 2019 (Practice Note) published by the Authority.

The Practice Note sets out a number of principles that distributors are expected to formally demonstrate they adhere to. Centralines considers that many of the principles are 'common sense' and have under-pinned the development of its prices over time.

Electricity Authority pricing principles comparison

In this section, Centralines sets out how it considers it meets the Authority's pricing principles. Each principle is stated, followed by Centralines' commentary.

Signal economic costs

a) Prices are to signal the economic costs of service provision, including by:

i. being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs);

ii. reflecting the impacts of network use on economic costs;

iii. reflecting differences in network service provided to (or by) consumers; and

iv. encouraging efficient network alternatives.

Centralines interprets the requirements for subsidy free prices as requiring that for each consumer group, the revenues obtained from that consumer group must not:

- be below the cost of connecting that consumer to the network (incremental costs), or
- exceed the costs of serving that consumer group, as if they were the only consumer group (stand-alone costs).

These bounds are extremely wide as there are extensive shared assets on Centralines' network. As a result, if Centralines were to cease supplies to any consumer group there would be limited reduction in costs and assets as different consumer groups are intermingled on the network.

Centralines considers that, by definition, its prices are subsidy-free as it applies a Cost Allocation Model to allocate costs across the consumer base to determine the revenue requirement.

This is then used as a basis for establishing prices for each consumer group. As the Cost Allocation Model allocates the total cost of supplying all Centralines' consumers in proportion to percentage use of peak demands, which (by definition) adds up to 100%, no consumer group pays more than their stand-alone costs, given the economics of providing a shared network.

Appendix A – Pricing Principles, Continued

Signal economic costs (cont)

Centralines also ensures that new connections are not subsidised, by calculating a capital contribution where the expected revenues from prices does not cover costs.

This ensures that total revenues from each consumer (including the capital contribution) are not expected to be less than incremental costs.

In adopting a capacity-based approach to assigning consumers to price categories, this signals to consumers the fact that increasing capacity demands on the network will increase costs over the longer-term.

As noted earlier, there is material capacity headroom on most parts of Centralines' network and only 12% of total capital expenditure over the next 10 years relates to system growth requirements.

Centralines does not consider it necessary to strengthen price signals to seek additional peak load reductions. Accordingly, Centralines' key objective is to set prices in a broad-based manner, so revenues are recovered on consumption at any point in time, rather than narrow time periods.

The following chart demonstrates the available capacity on various parts of Centralines' network. Combined with a demand growth forecast of 1.0% per annum, it is clear it is not necessary to signal future investment costs to consumers.

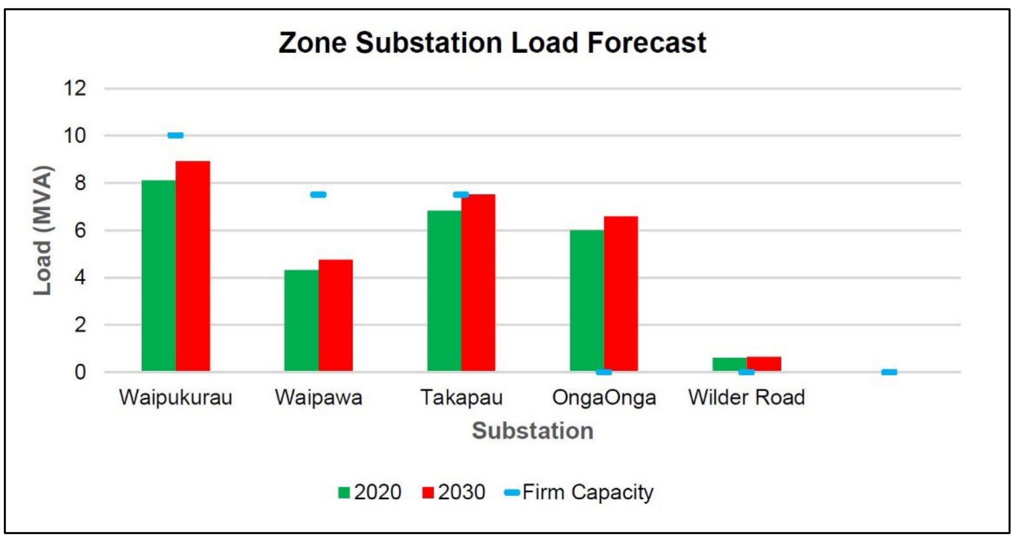

Figure 3 – Zone Substation Load Forecast

Appendix A – Pricing Principles, Continued

Signal economic costs (cont)

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.

Centralines interprets this principle as a requirement to implement some form of 'multi-part' pricing[2], with Ramsey[3] - based considerations applied to the mark-up of variable prices above incremental costs.

As recognised above, Centralines takes account of consumer demand responsiveness in setting prices by recognising that there is not a strong need to influence behaviour patterns beyond what already exists through the existing relativities between prices (e.g. between controlled and uncontrolled loads) as there are high levels of capacity headroom on the network.

This factor dictates that Centralines should adopt broad-based approaches in setting prices that does not rely unduly on revenues being recovered over narrow time periods.

Prices responsive to end users

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
ii. Enable price/quality trade-offs.

List below is how Centralines' compliance under these principles is achieved.

- Uneconomic bypass is avoided through Centralines' cost allocation approach to setting prices, whereby (by the use of a proportional cost allocation approach) pricing is set below stand-alone costs.
- Centralines also avoids uneconomic bypass/inefficient disconnection by lowering charges to consumers who, but for the level of line charges, would cease business.
- It is generally not practical to negotiate with consumers (particularly small consumers) to provide different price-quality trade-offs, given the shared nature of the network. Centralines establishes performance metrics pertaining to different zones (e.g. fault restoration times for rural versus urban consumers).
- Centralines most recent survey was conducted in April 2017. The 2017 survey has indicated that in general customers are satisfied with Centralines quality of service[4].

[2] Multi-part pricing refers to a pricing approach where a consumer pays a combination of fixed and variable charges.
[3] Ramsey-based pricing is an approach where those consumers with inelastic demand face higher charges.
[4] Overall 88.7% of respondents were satisfied, with some variations across segments.

Appendix A – Pricing Principles, Continued

Prices responsive to end users (cont)

- Across all segments continuity of supply continues to be the most important deliverable (64.7% response). Followed by keeping costs down (24% response) and outages (20.7% response). Overall, four out of every five customers are not prepared to pay for an improvement in their power supply, stating an increase would be too much.

- As a result of the regulatory regime and consumer preferences, Centralines' prices will track the costs associated with preserving the status quo quality and reliability levels, as allowed under the DPP.

- Centralines sets specific charges for large industrial consumers to ensure that charges reflect the economic costs of service provision (thereby discouraging uneconomic bypass and allowing such consumers to negotiate their specific needs).

- Centralines allows smaller generators, 10kW or less, to connect to Centralines' network and to utilise the distribution network for delivering their generation without incurring network charges. Compliance with Centralines' Network Connection Standards is required, and administration and connection costs may be applicable (these can be viewed on Centralines' website).

- Because of Centralines' peak/control-period prices, larger consumers have a clear value against which to assess network alternatives or behaviour changes. Many consumers, particularly major consumers, can reduce demand in response to such signals. The majority of Centralines' residential consumers heat their water through controlled meters in response to Centralines controlled pricing rates.

- The introduction of optional residential TOU pricing allows consumers that wish to make choices of when they use energy to reduce costs. While the peak periods are broad, they do deliver a signal on when the network is likely to reach peak levels.

Appendix A – Pricing Principles, Continued

Transparent development of prices

e) *Development of prices should be transparent and have regard to transaction costs, consumer impacts, and uptake incentives.*

Centralines' development of prices:

Is transparent:

- through this disclosure statement, Centralines provides information on the costs it allocates to different consumer groups, and

- in addition to this disclosure, Centralines publishes a pricing policy which details the relative prices for different price options and categories. Consumers can review charges and weigh up costs for changing capacity requirements or load profile and the resulting benefits.

  Centralines consults extensively with electricity retailers annually on pricing strategy, price category and option development. While there is a significant level of difference in the degree to which retailers engage in this consultation process, the opportunity to engage in the process is equal for all retailers operating on Centralines' network.

2. Promotes price stability – Centralines' allocation model is only altered where a strong case exists for such alteration.

3. To ensure price stability to consumers, any price changes made, limit rate shocks to any particular consumer group to less than 10% in line with standard industry practice. As delivery charges make up around 50% of a typical consumer's bill, this ensures no consumer group would face more than a 5% delivered price increase due to changes in distribution charges.

4. Promotes certainty – Centralines endeavours to maintain consistency in its price structure and relativity between prices, so that consumers who make investments (for example in controllable loads) due to the savings between controlled and uncontrolled rates are able to realise the savings expected when the original investment was made.

   As noted above, with the introduction of smart meters, Centralines intends to take a circumspect approach to developing and implementing TOU pricing. The new TOU categories are optional for the present, offering consumers a choice based on whether they can manage their load profile to benefit from savings while assisting to reduce demand on the network. Consumers will have time to consider behavioural changes and investment to avoid adverse bill impacts as Centralines:

   - seeks to strengthen differentials between peak and off-peak charges over time, and

   - considers phasing out less cost reflective consumption-based price categories and options.

Appendix A – Pricing Principles, Continued

Transparent development of prices (cont)	Centralines recognise the need to minimise undue complexity for retailers, subject to its legitimate business needs to signal costs to consumers and ensure equity between consumers. All retailers are subject to the same price schedules from Centralines. Therefore, Centralines considers that its prices are economically equivalent across all retailers.

Appendix B – Certification for Year Beginning Disclosure

CENTRALINES
LIMITED

CERTIFICATION FOR YEAR-BEGINNING DISCLOSURES

Pursuant to Schedule 17

We, Ian Howard Walker and Derek Neil Walker, being directors of Centralines Limited certify that, having made all reasonable enquiry, to the best of our knowledge -

a) the following attached information of Centralines Limited prepared for the purposes of clauses 2.4.1, 2.6.1, 2.6.3, 2.6.6 and 2.7.2 of the Electricity Distribution Information Disclosure Determination 2012 in all material respects complies with that determination.

b) 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.

c) the forecasts in Schedules 11a, 11b, 12a, 12b, 12c and 12d are based on objective and reasonable assumptions which both align with Centralines Limited's corporate vision and strategy and are documented in retained records.

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Director

Date: 29th March 2022

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Director

Date: 29th March 2022

Appendix C – Summary of Document Changes

Date	Version No.	Changes to Document	Creator	Authoriser	Approver
01/04/2010	1.0	Updated tables with new cost allocations	Commercial Manager	Centralines' Area Manager	CEO
01/04/2011	2.0	Significant update of document and descriptions of pricing methodology calculations in light of Electricity Authority Guidelines	Regulatory & Pricing	GM Regulatory & Pricing	CEO
01/04/2012	3.0	Inclusion of discussion re objectives of Centralines pricing approach and relativities between prices	Pricing Analyst	GM Business Assurance	CEO
31/04/2013	4.0	Updated tables and updated content with regard to new Information Disclosure requirements	Pricing Analyst	GM Business Assurance	CEO
31/03/2014	5.0	Updated tables and updated content for new pricing year. Feedback from Electricity Authority review incorporated.	Pricing Analyst	GM Business Assurance	CEO
17/03/2015	6.0	Updated tables and content for new pricing year.	Pricing Analyst	GM Business Assurance	GM Business Assurance
30/03/2016	7.0	Updated tables and content for new pricing year. Update of terminology to align to Guidelines set out by the ENA for distribution networks.	Pricing Analyst	GM Business Assurance	GM Business Assurance
30/03/2017	8.0	Updated tables and content for new pricing year. Introduction of the CH1T and CH2T price categories.	Pricing Manager	GM Business Assurance	GM Business Assurance
19/03/2018	9.0	Full review and restructure of document for new pricing year. Definitions aligned to Centralines' Pricing Policy.	Pricing Manager	GM Business Assurance	GM Business Assurance
11/03/2019	10.0	Updated tables and content for new pricing year. Updated statistics.	Senior Regulatory Affairs Advisor	GM Business Assurance	GM Business Assurance
27/03/2020	11.0	Full review and update to document. Update of key statistics.	Pricing Manager and Senior Regulatory Affairs Advisor	GM Business Assurance	GM Business Assurance
31/03/2021	12.0	Full review and update to document. Update of key statistics.	Pricing Manager and Senior Regulatory Affairs Advisor	GM Commercial	GM Commercial
31/03/2022	13.0	Full review and update to document. Update of key statistics.	Pricing Manager	GM Commercial	GM Commercial