PRICING METHODOLOGY

Pursuant to the Electricity Distribution Information Disclosure Determination 2012, clause 2.4.1

and

Electricity Authority Distribution Pricing Principles and Information Disclosure Guidelines

For the Period: 1 April 2018 – 31 March 2019

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Certification for Year-Beginning Disclosures

Pursuant to Schedule 17

Clause 2.9.1 of section 2.9

Electricity Distribution Information Disclosure Determination 2012

We, Christopher J. Dennison & Anthony James Wood, being directors of Network Waitaki Limited certify that, having made all reasonable enquiry, to the best of our knowledge:

a) The following attached information of Network Waitaki Limited prepared for the purposes of clause 2.4.1, disclosure of pricing methodologies, 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.

Christopher J. Dennison

Date: 7 March 2018

Anthony James Wood

Date: 7 March 2018.

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LIST OF ABBREVIATIONS

ADMD	After Diversity Maximum Demand
AMP	Asset Management Plan
EA	Electricity Authority
EDB	Electricity Distribution Business
GXP	Grid Exit Point
HV	High Voltage
ICP	Interconnected Control Point
ID	Information Disclosure
IND	Individually Assessed Customers
kV	kilo volt
kVA	kilo Volt Ampere
kW	kilo Watt
kWh	kilo Watt hour
LV	Low Voltage
LFC	Low Fixed Charges
NWL	Network Waitaki Limited
ODV	Optimised Deprival Value
ORC	Optimised Replacement Cost
RCPD	Regional Co-incident Peak Demand
RL	Residential Low User
RLC	Residential Low User Controlled
RLU	Residential Low User Uncontrolled
TOU	Time of Use
Transpower	New Zealand Limited
V	Volt

1 INTRODUCTION

This document describes the methodology that Network Waitaki Limited (NWL) has used in determining its Distribution and Pass-through prices from 1 April 2018 until the next review.

1.1 Legislative Compliance

This document has been compiled to comply with the Commerce Commission's Electricity Distribution Information Disclosure Determination 2012 (2012 IDD), clause 2.4, Pricing and Related Information, covering an Electricity Distribution Business's (EDB's) pricing methodology.

As part of the disclosures made under clause 2.4 of the 2012 IDDs, clause 2.4.3(2) requires that an EDB demonstrate the extent to which its pricing methodology is consistent with the Electricity Authority's March 2010 Pricing Principles (EA Principles and Guidelines). The EA Principles and Guidelines, and NWL's compliance with them are detailed in Appendix 2 of this document.

A detailed summary of how NWL complies with the 2012 IDDs and which sections of this pricing methodology comply with each requirement can be found in Appendix 3.

In respect of Residential Low User (RL) consumers at the 9,000 unit average domestic household consumption level for the Lower South Island, RL consumers will pay no more than standard price plan consumers, so NWL will remain compliant with the Government's Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 (RL Regulations).

1.2 Changes to NWL's pricing methodology

There have been no material changes to NWL's pricing methodology, approach and rationale since the last methodology was published in March 2017.

Further to the 2017 pricing methodology NWL has commenced with a pricing review as depicted in Appendix 4. It needs to be emphasised that the chart outlined in appendix 4 is a living road map and the activities and timelines listed may be subject to change. The main reason for NWL adding this road map to the pricing methodology is to share our thoughts on possible future pricing developments and to comply to a request from the EA in this regard. NWL will ensure that any subsequent amendments to the pricing methodology will not compromise any of the EA's pricing principles.

2 PRICING METHODOLOGY

The pricing methodology is based on certain pricing objectives, an identification of NWL's full cost (including a return on investment) to be recovered through prices which then culminates in the revenue requirement.

2.1 Pricing objectives

2.1.1 Revenue

NWL must obtain sufficient revenue to:

- meet its contractual obligations for connection to the Transpower National Grid;
- meet its contractual obligations for the delivery of energy over its distribution network;
- comply with statutory requirements on health and safety, environmental protection, and quality of supply;
- provide for new investment; and
- provide a rate of return on funds that is acceptable to its owners.

To meet the revenue requirement, NWL uses the following principles:

- to provide pricing which is simple to understand and administer and which complies with regulations;
- to maintain the stability of historic pricing regimes in order to lessen price shocks to consumers;
- to provide pricing which will not differentiate between urban and rural consumers;
- to provide pricing which allows the network to be operated safely, reliably, and efficiently; and
- to provide pricing which allows for an adequate level of return to NWL's shareholders.

2.1.2 Discount

NWL has a policy of paying discounts to qualifying consumers towards the end of each financial year. Except when noted otherwise, all revenues stated in this pricing methodology are before the payment of any discount. NWL's discount to consumers is comprised of a fixed component and a variable component. The amount of the variable component is determined taking the discount formula into account and the result will be announced in March of the year in question. The discount formula is available on NWL's website.

For both fixed and variable discounts, the discount offered is typically a set proportion of the fixed component of each price. The exception being the discount payments to RL consumers, who under the RL Regulations must receive discounts that are the same as equivalent standard consumers. RLU consumers, thus receive the same discount as 15U consumers, RLC consumers receive the same discount as 15C consumers. Aside from the exception for RL consumers, by setting discounts as a set proportion of the fixed component of each price, consumers are rewarded equally through the application of the discount without any regard for their consumption mix across prices.

2.1.3 Efficiency

<u>For Standard Contracts this applies as follows:</u>

- A rebalancing of fixed prices and volume prices to reflect the cost structure of the business and mitigate the risk of pricing mainly on volumes;
- High day and low night volume prices that encourage off-peak usage;
- Monitoring power factors;
- Maintain loss factors; and
- Load control to manage peak system demand within Transpower's supply constraints.
- Emergency load shedding scheme to cope with the transmission constraints.

NWL's simple price structure, which uses volume units metered at the Grid Exit Point (i.e. GXP Pricing) is also more efficient as it avoids the cost of duplicating retailer Installation Connection Point (ICP) billing software and data management.

<u>For Individually Assessed Contracts (IND) efficiency is promoted as follows:</u>

- Efficient investment in network by bulk consumers.
- Ongoing efficient operation of the network by signalling the capacity and demand costs of the delivery of electricity to each consumer of this type.

2.1.4 Fairness

As a supplier of essential services NWL has endeavoured to set fair and reasonable prices for each consumer group, however, given the wide variations in usage within each consumer

group, achieving a fair price is a complex objective. What one customer perceives as fair may be perceived by another customer as unfair based solely on their usage patterns.

Customers are placed in load groups based on the capacity of supply they require. The prices applied to each group reflects the value of the assets that they use, based on both group capacity and after diversity maximum demand (ADMD).

IND customers are subject to individual prices that reflect their use of network assets together with the associated transmission costs.

2.1.5 Simplicity

NWL has a simplistic, "easy to understand" pricing structure.

2.1.6 Transparency

For transparency NWL follows a philosophy of setting prices such that they reflect costs and allow consumers to respond in a positive manner.

2.1.7 Consumer Engagement

In February 2017, NWL conducted a phone survey of a random sample of 400 of its mass market consumers, as well as face-to-face interviews with 14 of the large consumers on its network. The approach was slightly changed for the February 2017 survey mainly with a view on the future pricing review that NWL intends to conduct and to get some insight on consumers' views in this regard. The mean rating score for satisfaction with reliability of power supply was 9.3 (on the 1-10 scale) (total sample) - indicating a high level of satisfaction. Only 8% of the total sample wished to be billed directly by NWL. In terms of future consultation on pricing 63% of the sample wished to be consulted – showing a high interest in distribution pricing.

2.2 Cost structure

NWL's main cost components are as follows:

2.2.1 Operation and Maintenance

- Maintenance costs are based on the NWL Asset Management Plan (AMP), with the allocation of costs between asset categories being determined by the 2018-2019 maintenance budget.
- Operating costs include all other network direct and indirect expenses excluding administration costs.

2.2.2 Depreciation

Depreciation for each asset is calculated by dividing the financial carrying value of network property, plant and equipment by the standard life for that asset, which results in a very long depreciation period with a correspondingly low depreciation requirement.

2.2.3 Return on Asset

A provision for future investment in the network based on the 2018-2019 budget. This provision aims to:

- provide for growth;
- deliver appropriate service standards where network usage has changed; and
- replace assets that have reached the end of their economic life with modern solutions.

2.2.4 Administration

A provision for support services related to distribution costs, based on the 2018-19 budget.

2.2.5 Pass-Through Cost

Pass-through cost consists of:

- Transmission prices,
- Avoided transmission costs; and
- New investment contracts

as well as

- Local authority rates,
- Electricity Authority levy,
- Commerce Commission levy; and
- Utilities Disputes levy.

Transmission prices are determined by Transpower New Zealand Limited (Transpower) per the EA's Transmission Pricing Methodology currently in effect, and comprises the following price components:

- Interconnection Charge

  This charge is based on the average of the 100 highest half-hour coincident regional peak demands. The prices for the 2018-19 financial year are based on the demands recorded between 1 October 2016 and 30 April 2017. All the NWL GXPs are located in the Lower South Island region.

- Connection Charge

  This charge represents the fixed costs associated with the dedicated assets at each GXP. Shared assets are allocated based on each off-take customer's share of the 12 highest half-hour demand peaks measured at the GXP.

Avoided transmission costs are associated with transmission assets that have been provided by NWL rather than by Transpower. In many instances, distributors can provide certain classes of transmission assets at a lower cost to consumers than assets provided by Transpower.

New Investment Contracts relate to improvements to the Grid undertaken by Transpower to meet Network Waitaki's supply requirements.

2.2.6 Capital Costs

NWL is currently in a period of capital investment that is mainly being driven by irrigation. In addition, several major assets are becoming capacity-constrained requiring new assets or the upgrading of existing assets. Capital expenditure in excess of depreciation is therefore expected to continue. Additional information concerning the assumptions governing NWL capital investment can be found in NWL's AMP.

2.3 Target Revenue

The target revenue required to cover the costs and return on investment of NWL's line business activities for 2018-19 are given in Table 1 below.

The distribution component of Network Waitaki's prices on average increased by 5.2% and the transmission component on average decreased by 4.7%. The overall weighted average increase in prices amounted to 2% from last year.

Table 1: Annual Revenue Requirement

TARGET REVENUE		
	2017-18	**2018-19**
Operation and Maintenance	$3,668,613	$4,185,391
Depreciation	$3,289,710	$3,327,385
Administration	$1,781,835	$2,128,876
Return on Regulatory Assets	$4,005,766	$3,647,733
Transmission	$5,848,880	$5,577,508
Rates & regulatory levies	$170,154	$173,954
Total target revenue	**$18,764,957**	**$19,040,848**

2.4 Allocation of Target Revenue Components to consumer load groups

NWL's current methodology allocates costs based on estimated usage of network assets valued at the 2004 ODV.

Table 2 below reconciles NWL's target revenue to the overall consumer groupings of Small, Medium, Large and Individually Assessed Contract consumers. Revenue is apportioned over the standard load consumer groupings based on the revenue shares reported for these groups in NWL's Information Disclosure to the Commerce Commission for the year ended 31 March 2017.

Pass-through target revenue includes both transmission revenue and rates & regulatory levies.

Table 2: Allocation of target revenue to consumer groupings

ALLOCATION OF TARGET REVENUE		
	Distribution	**Pass-through**
Small Consumers: RLU, RLC, 15U, 15C	$5,879,416	$2,166,247
Medium Consumers: 30U, 30C, 50U, 50C	$2,377,630	$964,718
Large Consumers: 100, 200, 300, 500, 750	$3,437,371	$1,273,184
Individually Assessed Contracts	$1,594,969	$1,347,313
Total Target Revenue	**$13,289,386**	**$5,751,462**

NWL does not apply distance-based prices to standard load group consumers, i.e. different prices for urban and rural consumers. Although costs increase as the distance from the GXP increases NWL does not believe that the distances involved and the number of consumers affected warrant the introduction of distance-based prices. Approximately 90% of NWL consumers are supplied through the Oamaru GXP showing that the market is relatively concentrated. At this point the complexity and possible ambiguity of applying distance based prices to a few remote rural consumers do not justify distance-based pricing.

Urban consumers supplied from Chelmer Street and Redcastle substations enjoy a higher level of security due to the N-1 status of these substations. Also, the higher level of interconnectivity in the

urban areas provides alternative supply routes in the event of a fault or planned outage. There is a trade-off between distance costs and security of supply costs.

Further, NWL has a capital contributions policy that charges consumers when they initially connect for line extensions and future network development needs over the whole of the network. NWL considers that this in part justifies current consumer groups and their lack of differentiation based on location.

3 NWL CONSUMER LOAD GROUPS & PRICING STRUCTURES

NWL consumer load groups fall into two main categories, namely:

- Standard Contract Consumer Load Groups where network costs are recovered by means of a fixed annual price applicable to the particular consumer load group, and a day/night volume (kWh) price as shown in the schedule of delivery prices in Appendix 1. Most NWL consumers are on standard contracts which mean that they have a supply contract with a retailer and not with NWL.

- Individually Assessed Contract consumers where network costs are recovered by means of a fixed annual price based on the individual customer's asset usage, capacity requirements, and contribution towards the system peak demand.

3.1 Standard Contract Consumer Load Groups

Load groups are based on the standard distribution transformer capacities used on the network, with no distinction being made between a single-phase and three-phase connection.

The minimum connection capacity for a single-phase supply is 15kVA, while the minimum connection capacity for a three-phase supply is 30kVA.

Consumers are allocated into the various load groups based on their contracted connection capacity, with no distinction being made between residential and non-residential connections except for the RL categories which is available only to primary domestic supplies.

The groupings at different kVA ratings are made because kVA is a measure of service capacity and so is reflective of the costs incurred to serve each group.

The current NWL Consumer Load Groups are:

Load Group	Description	Maximum Fuse Rating
RLC	Residential Low User 15C	1x 63A fuse
RLU	Residential Low User 15U	1x 63A fuse
15C	0 - 15kVA controlled	1 x 63A fuse
15U	0 - 15kVA Uncontrolled	1 x 63A fuse
30C	16 - 30kVA Controlled	1 x 100A fuse or 3 x 40A fuses
30U	16 - 30kVA Uncontrolled	1 x 100A fuse or 3 x 40A fuses
50C	31 - 50kVA Controlled	3 x 80A fuses
50U	31 - 50kVA Uncontrolled	3 x 80A fuses
100	51 - 100kVA	3 x 160A fuses

200	101 – 200kVA	3 x 315A fuses
300	201 – 300kVA	3 x 400A fuses
500	301 – 500kVA	NA
750	501 – 750kVA	NA
LC	750kVA +	NA
IND	Individually Assessed	NA

Street lighting is a specialist load group which utilises dedicated LV assets and is covered by an Individually Assessed Contract.

3.2 Distribution Fixed Prices for Standard Contract Consumer Load Groups

Although most network costs are fixed, passing these costs through to consumers as a predominantly fixed cost would not provide consumers with the pricing signals necessary to encourage them to use the resources efficiently.

To this end, NWL has maintained fixed prices at a significantly lower level than volume prices for the past number of years. A further rebalancing of fixed and volume prices will be implemented from 1 April 2018 to better reflect the fixed cost nature of the business, mitigate the risk of a high dependence on volumes transported through the network, while still giving pricing signals.

3.2.1 0 – 50kVA Load Groups

Consumers in the 15, 30, and 50kVA groupings are typically domestic or small commercial installations which have water-heating or other loads that can be controlled. NWL has developed several control options for those consumers that foster economic use of the network assets and enable load to be moved to off-peak periods. In recognition of this, the fixed prices for installations that provide year-round access to controllable load are lower than for installations with no controlled load. In addition, controlled installations can utilise two-rate, night/day metering, which enables consumers to benefit from the cheaper night rate prices that apply between 11:00pm and 7:00am.

The total costs associated with each load group are allocated on the portion of the assets that they utilise. The load group share of the assets is determined by comparing the group capacity with the total network capacity and the group ADMD with the network maximum demand. Costs are allocated 50% on group ADMD, and 50% on the group capacity.

In addition, a RL option is available in accordance with the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulation 2004. This option is revenue-neutral for a consumer using 9,000 kWh per annum before and after a discount has been applied.

3.2.2 51 – 750kVA Load Groups

Installations in the 100 – 750kVA load groups are predominantly commercial, light industrial, or farming, and do not normally have loads that can be controlled externally. Load control is not generally available for these load groups, although limited access to night-rate prices are available for irrigation supplies and for installations with Time-of-Use (TOU) metering. These installations are normally supplied from a dedicated transformer and therefore do not utilise the same range of network assets as small low-voltage connections. Energy use within these load groups is much higher than the groups on connections below 51kVA resulting in the costs being predominantly governed by energy use rather than fixed prices. This provides consumers within these load groups with pricing signals that relate directly to consumption. A rebalancing of fixed and volume based components will be continued on

1 April 2018 to adequately reflect the fixed cost nature of NWL's business while still providing signals through the volume based components.

The total costs associated with each load group are allocated on the portion of the assets that they utilise. The load group share of the assets is determined by comparing the group capacity with the total network capacity and the group ADMD with the network maximum demand. Costs are allocated 50% on group ADMD, and 50% on the group capacity.

3.2.3 Large Commercial Load Group

This load group require connections larger than 750kVA. Pricing for this group is similar to the pricing method applied for Individually Assessed Contracts. The costs associated with the network assets are recovered as a fixed price based 50% on demand and 50% on contracted capacity. Consumers in this group can reduce their costs by improving their utilization of assets and controlling their peak demands.

3.3 Individually Assessed Contracts

Individually Assessed Contract consumers are assessed on their contribution to network system demand and the contracted capacity they require. The assets required to supply each customer installation are assessed and valued at ODV, and the contribution that the installation makes towards network system demand is determined from TOU metering data. The costs associated with the network assets are then recovered as a fixed price based 50% on demand and 50% on contracted capacity. Consumers in this group can reduce their costs by improving their utilisation of assets and controlling their peak demands.

NWL currently has 32 Individually Assessed Contract customers and intends to incentivise most of these customers to move to standard load groups.

3.4 Volume prices for Standard Contract Consumer Load Groups

Volume prices for Standard Contract Consumer Load Groups are based on GXP volumes and individual contract customer usage. Day volume prices apply to all units transported over the network between 7:00am and 11:00pm and night volume prices to all units transported over the network between 11:00pm and 7:00am. Night volume prices are lower than day prices to encourage retailers to develop prices that reward consumers for off-peak usage.

3.5 Transmission prices for Standard Contract Consumer Load Groups

The following methodology has been used as the basis for the recovery of transmission prices in a way that is equitable to all groups and reflects Transpower's pricing structure.

Transpower's Connection Charges and NWL Avoided Transmission Costs are fixed asset-based costs and are allocated between load groups based on the group capacity requirements. These costs are recovered through mostly fixed prices.

Transpower's Interconnection Charges are recovered from Standard Contract consumers as a volume (kWh) price plus a small fixed price.

A rebalancing of the fixed and volume based components will continue from 1 April 2018 to recover costs in proportion to the capacity being made available to load groups. The volume prices are based on GXP totals. Day volume prices apply to all units transported over the network between 7:00am and 11:00pm, and night volume prices to all units transported over the network between 11:00pm and 7:00am.

3.6 Transmission prices for Individually Assessed Contracts

Transpower's Connection Charges and NWL Avoided Transmission Costs are recovered by means of a fixed price based on the capacity (kVA) requirements of each consumer.

Transpower's Interconnection Charges are recovered by means of a fixed price based on the average of the 100 highest half-hour demands (kW) recorded by each consumer in the previous 12 months.

3.7 Transmission prices Relating to Loss and Constraint Rebates

Loss and Constraint Rebates are credits rebated by Transpower, resulting from over-recovery of costs and are included in transmission prices.

4 LOSSES

4.1 General

Losses represent the percentage of electricity entering the network that is either consumed in the delivery process or lost, and can be categorised as either technical losses or non-technical losses.

Technical losses comprise:

- standing losses arising from zone and distribution transformers; and
- variable losses arising from resistive losses in conductors. Resistive losses are proportional to the square of the current passing through the conductor.

Non-technical losses comprise:

- losses arising from metering faults or errors; and
- losses arising from electricity theft etc.

The energy measured at customers' installations is therefore after losses, and must be multiplied by the overall "loss factor" to determine each retailer's purchase quantities at each GXP.

4.2 Low Voltage and High Voltage Connection

Most consumers take supply and are metered at 400/230V and the loss factor applied to these sites must account for distribution transformer and low voltage reticulation losses. A small group of customers take supply and are metered at 11,000V and the loss factor applied to these customers does not include distribution transformer and LV reticulation losses.

4.3 Loss Factor Allocation

The average loss factor for the network is calculated from data supplied by the National Reconciliation Manager. This information is compared with the GXP data to determine the long run overall loss factor.

5 DISTRIBUTED GENERATION (DG)

NWL is always keen to work with consumers and to advise them of distribution alternatives such as DG from wind or solar. Any consumer interested in DG is encouraged to get in touch to discuss the opportunity further.

NWL offers connection to DG by the standard terms defined by the EA. The standard terms are easy to understand and are consistent with most distributors across the country. These terms can be found on the DG page on NWL's website: www.networkwaitaki.co.nz.

DG consumers are not charged for injecting into the grid at this time. In future, there may be a need to charge for this, but it will be set at a level that does not discourage DG and relevant stakeholders will be consulted at the time.

For sufficiently large distributed generation consumers located in an area of strategic importance where a contribution to peak demand reduction could be deemed useful, NWL has up to now considered making payments to a DG consumer for the amount it reduces NWL's Regional Co-Incident Peak Demand (RCPD). The consultation paper on review of the Transmission Pricing Methodology (TPM) as well as the Distributed Generation Pricing guidelines by the EA might lead to changes in these methodologies. NWL is closely following developments in this area and might have to adjust its approach as there will possibly be some changes to the way that the Transmission Interconnection charge is calculated. Once the new TPM and Distributed Generation Pricing principles is released there will be more clarity on this.

6 APPENDIX 1 – DELIVERY PRICE SCHEDULE

Delivery Price Schedule for Network Waitaki Limited
Effective from 1 April 2018

The prices in this schedule are used to charge electricity retailers for the delivery of electricity in the Waitaki region serviced by Network Waitaki. Electricity retailers determine how to allocate this cost together with energy, metering and other retail costs when setting the retail prices that appear in an end consumer's power account.

			Effective 1 April 2017			Effective 1 April 2018			
Code	**Description**	**Units**	**Distribution**	**Pass-through**	**Delivery Price**	**Distribution**	**Pass-through**	**Delivery Price**	**Number of consumers**
RESIDENTIAL LOW FIXED CHARGE / Price category code: RL (0 - 15 kVA)									
RLU	Daily Price - Uncontrolled	$/connection/day	0.0952	0.0548	**0.1500**	0.0952	0.0548	**0.1500**	555
RLC	Daily Price - Controlled	$/connection/day	0.0952	0.0548	**0.1500**	0.0952	0.0548	**0.1500**	3725
RLUD	Day Volume - Uncontrolled	$/kWh	0.07643	0.04203	**0.11846**	0.08301	0.03721	**0.12022**	
RLCD	Day Volume - Controlled	$/kWh	0.07643	0.03003	**0.10646**	0.08301	0.02545	**0.10846**	
RLUN	Night Volume - Uncontrolled	$/kWh	0.00772	0.01509	**0.02281**	0.00838	0.01336	**0.02174**	
RLCN	Night Volume - Controlled	$/kWh	0.00772	0.00309	**0.01081**	0.00838	0.00262	**0.01100**	
GENERAL CONNECTIONS / Price category code: GC									
15U	0 - 15kVA - Uncontrolled	$/connection/day	0.5144	0.3112	**0.8256**	0.5762	0.3112	**0.8874**	1641
15C	0 - 15kVA Controlled	$/connection/day	0.4123	0.1125	**0.5248**	0.4737	0.1125	**0.5862**	4826
30U	16 - 30kVA - Uncontrolled	$/connection/day	0.5737	0.5838	**1.1575**	0.6674	0.5838	**1.2512**	466
30C	16 - 30kVA Controlled	$/connection/day	0.4687	0.3681	**0.8368**	0.5624	0.3681	**0.9305**	214
50U	31 - 50kVA - Uncontrolled	$/connection/day	0.7517	0.6643	**1.4160**	0.9529	0.6643	**1.6172**	621
50C	31 - 50kVA Controlled	$/connection/day	0.6489	0.4436	**1.0925**	0.8500	0.4436	**1.2936**	153
100	51 - 100kVA	$/connection/day	0.9495	0.8529	**1.8024**	1.2819	0.8529	**2.1348**	341
200	101 - 200kVA	$/connection/day	1.8398	1.4296	**3.2694**	2.4101	1.4296	**3.8397**	119
300	201 - 300kVA	$/connection/day	2.4530	1.8178	**4.2708**	3.3851	1.8178	**5.2029**	49
500	301 - 500kVA	$/connection/day	3.2838	2.6829	**5.9667**	5.9109	2.6829	**8.5938**	23
750	501 - 750kVA	$/connection/day	4.8467	3.8918	**8.7385**	6.8338	3.8918	**10.7256**	9
WATAD	Day volume	$/kWh	0.06119	0.02718	**0.08837**	0.06375	0.02304	**0.08679**	
WATAN	Night volume	$/kWh	0.00680	0.00295	**0.00975**	0.00708	0.00250	**0.00958**	
LARGE COMMERCIAL / Price category code: LC (750 kVA +)									
LC	Daily fixed price	$/con/day	1.8398	0.0000	**1.8398**	1.8398	0.0000	**1.8398**	0
LCCAP	Daily capacity price	$/kVA/day	0.0751	0.0639	**0.1390**	0.1059	0.0639	**0.1698**	
LCDEM	Daily demand price	$/kW/day	0.1235	0.2213	**0.3448**	0.1235	0.2074	**0.3309**	
INDIVIDUALLY ASSESSED / Price category code: IND									
IND									32

Notes:
All Charges are GST exclusive. GST is payable in addition to the charges.

The price movement amounts to an **average** overall 2% increase mainly as a result of increased operational and capital expenditure. As a result of a **rebalancing** of the **fixed** ($/con/day) and **volume** ($/kWh) price components consumers will be impacted differently depending on their electricity usage patterns. More information on how prices are determined is published in our **pricing methodology** which is available on the Network Waitaki Ltd website (www.networkwaitaki.co.nz).

Eligibility for the "Residential Low Fixed Charge" price category requires that the premises must be the consumer's principal place of residence as defined in the Electricity Industry Act 2010.

Volume (kWh) prices are based on volumes metered at the Grid Exit Points supplying the network. All metered loads should be grossed up using the appropriate loss factor to arrive at the chargeable GXP volume.

Large Commercial (LC) load group with connections higher than 750kVA. **Daily capacity prices** are based on contracted capacity and **daily demand prices** are applied to an assessed demand level.

Distribution and Pass-through prices are charged in respect of each site and electricity retailers are invoiced monthly in arrears. Fixed prices accrue on a daily basis at the rate of 1/365th of the annual amount due.

Network Waitaki's **annual discount** to consumers is comprised of a fixed and variable component. The amount of the variable component is determined taking the discount formula into account and the result will be announced in March 2019. The discount formula is available on NWL's website.

Discounts will be payable in March or April 2019 based on the **number of days that the installation has been connected** within a specific load group during the preceding 12 months. The discount methodology is available on the Network Waitaki Ltd website.

7 APPENDIX 2 – COMPLIANCE TO EA PRINCIPLES

As part of the disclosures made under Section 2.4 of the 2012 IDRs, Clause 2.4.3(2) requires that an EDB demonstrate the extent to which its pricing methodology is consistent with Electricity Authority's March 2010 Pricing Principles (EA Principles and Guidelines). The EA Principles and Guidelines, and NWL's compliance with them are detailed in the table below.

Pricing Principles	Network Waitaki Limited's compliance to the EA principles
(a) Prices are to signal the economic costs of service provision, by:	
(i) being subsidy free (equal to or greater than incremental costs, and less than or equal to standalone costs), except where subsidies arise from compliance with legislation and/or other regulation;	For its Standard Contract consumers, NWL placed these consumers in load groups per an estimate of the actual transformer capacity used by each consumer. Capacity requirements were also considered when the prices of IND consumers were set. NWL is of the view that dividing consumers into different groups per capacity utilisation is reflective of the underlying cost drivers of incrementally supplying each load group and IND consumer. According to this Principle, being subsidy free means that for each consumer group or IND consumer, the revenues from that group or IND consumer should not be below the cost of connecting that consumer group or IND consumer to the distribution network (incremental cost) and this is indeed the case given NWL's capacity utilisation reflective prices. Further, this principle means that revenues from each consumer group or IND consumer should not exceed the costs of supplying that group or IND consumer as a standalone. Except for subsidies provided in compliance with the RL Regulations, NWL is of the view that its prices are generally free of subsidies.
(ii) having regard, to the extent practicable, to the level of available service capacity; and	By dividing consumers into load groups according to transformer capacity NWL has regard for this principle. NWL have day/night volume prices that encourage consumers to shift load to night time where possible. NWL also offer an incentive to consumers that choose controlled load price plans.
(iii) signalling, to the extent practicable, the impact of additional usage on future investment costs.	Even with the slight rebalancing of fixed and volume components the volume component sends a signal to consumers that additional usage will impact on the future investment costs of NWL. In addition, for NWL's volume day and night prices, there is a higher price in the congested day period which signals that additional usage will impact on future investment costs. As a further signal, NWL offers discounted prices for consumers who opt for Controlled prices. Both distribution and transmission fixed prices are lower for controlled prices compared to the equivalent uncontrolled prices to signal the benefits of load control. The transmission fixed component of each controlled price is significantly lower to signal the clear and direct impact that load control has on reducing transmission prices. Load control systems are effective in reducing demand at peak times by deferring non-critical electricity usage. The benefits of controlled load include greater predictability of the magnitude of peak demands, less need to build peak generation plants and potential to defer transmission and distribution capacity upgrades.

Pricing Principles	Network Waitaki Limited's compliance to the EA principles
(b) Where prices on 'efficient' incremental costs would under-recover allowed revenues, the shortfall should be made up by setting prices in a manner that has regard to consumers' demand responsiveness, to the extent practicable.	
NWL considers this principle matches the economic principle known as Ramsey Pricing, which is a form of price discrimination where if differential prices are appropriate, then the highest prices should be borne by consumers with the most inelastic demand. In practice, however, Ramsey Pricing is only ever used to provide guidance in pricing development as it is complex to accurately observe the price elasticity of different consumers. Further, Ramsey pricing also requires an ability to segment consumers by their respective characteristics, e.g. cinemas can easily differentiate between adults, children, students and senior citizen viewing audience by the time of day and day of the week of movie screenings, with prices set accordingly to reflect the differences in willingness to pay between these different groups. However, it is much more difficult for an EDB to differentiate between consumer groups, and particularly so for an EDB like NWL which uses interposed arrangements with retailers. Except for RL customers, NWL does not differentiate between consumers on Standard Contracts – the cost to do so would be prohibitively expensive. NWL contends, however, that by weighting its prices towards volume prices, it is to some extent discriminating between differences in end consumers' willingness to pay when it is unknown what elasticity each consumer group has. For Individually Assessed Contract consumers, however, where the transaction costs of developing non-standard arrangements are small in relation to the value of the network service, customers' prices are calculated as an annually recalculated fixed price based 50% on contracted capacity and 50% on the contribution the customer's installation makes to system demand. The contribution that an installation makes to system demand is less subject to demand response than other measures, and is thus reflective of this principle. NWL is of the view that once data from advanced meters is available it would provide an opportunity to obtain a more accurate view of the price sensitivity of consumer classes.	
(c) Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to:	
(i) discourage uneconomic bypass	This principle considers that it is not economically efficient to replicate sunk assets and therefore requires that prices should not be at a level so high that it becomes economic for a large consumer to obtain alternative network supply. For Standard Contract consumers NWL follows this principle by ensuring that at a load group level, prices faced by consumers reflect the true economic cost of their service provision. Each load group utilises some or all NWL's network assets to a greater or lesser degree, and the cost recovery from each load group is based on its utilisation of these assets. Allocation of the assets utilised by each group is based on the capacity (kVA) requirements of each load group, and the ADMD (kW) that they place on the network. Further, in the past for Individually Assessed Contract consumers, NWL discouraged uneconomic bypass by analysing on a case-by-case basis the specific needs of the consumer and tailoring its pricing to reflect the cost to supply the unique needs of the consumer in question. It should be noted that NWL has 32 customers on Individually Assessed Contracts. This is high compared to most networks. For historic reasons, some consumers are on IND contracts when other very similar consumers are on standard contracts. NWL is revisiting its Individually Assessed

Pricing Principles	Network Waitaki Limited's compliance to the EA principles
	Contract methodology with the aim of incentivising most of its Individually Assessed Contract customers to move to standard contract load groups.
(ii) allow for negotiation to better reflect the economic value of services and enable stakeholders to make price/quality trade-offs or non-standard arrangement for services; and	NWL is 100% owned by the Waitaki Power Trust (Trust). Trustees of the Trust represent the interests of consumers and engage with NWL to ensure that NWL makes appropriate price/quality trade-offs. In addition, for IND consumers, through a process of one-to-one consultation, NWL has in the past negotiated a service tailored to the requirements of the individual consumer, making a price-quality trade-off appropriate for that consumer. As noted previously, NWL is not accepting new IND consumers at this time. The main reason for this is that most consumers will be adequately catered for in one of the standard load group categories. IND contracts should be available only for very large consumers that do not fit into any of the standard load groups with special and unique requirements.
(iii) where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives (e.g. distributed generation or demand response) and technology innovation	Refer to paragraph 5 of the methodology for a discussion on this. Also, consumers can opt for demand response supply through controlled load prices which is significantly lower than uncontrolled prices.
(d) Development of prices should be transparent, promote price stability and certainty for stakeholders, and changes to prices should have regard to the impact on stakeholders.	
NWL prices are stable and provide certainty to stakeholders. Changes to prices have been such that stakeholders have not experienced major impacts. In rebalancing fixed and variable components NWL had due regard to the impact on consumers and the fact that a consumer has options to move to another price plan. In reviewing its prices NWL will do so with due regard to the impact on and expectations of stakeholders of any price changes. NWL believes that its prices and price structures are simplistic and understandable. Further, through its ownership by the Waitaki Power Trust, and the regular engagement with Trustees of the Trust (who represent the interests of consumers), NWL ensures that its prices are transparent to the Trust and have full regard to the impact they have on consumers. When NWL changes the structure of its prices, it will consult with retailers on its network and takes on-board any feedback from them on the proposed new price structures. As a 100% Consumer Trust owned company, NWL is exempt from following the Default Pricing-Quality Path (DPP) that most EDBs are obliged to follow, however, to the extent it is practicable to ensure price stability, NWL follows the DPP when it reviews its prices each year, and keeps price increases net of Recoverable and Pass-Through Costs at a rate limited to CPI + X. When it decides on what the X should be, the Board is always mindful of the extent to how price increases will impact on consumers and balances this against the requirements inherent in providing a reliable and secure electricity supply and the need for future investment in asset replacement and network development.	
(e) Development of prices should have regard to the impact of transaction costs on retailers, consumers and other stakeholders and should be economically equivalent across retailers.	

Pricing Principles	Network Waitaki Limited's compliance to the EA principles
NWL's prices do not favour one retailer over another. NWL's pricing methodology and applicable prices are identical across all retailers, with no discrimination in regard to available price plan options, applicable prices, calculation methodology, or discounts. NWL's prices are therefore economically equivalent across retailers. Further, through its engagement with Trustees of the Waitaki Power Trust and its consultation with retailers from time-to-time, NWL gives regard to the impact of transaction costs on consumers and other stakeholders.	

8 APPENDIX 3 – CHECKLIST OF COMPLIANCE TO 2012 INFORMATION DISCLOSURE REQUIREMENTS

The table below contains a check list that summarises compliance to all the pricing and related information requirements as per section 2.4. of the Information Disclosure Guidelines.

Clause in Determination		Reference in Pricing Methodology
2.4.1	**Every EDB must publicly disclose, before the start of each disclosure year, a pricing methodology which-**	
	(1) Describes the methodology, in accordance with clause 2.4.3 below, used to calculate the prices payable or to be payable;	
	(2) Describes any changes in prices and target revenues;	Appendix 1 for changes to prices. Table 1, paragraph 2.3 for changes to target revenues.
	(3) Explains, in accordance with clause 2.4.5 below, the approach taken with respect to pricing in non-standard contracts and distributed generation (if any);	Paragraphs 3.3 and 3.6. Paragraph 5 for a discussion on Distributed Generation.
	(4) Explains whether, and if so how, the EDB has sought the views of consumers, including their expectations in terms of price and quality, and reflected those views in calculating the prices payable or to be payable. If the EDB has not sought the views of consumers, the reasons for not doing so must be disclosed.	Paragraph 2.1.7 for an explanation of NWL's Consumer Engagement.
2.4.2	**Any change in the pricing methodology or adoption of a different pricing methodology, must be publicly disclosed at least 20 working days before prices determined in accordance with the change or the different pricing methodology take effect.**	**There have been no material changes to the pricing methodology since publication of the last methodology in 2017.**
2.4.3	**Every disclosure under clause 2.4.1 above must-**	
	(1) Include sufficient information and commentary to enable interested persons to understand how prices were set for each consumer group, including the assumptions and statistics used to determine prices for each consumer group;	Paragraph 3 explain how prices were set for each consumer group, for both standard and non-standard contracts. Paragraphs 2.3and 2.4 provide more detail on allocation of revenue requirement.
	(2) Demonstrate the extent to which the pricing methodology is consistent with the pricing principles and explain the reasons for any inconsistency between the pricing methodology and the pricing principles;	Appendix 2 details the consistency of NWL's pricing methodology with the Electricity Authority Pricing Principles and Information Disclosure Guidelines. NWL considers its

Clause in Determination	Reference in Pricing Methodology
	pricing methodology to be fully consistent with these.
(3) State the target revenue expected to be collected for the disclosure year to which the pricing methodology applies;	Table 1 in paragraph 2.3 shows the target revenue to be collected in the disclosure year 2016/17.
(4) Where applicable, identify the key components of target revenue required to cover the costs and return on investment associated with the EDB's provision of electricity lines services. Disclosure must include the numerical value of each of the components;	Table 1 in paragraph 2.3 shows the target revenue to be collected in the disclosure year 2016/17.
(5) State the consumer groups for whom prices have been set, and describe (a) the rationale for grouping consumers in this way; (b) the method and the criteria used by the EDB to allocate consumers to each of the consumer groups;	Paragraph 3 details consumer groups and the rationale for grouping consumers this way and the method and criteria that NWL has used to allocate consumers to each group.
(6) If prices have changed from prices disclosed for the immediately preceding disclosure year, explain the reasons for changes, and quantify the difference in respect of each of those reasons;	Note 2 of the table in Appendix 1 details this.
(7) Where applicable, describe the method used by the EDB to allocate the target revenue among consumer groups, including the numerical values of the target revenue allocated to each consumer group, and the rationale for allocating it in this way;	Paragraph **Error! Reference s ource not found.** and 2.4
(8) State the proportion of target revenue (if applicable) that is collected through each price component as publicly disclosed under clause 2.4.18.	NWL's revenue is targeted across consumer groups as stipulated in paragraph 2.4.
2.4.4 Every disclosure under clause 2.4.1 above must, if the EDB has a pricing strategy-	This section is not applicable. However, Appendix 4 contains a "living" roadmap which outlines NWL's initial thinking on future pricing developments.
(1) Explain the pricing strategy for the next 5 disclosure years (or as close to 5 years as the pricing strategy allows), including the current disclosure year for which prices are set;	Not applicable as per above.
(2) Explain how and why prices for each consumer group are expected to change as a result of the pricing strategy;	Not applicable as per above.
(3) If the pricing strategy has changed from the preceding disclosure year, identify the changes and explain the reasons for the changes.	Not applicable as per above.
2.4.5 Every disclosure under clause 2.4.1 above must-	

Clause in Determination	Reference in Pricing Methodology
(1) Describe the approach to setting prices for non-standard contracts, including-	
(a) the extent of non-standard contract use, including the number of ICPs represented by non-standard contracts and the value of target revenue expected to be collected from consumers subject to non-standard contracts;	There are 32 consumers on non-standard contracts. The value of target revenue from non-standard contracts is depicted in Table 2, paragraph 2.4.
(b) how the EDB determines whether to use a non-standard contract, including any criteria used;	NWL has several historic non-standard contracts. However, it will only consider non-standard contracts to new customers when there are particular and compelling reasons for doing so.
(c) any specific criteria or methodology used for determining prices for consumers subject to non-standard contracts and the extent to which these criteria or that methodology are consistent with the pricing principles;	The methodology for determining prices for non-standard contracts is detailed in paragraphs 3.3 and 3.6.
(2) Describe the EDB's obligations and responsibilities (if any) to consumers subject to non-standard contracts in the event that the supply of electricity lines services to the consumer is interrupted. This description must explain-	This is not applicable as NWL does not treat interruptions to non-standard contract consumers any differently to those on standard contracts.
(a) the extent of the differences in the relevant terms between standard contracts and non-standard contracts;	Not applicable as above.
(b) any implications of this approach for determining prices for consumers subject to non-standard contracts;	Not applicable as above.
(3) Describe the EDB's approach to developing prices for electricity distribution services provided to consumers that own distributed generation, including any payments made by the EDB to the owner of any distributed generation, and including the-	Paragraph 5.
(a) prices; and	Paragraph5.
(b) value, structure and rationale for any payments to the owner of the distributed generation	Paragraph 5.

9 APPENDIX 4: NETWORK WAITAKI FUTURE PRICES ROADMAP

	Task Name	Activities	Resource requirements
1	NETWORK WAITAKI FUTURE SERVICE-BASED PRICING ROADMAP STAGES		
2	MONITOR ENA/EA GUIDANCE TO BE CONSISTENT IN APPROACH WHERE PRACTICABLE	Continuous comparison and alignment where possible with other EDBs	
3	DETERMINING FUTURE PRICE STRUCTURES		
4	Analyse current price structures and impacts	During the first year NWL to review the existing ToU structures and the impacts thereof currently in view of NWL circumstances.	NWL & Expert Advice
5	Identify preferred Price Structures	Initial thinking on cost-reflective & service-based price structures: ToU and fixed/demand prices for small to medium consumers. Large consumers with smart meters = Installed contractual capacity + Demand	NWL & Expert Advice
6	Identify challenges with preferred Price Structures	Challenges potentially include: Data access, Billing System, AMI penetration, regulatory compliance, data privacy issues, System upgrade resourcing, stakeholder education	NWL & metering & billing expert advice
7	Identify measures to overcome challenges of preferred price structures	Consider all measures such as opt-in pricing approach, direct billing, surveys	
8	Review Cost of Supply & Allocation methodology	Review cost of supply & allocation model based on identified price structures	NWL & Electricity Expert modeller
9	CONSULTATION / COMMUNICATION		
10	Communication with stakeholders to inform them of NWL's process	Development of Communication strategy. Letters to NWL stakeholders to inform them of the thinking & intended communication process around new price structures	NWL & Communication expert
11	Consultation on preferred price structures	- Detailed outline of proposed price structures to stakeholders + stakeholder survey - Receipt and consideration of comments - Amendments to price structures where required - Communication of revisions to stakeholders	NWL
12	Prepare necessary documentation for trial run	Liaise with stakeholders and agree on process to do a trial run of revised price structures	NWL
13	Trialling of new price structures	Executing the trialling of new price structures with a selected sample of stakeholders	NWL
14	Analyse results of trials	Detailed analysis to determine the impact of the price structures post the trial run on stakeholders, revenue, systems	NWL & Billing, metering & systems experts
15	Make changes to price structures where necessary	Post the analysis of the potential impact it might probably be necessary to make changes to price structures. Communicate any changes to stakeholders with reasons	NWL & Expert Advice
16	Communication of reformed price structures for implementation - 1 April 2021	Communication in line with communication strategy well ahead of implementation	NWL & Survey expert & stakeholders
17	ROLL-OUT OF REFORMED PRICE STRUCTURES		
18	Develop risk mitigation strategy	Consider all risks and if deem necessary develop a risk mitigation strategy	NWL
19	Develop transition strategy	Especially if an opt-in approach is followed initially it will be necessary to develop a transition strategy to incentivise stakeholders to move to new price structures	NWL
20	Notification of price structures to customers in line with regulatory requirements		NWL
21	Implementation		NWL
22	ONGOING MONITORING		NWL