



## **Electricity Distribution Network**

## **Pricing Methodology Disclosure**

**For prices effective 1 April 2014**

Pursuant to:

Electricity Distribution (Information Disclosure) Requirements 2012

and

Distribution Pricing Principles and Information Disclosure Guidelines

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## Glossary – Terms and Definitions

<b>Avoided Cost of Transmission (ACOT )</b>	Avoided Cost of Transmission is a payment made to a distributed generator based on their generation output at a time that loads are measured to set Transpower charges. MLL pays Avoided Cost of Transmission to a number of small scale generators that provide distributed generation services on MLL’s network, at times when Regional Coincident Peak demand is highest.
<b>Asset</b>	Equipment or plant that is part of MLL’s electricity distribution network.
<b>Bypass</b>	If a consumer chooses to obtain its electricity supply from an alternative source to the distribution network.
<b>Commerce Commission</b>	Electricity distributors are subject to regulatory provisions from the Commerce Commission under the Commerce Act 1986 which aims to provide the benefits of competition in markets where effective competition does not exist.
<b>Consumer</b>	An electricity user.
<b>Controllable Load</b>	The load, mostly electrical water heating load, that MLL is able to switch off during periods of high Network demand.
<b>Cost Allocation Model</b>	A model that allocates the actual costs of owning and operating the distribution network to the consumer groups based on a cost allocation methodology.
<b>Consumer Price Index (CPI)</b>	The consumer price index is a measure of the change of a weighted average of prices in a basket of consumer goods and services.
<b>Distributed Generation</b>	Electricity generation that is connected directly to the distribution network. Also referred to as ‘embedded generation’.
<b>Electricity Authority (EA)</b>	The Electricity Authority is an independent Crown entity responsible for regulating New Zealand’s electricity market. Its objective is to promote competition in, reliable supply by, and the efficient operation of the electricity industry for the long-term benefit of consumers.
<b>Electricity Distribution Business (EDB)</b>	A business such as MLL that is responsible for delivering electricity from the national grid to homes and businesses. Also commonly referred to as an ELB (Electricity Lines Business).

<b>Distribution Pricing Principles</b>	Published by the Electricity Authority in February 2010. These principles set out economic concepts that should be reflected in Distributors' pricing methodologies. Also known as the "Pricing Principles".
<b>Grid Exit Point (GXP)</b>	The point where MLL's network connects to Transpower's transmission network and where electricity flows from Transpower's network onto MLL's network.
<b>High Voltage (HV)</b>	The high voltage distribution network.
<b>Installation Connection Point (ICP)</b>	The installation point where a consumer connects to MLL's electricity distribution network.
<b>Kilowatt-hour (kWh)</b>	A measure of electricity consumption - this is the unit in which retail sales of electricity are measured.
<b>Kilovolt Ampere (kVA)</b>	Is a symbol of electrical load.
<b>Load Management</b>	When MLL controls the electrical water heating load (or other controllable load) by switching it off during periods of high demand or during faults or emergency situations.
<b>Low Voltage (LV)</b>	The low voltage distribution network.
<b>Network Peak Demand</b>	When the network's consumption is at its highest.
<b>Pricing Methodology Disclosure Guidelines</b>	Published by the Electricity Authority on 1 March 2010. These guidelines specify the information that a distributor should make available so that a third party may determine if a pricing methodology is consistent with the pricing principles.
<b>ToU</b>	Means Time of Use, a metering set up that measures half hourly data allowing pricing that varies depending on time of day and measurement of peak demands.

# 1. Background

## 1.1 Overview of Marlborough Lines

Marlborough Lines Limited (MLL) is an electricity distribution business (EDB). The network has approximately 24,500 customers, which are homes and businesses across the Marlborough region. The area supplied includes the provincial centre of Blenheim and the smaller towns of Picton, Havelock, Seddon and Ward. The supply network also extends to a number of very isolated areas (including the Marlborough Sounds), that pose unique challenges for electricity supply. Unlike many other regional networks the company has a single point of supply from the National Grid to the Grid Exit Point (GXP) in Blenheim. Relative to its size the Marlborough Network has an extensive sub-transmission system. There are 16 zone substations on the Marlborough Network with the most recent addition being Cloudy Bay completed in March 2013.

MLL has an electrical contracting business in Marlborough that undertakes capital and maintenance work for the network and other local users. Marlborough Lines has around 120 staff based between the centrally located office and the Contracting Depot.

The Marlborough Lines Group also has investments in other related businesses including Nelson Electricity, OtagoNet, Otago Power Services and Horizon Energy.

Marlborough Lines has an 'interposed' relationship with the Marlborough consumers i.e. the contractual relationship to deliver services is through the energy retailers on the network. Consequently, MLL has no contractual relations for the network service with the consumers on its network. Marlborough Lines has a Use of System Agreement with all the retailers that operate on its network. Currently the energy retailers offering services in Marlborough are; Contact Energy, Genesis Energy, Pulse Utilities (through their brands including Just Energy and Grey Power), Meridian Energy, Mercury Energy, Tiny Mighty Power<sup>1</sup>, TrustPower and Opunake Hydro.

Lines charges are billed to the retailers on a monthly basis based on consumption data provided to MLL by consumers' Metering Equipment Providers (MEP). In some instances the MEPs are the same entity as the consumers' retailers.

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<sup>1</sup> Mercury Energy and Tiny Mighty Power are fully owned subsidiaries of Mighty River Power Limited.

## **1.2 Ownership Structure of Marlborough Lines**

MLL is owned by the Marlborough Electric Power Trust (MEPT), which holds shares on behalf of the consumers connected to the network in Marlborough. The MEPT has six elected trustees. Elections are held biannually with the next election for three trustees to be held in March 2016.

## **1.3 Price Changes for Current Year**

MLL has reviewed its prices for electricity distribution services and new prices were published to take effect from 1 April 2014. The prices set reflect the needs of the company, the Marlborough consumers and stakeholders, together with the wide ranging requirements provided by the comprehensive regulatory framework. The overall rate of increase over the prior year was 3.6%. The increase in prices result from an 8.5% increase in transmission charges which required an increase of approximately 1.5% increase in MLL prices for lines services to recover. The balance of the increase was to provide for increases in MLL's own costs at close to the level of inflation thereby providing for sufficient operational and capital expenditure to ensure reliability and continuity of supply for consumers.

The structure of prices for all consumers remains unchanged from the prior year. This follows a significant change in prices for the large commercial and industrial consumers, defined as those with a capacity requirement greater than 140kVA, in the year commencing 1 April 2013. An overview of these changes is included in section 4.8.3.

## **1.4 Regulatory Status of Marlborough Lines**

MLL meets the criteria specified for a consumer owned electricity distribution business under Part 4 of the Commerce Act and consequently has 'exempt' status. Electricity distributors that are deemed exempt are not required to comply with the Default Price-quality Path (DPP) provisions. However, the company is still required to comply with a number of regulatory obligations including the Information Disclosure (ID) regime.

The Electricity Authority also has regulatory oversight of the Electricity Distribution sector and sets out a number of compliance obligations for EDBs such as Marlborough Lines.

## **1.5 Background to Pricing Methodology Disclosure Document**

MLL's Pricing Methodology is in a similar format to the methodology published for the prior two years. This disclosure continues to evolve, with additions last year to

address the new Electricity Distribution Information Disclosure Requirements<sup>2</sup>. This year there is also new information and greater detail provided in some areas based on feedback received from the Electricity Authority's most recent review of Distributors' Pricing. The Electricity Authority commissioned a specialist firm to review the pricing methodologies of all EDBs last year for alignment with the pricing principles and Information Disclosure Guidelines<sup>3</sup>. The report was published in November 2013.

MLL's Pricing Methodology Disclosure includes an explanation on the allocation of network costs, including transmission costs, across consumers and the structure and quantum of tariffs set to recover those costs. Transmission costs include Transpower charges and Avoided Cost of Transmission (ACOT), paid to embedded generators.

MLL considers that this disclosure is consistent with the current regulatory framework. The document has been prepared in accordance with the Electricity Distribution Information Disclosure (ID) Requirements, published by the Commerce Commission and the Distribution Pricing Principles set out by the Electricity Authority.

Although the pricing principles are voluntary, the Electricity Authority encourages EDBs to carefully consider the pricing principles and the associated guidelines in their processes to set prices. A commentary on the consistency or otherwise of the company's pricing methodology with these pricing principles is also required to be disclosed.

## **1.6 Structure of Pricing Methodology Disclosure Document**

**Section 1.** - Includes an introduction to Marlborough Lines, the regulatory context for this disclosure and overview of the process used to set prices to take effect from 1 April 2014.

**Section 2.** – Overviews the regulatory framework for this year's Pricing Disclosure. The detail of the regulatory requirements including the pricing principles confirmed by the Electricity Authority and the ID requirements with respect to pricing are set out in Appendix A.

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<sup>2</sup> Electricity Distribution Information Disclosure Determination 2012, Decision No. NZCC 22, Date of Decision 1 October 2012.

<sup>3</sup> Castalia Strategic Advisors Report to the Electricity Authority, November 2013



**Section 3.** – Discusses some of the issues and considerations that provide a context for the application of a specific cost allocation model used to apportion network costs to consumer groups.

**Section 4.** - Provides a detailed explanation of the methodology and cost allocation model applied to determine the prices for lines charges for customers on MLL's electricity network. This section includes:

- the rationale for each of the consumer groups,
- a description of the methodology used to allocate assets to ICPs and therefore consumer groups.

**Section 5.** - Discusses each of the pricing principles and demonstrates the consistency of MLL's pricing methodology with these principles.

## **1.7 Overview of the Pricing Process for FY2015**

### **1.7.1 Target Revenue and Cost Estimates**

This document is required to outline the costs of the network business that are targeted to be recovered through charges for lines services. The level of line charge revenue to be recovered in the year was based on an estimate of costs for the 1 April 2014 to 31 March 2015 year and other considerations.

The total costs of operating the network business for the year from 1 April 2014 to 31 March 2015 have been grouped into the categories of system operation and maintenance, administration and overhead, transmission costs, depreciation, taxation and a return on assets used in the provision of network services. The numerical value of each of these cost components is clearly stated in section 4.3.

### **1.7.2 Overview of Customer Groups**

Network consumers are grouped together into a number of consumer groups based on common characteristics. The four consumer groups referred to in the cost allocation model are; Residential, Small & Medium Commercial, Large Commercial and Industrial (Time of Use and >140kVA) and Irrigation users.

The document discusses the rationale for the grouping of consumers in this way and the methodology to determine which group each consumer falls into. The network statistics for each of the consumer groups is outlined in section 4.5.

### **1.7.3 Overview of Cost Allocation Methodology**

Once the costs and groups have been identified a cost allocation methodology is used to allocate the costs between the groups. This means the total cost of

providing network services for each consumer group can be estimated. The cost allocation methodology is explained and clearly shows how each category of network costs is allocated between the consumer groups. Where the asset allocator is used an apportionment of network assets, based on the replacement cost, is made to each ICP on the network and then summated for each ICP and then summated to get a total for each consumer group.

The methodology utilises cost allocators that reasonably apportion the costs to each of the consumer groups. There are a number of different cost allocators that could be used and different EDBs have used different allocation techniques. Some of the common approaches are discussed with reasons provided as to why MLL used their current cost allocators.

The majority of costs are allocated based on the proportion of assets used to supply the ICPs within each consumer group. This is because most costs incurred by the network relate to the provision of assets being return on capital, return of capital (depreciation), and the servicing or maintaining of assets. Therefore generally the more assets a consumer requires, the higher the cost of providing service to that consumer. The usage in kWh and number of ICPs are used to allocate overhead and administration costs. Revenue is used to allocate the estimate of taxation expense.

#### **1.7.4 Structure of the Tariffs for Each Group**

Once the target revenue for each group is identified the specific tariff structures for each group are examined and the rates set for each tariff. The tariff structures vary across the consumer groups and this ensures that the revenue is recovered in a means consistent with the pricing principles. Although most of the cost of operating an electricity network is fixed, revenue for lines services is generally made up of fixed and variable tariffs. A description of the current methodology with respect to the proportion of fixed and variable charges and the different tariff structure used for irrigation installations and large commercial industrial connections are discussed in section 4.7.

#### **1.7.5 Comparison of Annual Revenue and Allocated Cost for Each Group**

The forecast target revenue is compared with the cost allocated to each group with a discussion on why there may be differentials between revenues and the estimates of costs.

## **1.8 General Issues with Cost Allocation Model**

MLL recognises that the pricing principles published by the Authority encourage distributors to develop and use a cost allocation model. There are a number of different and valid approaches to the allocation of network costs to groups of consumers with some limitations on options due to the availability of accurate information.

Many network assets and other non-asset related costs are shared over a large number of consumers, which makes the allocation of costs to each of the consumer groups subject to assumptions and judgement. In essence many costs have to be allocated rather than accurately attributed to a defined group of consumers. The application of the cost allocation model used by MLL is discussed in more detail in section 4.5.

## **1.9 Discount Policy**

MLL has for some time had a policy of paying discounts to qualifying consumers at the end of each financial year. The revenues stated in this report are before the payment of discounts and discounts are not included as a cost to be recovered. In most cases the discount offered is an equal proportion of each tariff on the price schedule. MLL has chosen to set the discount as a relatively equal proportion of each tariff<sup>4</sup>. Therefore generally each network consumer is rewarded proportionately through the discount process regardless of their mix of consumption across tariffs.

The exception is that the regional peak demand charge that applies to the large commercial and industrial consumers group. This charge is set at a level to recover the transmission costs only and therefore no discount is paid on this portion of the consumers' line charges.

In most cases the structure of the discount means it acts as a credit for a portion of the lines charges paid for network services in the prior 12 month period<sup>5</sup>. Discounts are paid via the consumers' electricity retailer as a credit on their account.

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<sup>4</sup> A small number of tariffs are excluded such as power factor charges and some charges for unmetered load to make the discount administration process more straightforward and therefore cost effective.

<sup>5</sup> The calculation period runs from 1 February to 31 January each year to provide sufficient time to calculate each qualifying consumer's discount which is paid via their retailer in March.

Consistent with the Low User Regulations, the costs faced by the typical residential user (as defined in the regulations) are equal on a pre and post discount basis.

## 2. Regulatory Framework

MLL is subject to the following key regulatory requirements.

- Part 4 of the Commerce Act which requires formal disclosure of a significant amount of company specific information in accord with the Electricity Distribution Information Disclosure requirements.
- The Electricity Industry Act which provides the Electricity Authority with particular responsibility for monitoring tariff structures and approaches to distributor pricing.
- The “Low User Regulations” which require all EDBs to offer a low fixed charge option to domestic consumers (subject to limitations such as for permanent residences only).
- Restrictions on pricing differentials between urban and rural consumers.
- A range of obligations set out in the Electricity Participation Code.

Appendix A provides an overview of these regulatory requirements that impact MLL’s pricing decisions and disclosures.

## **3. MLL Approach to Setting Prices**

### **3.1 Introduction**

The following section outlines some of the high level considerations that set the context within which a detailed cost allocation model and process to set specific tariffs for each consumer group operate.

MLL conducts a comprehensive customer satisfaction survey each year. The results of the survey inform the company management and directors of consumer views which are one of a number of considerations that influence pricing decisions. This year MLL also undertook research as to price quality issues.

The primary determinant in the company's pricing is to meet the needs of the users of the network, consistent with the regulatory requirements and the principles of fairness and equality.

Therefore a number of factors need to be taken into account when network prices are determined. MLL considers that changes to network pricing should be undertaken on a consistent and progressive basis. This approach is consistent with the requirement to maintain stability and provides network users with the opportunity to respond to changes in price levels or tariff structures.

It is recognised that within the network there is cost sharing, both within consumer groups and between groups. Prices have been shaped by community feedback, government policy and regulation over a period of many years.

The company will continue to refine the costs of supply for all categories of network users, and the implementation of changes will be tempered with the need to satisfy regulatory requirements and meet the requirements of the network users overall, whilst ensuring that changes are consistent with the long-term interests of all stakeholders.

### **3.2 Pricing to Provide Adequate Revenue Recovery**

MLL sets an overall target revenue level consistent with the company achieving a commercial rate of return. Setting an appropriate level of target revenue and structuring tariffs to manage revenue risk are both important to ensure the financial sustainability of the company.

### **3.3 Payment of Discounts**

MLL has decided to continue to pay discounts for the financial year ending 31 March 2015. The discount will continue to be in the form of a “posted” discount, which forms part of the company’s published price schedule. A pre and post discount price is on the price schedule. The discount payment will be subject to qualification criteria as in prior years, with a premise required to be occupied (i.e. not vacant) on a qualification date in March 2015, and those in “remote” areas excluded from receiving a discount.

Consumers in areas deemed remote do not receive a discount as these areas are uneconomic to service. More than 90% of consumers will receive a discount.

The comparison of revenues and costs in this disclosure are prior to the payment of discounts to consumers. The amount of the discount and revenue net of discount are included in section 4.5.

### **3.4 Consideration of the Impact of Changes on Individual Consumers**

Changes in the structure of price categories or relativities between prices can cause rate shock for individual consumers. Where such changes are required to be made, the effects on individual consumers will be considered, with rate shock generally limited to 15% (of the lines charge component) for any consumer.

### **3.5 Prices to be Cost Reflective Subject to Consumer Considerations**

Pricing for electricity network consumers can be complex, especially when pricing aims to reflect the cost that a consumer or consumer group places upon the network. For residential and small business customers there are clear tradeoffs between pricing which reflects more accurate cost recovery from individual consumers and pricing that is relatively simple and easy to understand.

MLL has considered the expectation of consumers and their level of expertise to determine what is appropriate for each group. E.g. an industrial consumer is typically better placed to understand more complex price structures than a domestic consumer.

More complex pricing has benefits compared to a simple fixed tariff per ICP per day and unit charge per kWh as it allows pricing signals to be sent to consumers. These signals may encourage responses that lower the costs to the network provider and to individual consumer and/or consumer groups. Where there are opportunities to

drive desirable consumer behaviour MLL aims to develop and maintain price structures that provide signals to align consumer behaviour with network objectives.

The pricing provided by MLL aims to be clear and understandable. Retrospective pricing will be avoided. MLL has initiated contact with all its consumers within the large commercial and industrial group and the staff within energy retailers who may deal with the network charges to ensure there is a clear understanding of MLL network charges.

A consistent price structure is also considered to be important. Frequent change creates unnecessary transaction costs and discourages consumers from responding to the price signals provided. Therefore any changes should be well considered and clearly communicated when introduced.

### **3.6 Results of Consumer Research - Customer Satisfaction Survey**

MLL regularly undertakes customer research relative to a number of parameters. A customer satisfaction monitor is conducted independently each year and covers a number of issues such as overall satisfaction, reliability of supply, company performance, ownership preferences, community involvement, and attitudes to regulation. The views of both businesses and residential consumers are represented.

The key indicator of overall satisfaction has been generally consistent over recent years. The most recent survey was completed in March 2013. General consumer views on quality and reliability and network performance are canvassed in this survey. Table 1 below outlines the level of customer satisfaction in key areas.

**Table 1: 2013 Customer Satisfaction Results**

	<b>2012</b>	<b>2013</b>
Reliability	93%	96%
Quality	91%	95%
Faults	88%	92%
Fault Service	95%	92%
Restore Power	94%	89%

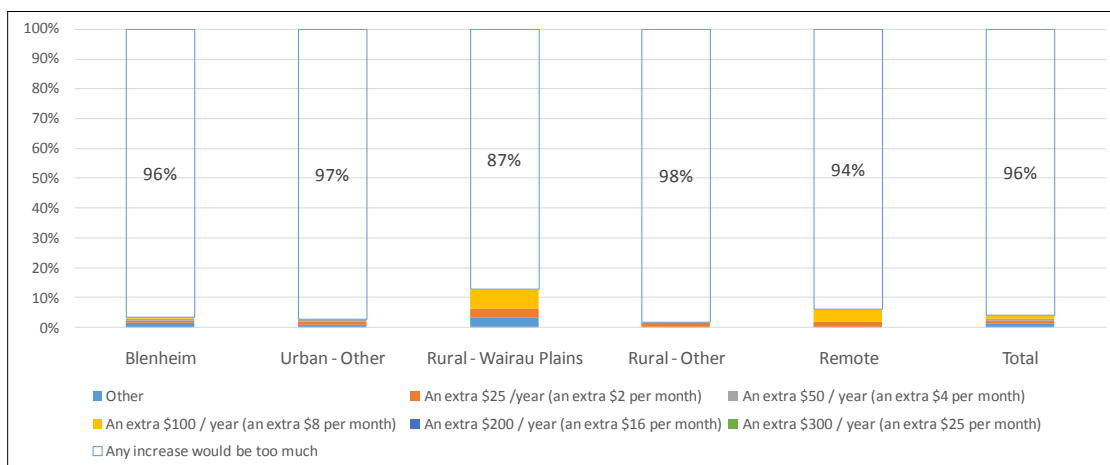
Although the customer satisfaction monitor had been sufficient for the company's requirements in the past, a specific piece of research was commissioned this year to address the revised ID requirements. Section 2.4.1.(3) of the ID directs EDBs to seek the views of consumers on price and quality matters and for the company to consider the views expressed by consumers in the pricing decisions made by the company.



The sampling process for this research was more in depth, with the data segmented for customer types and geographic areas. The headline results of the price quality research show that the most important aspect of network performance for consumers is the continuity of supply. This is followed by response to outages and then keeping the costs of supply down.

Customers were also asked specifically about price and quality tradeoffs. 96% of domestic customers stated that “any increase would be too much” when asked if they would be prepared to pay for improvements to the quality of their power supply. Customers within one geographic area responded differently with almost one in five customers in the Rural – Wairau Plains prepared to pay something for an improvement in quality.

**Figure 1 Price quality trade-off results – Domestic customers**



The results of the price quality research were received in March 2014 by the company. There is a lot of information that will be clearly reviewed and appropriately considered as part of the planning processes going forward.

Last year company representatives met with over 90% of the customers within the large commercial industrial group to discuss their future plans, required service levels, pricing and quality/reliability issues and to outline the new pricing structure applicable for this customer group. Useful feedback was obtained in these meetings.

## 4. Allocation of Costs and Derivation of Tariffs

### 4.1 Introduction

The following section outlines the methodology used to assess target revenue, define consumer groups and allocate costs to consumer groups. The choice of cost drivers to allocate costs to the defined consumer groups is explained and network statistics for each consumer group are stated. Once an estimate of the cost of serving each group is made the tariffs for each group are derived. The estimate of revenue from each consumer group is compared with the estimate of costs to serve each group with the view to aligning costs and revenues where practicable over time, and outlining why such alignment is not appropriate in some cases.

### 4.2 Treatment of Discounts

MLL will continue to include discounts within its price schedule for the financial year ending 31 March 2015. The comparison of revenues and costs in this disclosure are prior to the payment of discounts to consumers.

### 4.3 Assessment of Costs for the FY15 Year

The company aims to set a price for network services at a level to generate sufficient revenue to cover costs for the coming year subject to other business constraints. The estimated network costs include a return on the assets employed in the network business.

The Return on Investment is calculated by applying the cost of capital published for the current regulatory period to an estimate of the Regulatory Investment Value (RIV) as at 31 March 2014. The estimate of the RIV as at 31 March 2014 is \$214.997m. This is made up of the closing regulatory investment value of \$207.417m disclosed as at 31 March 2013, with estimates of capital expenditure, regulatory depreciation, and revaluation for the FY14 year. The value of this estimate of RIV is multiplied by the Commerce Commission's estimate of WACC at the 75th percentile for the current five year regulatory period of 7.06%<sup>6</sup> to give a required return on investment of \$15.179m. If the WACC for information disclosure purposes in the current 2014 year of 6.14% was used then the return on investment estimate would reduce by \$1.978m to \$13.201m.

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<sup>6</sup> Determination of the Cost of Capital Decision 718, Commerce Commission, 3 March 2011, Page 2

Table 2 sets out the calculation of the Return on Investment.

**Table 2: Marlborough Lines Estimate of Regulatory Investment and Return**

<b>Calculation of Return on Investment</b>		
Regulatory Investment Value as at 31 March 2013		207,417
<i>Regulatory Depn for FY13</i>	8,526	
<i>Addnl Depn estimate Capex</i>	268	
Estimate of Depn for FY14		8,794
Revaluation at 1.5%		2,979
CAPEX for FY14		13,395
<b>Estimate of Regulatory Investment Value (RIV) 31 March 20</b>		<b>214,997</b>
Return on RIV at DPP WACC	7.06%	15,179
Return on RIV at ID post tax 75% for FY14	6.14%	13,201

Table 3 outlines the company's best estimate of costs for the network business for 1 April 2014 to 31 March 2015, at the time pricing decisions were made.

**Table 3: Marlborough Lines Network Cost Estimate by Category - FY15**

<b>\$'000</b>	<b>FY15 Estimated Cost</b>
Transmission Costs Excl NIC	6,958
Transmission NIC	523
System Operations & Mtce	8,488
Admin & Overheads	5,351
Depreciation (Regulatory)	8,794
Taxation Expense	1,542
Return on Investment	15,179
<b>Total Costs for FY15</b>	<b>46,835</b>
Misc. Revenue	2,383
<b>Costs Net of Misc. Revenue</b>	<b>44,452</b>

In addition to revenue for lines services the network receives some miscellaneous revenue e.g. capital contributions, sale of scrap material and net income from third party jobs undertaken by the network's in-house contracting business. To calculate the target revenue for lines services the miscellaneous revenue received by the network is deducted from the total costs.

#### **4.4 Classification of Consumers into Groups**

All network consumers are categorised into four broad consumer groups. The groups were determined by assessing the predominant end use of energy for each installation and the installed capacity of each connection.

Initially consumers are categorised as being residential or non-residential. The classification of a consumer into residential or non-residential is based upon their predominant end use. The different characteristics of residential consumers, such as greater diversity in demand patterns compared to businesses consumers make it logical to have a residential consumer group. Residential consumers as a group have different consumption patterns from businesses. Residential users also have a higher proportion of their total load associated with water and space heating. Water and space heating loads are generally able to be interrupted by the company's ripple control system. There are also different regulatory restrictions on domestic consumers e.g. the Low User Regulations.

Therefore rationale for the grouping of residential customers together is that they share similar network profiles, with peak demands occurring between 7.30 – 9.30am and 5.30 – 9.00pm. Residential consumers' network capacity utilisation is a key driver of network costs.

The non-residential consumers are divided into three groups, with two groups for commercial consumers, depending on the maximum capacity supplied to the installation measured in kVA, and one group for irrigation installations.

Group 2 is the irrigation consumer group which includes consumers with both small and larger capacity requirements. These users have a distinct pattern of consumption and have therefore been grouped separately from other commercial users. Their peak demand occurs at a different time in the year from other user groups and their consumption in kWh is far more variable from season to season. To qualify for an irrigation tariff an installation must be fitted with a relay to ensure the load is interruptible, and therefore restrictions on seasonal use may apply. Their unique pattern of consumption drives the costs they impose on the network in a different manner than for other groups, e.g. they contribute very little to transmission costs as they generally do not operate at times of regional Coincident Peak Demand (RCPD) i.e. the group has a before diversity maximum demand of 27MVA but an estimated peak demand during RCPD period of less than 1MW.

Group 3 are the small to medium commercial consumers with a capacity requirement less than 140kVA. Within this group there are a number of subgroups with steps for fixed charges based on the capacity provided.

Group 4 is made up of customers that have capacity requirements in excess of 140kVA. MLL’s network policy requires these consumers to have half hourly or Time of Use (ToU) metering installed. This group also includes a number of large consumers with 11kV supplies. The demarcation level of 140kVA has been a consistent network requirement for many years.

The grouping of non-residential consumers by capacity is considered to be an appropriate way to distinguish between consumers. The capacity provided generally reflects the initial and ongoing investment made, the maintenance costs required, and is an indication of their contribution to peak demands.

The four consumer groups are therefore Group 1 - Residential, Group 2 - Irrigation, Group 3 - Small and Medium Commercial, and Group 4 - Large Commercial and Industrial (Time of Use).

Table 4 outlines the four consumer groups, the relevant fixed charge price codes and the estimated number of ICPS in each group for the year commencing 1 April 2014.

**Table 4: Consumer Groups**

<b>Group</b>	<b>Description</b>	<b>Fixed Charge Codes</b>	<b>No. of ICPS</b>
1	Residential	DS,DSNL,DL,DT	20,832
2	Irrigation	PM,PH,PK	337
3	Small Med. Comml. <140 kVA	NS,NH,NT,US,UL,RT,RV,RX	3,259
4	Lge. Comml. & Industrial > 140kVA	BF,BHC,BHM	114
<b>Total number of installations</b>			<b>24,542</b>

## **4.5 Cost Allocation Methodology**

### **4.5.1 Network Statistics**

This section outlines the key network statistics for each of the four consumer groups. These statistics form the basis of how each category of costs is allocated to consumer groups. The table below summarises the network statistics for each consumer group.

**Table 5: Network Statistics**

Consumer Group	No. of ICPS	Annual	Capacity	Peak	Demand	Assets
		Consumption GWH	Provided BDMD MVA	Demand ADMD MVA	at RCPD MW	for supply \$m
1. Residential	20,832	143	347	23	25	150
2. Irrigation	337	15	27	1	1	13
3. Small Med Comml.	3,259	78	115	18	17	115
4. Lge. Comml. Industl	114	126	57	29	16	89
<b>Total</b>	<b>24,542</b>	<b>362</b>	<b>546</b>	<b>71</b>	<b>59</b>	<b>367</b>

The number of ICPs connected and consumption of units (kWh), for each ICP is readily available for network's billing system and the company's estimates for the coming year.

The capacity provided is measured in kVA and stated on a before diversity maximum demand basis. This has been assessed based on the fuse size for all non ToU installations and the actual peak demand for those installations with ToU metered data.

Peak Demand is the capacity required for each ICP, summated into their consumer groups during periods of peak network demand. This is measured in kVA on an after diversity maximum demand (ADMD) basis. The group totals are based on actual and estimated data at times of peak network demand which occurred in April 2013. Where ToU metering is installed the actual data is available. Estimates are based on the fuse size and customer type for all non ToU installations.

The proportion of network demand utilised by ToU customers at times of peak demand calculated for the current year is higher than in prior years as the peak demand was outside of the winter period when wine related businesses were processing.

For non ToU installations the actual demand at peak times is not available and assumptions as to diversity are required to be made. These assumptions are supported by the periodic data logging at particular substations where load is typically solely residential or solely small/medium commercial.

The results in the Network Statistics table above indicate that irrigation demand is low at times of peak demand on the network. This is because irrigation is generally not operating during the months that the periods of network peak demands occur, whether peaks are in the winter or in April. The diversity factor is significantly higher

for residential users than non-residential users. The difference in diversity factor between residential and businesses is increased further by the number of non-permanent residences connected to the Marlborough network.

#### **4.5.2 Allocation of Assets**

The calculations to allocate assets between consumer groups can be done in a number of ways. The range of techniques available depends on the data and flexibility of information systems that each network company has. The approach taken by MLL was that for each ICP, the value of assets assigned to the ICP was calculated and then used to derive the value of assets assigned to each customer group. In the frequent case when assets were shared the After Diversity Maximum Demand (ADMD) was used to allocate asset values across all of the ICPs supplied by those assets. For example the major asset categories were allocated as follows:

- The service, and in some cases the transformer, were assigned to a single ICP.
- The transformer, if shared, and associated sub-site assets values were assigned to the ICPs they supply on the basis of their respective ADMDs.
- The value of the 11kV feeder assets were assigned to all of the ICPs normally supplied by that feeder on the basis of the ICP's ADMDs<sup>7</sup>.
- The zone substation asset values were assigned to all of the ICPs supplied by that zone substation on the basis of the ICP's ADMDs.
- The 33kV network and global assets were assigned to all ICPs on the basis of the ICP's ADMDs.

The Replacement Cost (RC) of assets was selected for the methodology. The use of Depreciated Replacement Cost (DRC) was considered, however this would have required a more complex treatment of allocating operating and maintenance costs to reflect different age profiles within the asset groups.

The Marlborough network also has a number of geographic areas that are uneconomic to service. The assets for these areas have been shared amongst the groups in the proportion of economic assets. Therefore the burden of supply

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<sup>7</sup> Where the feeder lengths are long, all ICPs on the feeder share the total feeder value. This means that an individual ICP may share in a greater proportion of the feeder than they utilise. However there are practical limitations in determining an individual ICP cost particularly when ultimately there are factors such as low user fixed charges, urban/rural cost sharing and averaging within ICP groups which all mitigate against determination of precise costs for individual ICPs.

obligations to areas such as remote locations in the Marlborough Sounds is borne by all network consumers.

#### **4.5.3 Application of Cost Indicators to Cost Categories**

The intention of the methodology is to establish a substantial relationship between the underlying activity driving each component of cost and the cost driver used.

Three cost categories; system operations and maintenance, depreciation, and return on investment, have been allocated on the basis of assets utilised for each consumer group. For all four groups the costs in these categories are linked to the assets that are required to provide services to consumers which ultimately drives these asset related costs.

Administration and overhead costs are related to the company's servicing of consumers and other company obligations. The share of ICPs and units used has been combined to form the cost allocator for the administration and overhead costs. The taxation charge, which is relatively small, has been allocated on the basis of forecast lines charge revenue.

For Marlborough the majority of transmission charges are interconnection charges. These charges are based on the demand measured on the network during the 12 half hour peak demand periods, Regional Coincident Peak Demand (RCPD), observed each year for the Upper South Island. As the 12 periods that drive charges for the year to 31 March 2015 are known, the actual contribution to the peak load is able to be measured for Group 4 customers as they all have Time of Use metering. We have used the contribution to this total network demand to allocate the transmission charges other than those relating to the customer specific transmission asset contracts (NIC, CICs). The \$0.523m of transmission costs relating to charges levied as NIC or CICs are allocated based on the share of network assets utilised in the prior year.

The \$6.958m for transmission costs are allocated based on actual and estimated ADMD. For the winter 2014 period, which is the basis of transmission costs for FY15, 16.3MW of the 59.0MW of network demand during the 12 RCPD was attributable to the consumers within Group 4.

The allocation of the remaining transmission charges between the other three groups has been done by applying the estimated After Diversity Maximum Demand during these RCPD periods.



The costs to be allocated and cost allocator selected are summarised in the table below.

**Table 6: Cost Allocator**

\$'000	FY15 Estimate Costs	Misc Revenue	Net of Misc Revenue	Allocation to Group by
Transmission Costs Excl NIC	6,958		6,958	Share of RCPD
Transmission NIC	523		523	Share of Assets Prior Year
System Operations & Mtce	8,488	514	7,974	Share of Assets
Admin & Overheads	5,351	324	5,027	MWH /ICPs
Depreciation	8,794	533	8,261	Share of Assets
Taxation Expense	1,542	93	1,448	Net Revenue
Return on Investment	15,179	919	14,260	Share of Assets
<b>Total Costs for FY14</b>	<b>46,835</b>	<b>2,383</b>	<b>44,452</b>	
Misc Revenue	2,383			
<b>Costs Net of Misc Revenue</b>	<b>44,452</b>			
<b>Estimated revenue</b>	<b>41,993</b>			
<b>Difference (shortfall)</b>	<b>(2,459)</b>			

#### 4.5.4 Calculation of Required Revenue

Table 7 below demonstrates how each cost has been allocated between the consumer groups and the total cost of each group. Note the total cost allocated is equal to the cost net of miscellaneous revenue.

**Table 7: Allocation of Costs to Consumer Groups**

\$ '000	Transmission	System Opns & Mtce.	Admin & Overheads	Depreciation	Taxation Expense	Return on Inv.	Total Cost Allocated
1. Residential	3,159	3,262	3,126	3,379	648	5,833	19,407
2. Irrigation	77	276	139	286	59	494	1,330
3. Small Med Comml.	2,220	2,501	875	2,591	344	4,472	13,003
4. Large Comml. & Industl.	2,026	1,935	887	2,005	398	3,461	10,712
<b>Total</b>	<b>7,481</b>	<b>7,974</b>	<b>5,027</b>	<b>8,261</b>	<b>1,448</b>	<b>14,260</b>	<b>44,452</b>

Having established an overall revenue target for the year and allocated costs to each group, a revenue increase for each group is established.

The derivation of tariffs to collect the level of revenue targeted for each group is discussed in detail in section 4.8.

#### 4.5.5 Comparison of Cost Allocation and Expected Revenue

Table 8 compares the estimate of revenue for FY15 with the estimate of costs for the same year. The estimate of revenue for FY15 is based on constant volumes for each group except irrigation where the forecast is for an average year.

**Table 8: Revenues Estimate by Consumer Groups and Cost Estimates**

\$ '000	FY15	FY15	Difference	Difference
Consumer Group	Revenue	Cost	Revenue	Revenue
	estimated	estimated	estimated	estimated
1. Residential	18,782	19,407	(625)	-3%
2. Irrigation	1,705	1,330	375	28%
3. Small Med Comml.	9,981	13,003	(3,022)	-23%
4. Large Comml. & Industl	11,524	10,712	813	8%
<b>Total</b>	<b>41,993</b>	<b>44,452</b>	<b>(2,459)</b>	<b>-6%</b>

Rates of increase of between 3.6-4.0% for each consumer group have been applied for FY15. In the prior two years Marlborough Lines needed to substantially increase its total line charge revenue to bring it closer to the costs of operating the network.

The approach taken was to increase revenue from consumer segments that appear to be under-recovering at a greater than average rate and increase revenue at a lesser rate from the other consumer segments. This approach reflected that the cost allocation model can only ever be an estimate of network costs and any rebalancing between groups will occur over a period of time.

With the changes occurring as to timing of peak network demands MLL chose this year to put through relatively equal increases across all consumer segments.

The company's overall expected revenue is less than what is required currently to make a return on investment in line with the industry cost of capital benchmark for the current regulatory period. The overall shortfall between costs and revenues is \$2.459m, 5.5% of the estimated costs. However if an after tax WACC of 6.14% was applied, which was the WACC for the Information Disclosure for the year ended 31 March 2014, then the shortfall would reduce from \$2.459m to \$0.481m.

The expected revenue from the residential consumer group is broadly in line with the costs produced by the allocation model.

In the case of the irrigation consumer group the expected revenue is \$0.375m above the costs allocated under this methodology. When tariffs were introduced for irrigation users the rates were set to encourage the use of network assets at off-peak times. The cost allocation model applies an asset allocation based on the estimated ADMD occurring at times of overall peak network demand. The relatively low cost allocated to this consumer group reflects that the irrigation users are generally utilising assets outside of peak times. However in some areas of the network the peak load occurs during the irrigation season. Therefore it is not inequitable that the irrigation group contributes more than the cost allocation methodology attributes to this group.

The current network line charges include historical elements though there has been significant changes made over the last three years. The major changes have been the simplification of the schedule and the revision in the structure of the tariffs for the large commercial and industrial customers.

#### **4.6 Reason for Changes in Prices**

The estimated revenue for FY14 as per the pricing methodology disclosure was \$40.900m, of which \$6.935m was forecast for transmission charges<sup>8</sup>. For FY15 the forecast of transmission charges increased 8.5% to \$7.481m. In order to maintain net revenue at a constant level, assuming constant volumes on the network<sup>9</sup> a price increase of 1.33% would be required. However changes in consumption patterns on the network and an increase in the take-up of low user plans means the actual increase would be higher than this at approximately 1.5%.

As well as providing for the increase in transmission charges MLL is forecasting an increase in its own costs. Cost increases have occurred in a number of areas including as a result of a comprehensive capital investment programme to improve reliability of supply.

#### **4.7 Fixed and Variable Proportions**

The proportion of total line charges currently being charged is 47% fixed, 53% variable.

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<sup>8</sup> MLL – Electricity Distribution Network Pricing Methodology Disclosure March 2013.

<sup>9</sup> The assumption of constant volumes was used as volume growth has been flat with a decrease this year that may be attributable to a mild winter.

The proportion of fixed charges versus variable charges for all consumer groups was considered as part of the process to derive tariffs for each group in the coming year. For Group 4 the capacity charges have been included as fixed and the regional peak charge has been included as variable. The following table looks at the proportion of fixed and variable charges for each consumer group.

**Table 9: Proportion of Fixed and Variable Charges by Consumer Groups**

<b>\$'000 Group</b>	<b>Revenue</b>	<b>Fixed Revenue</b>	<b>% Fixed</b>
1. Residential	18,782	7,169	38%
2. Irrigation	1,399	807	58%
3. Small Medium Commercial	10,287	4,814	47%
4. Large Comml. & Industrial	11,524	7,030	61%
<b>Total</b>	<b>41,993</b>	<b>19,820</b>	<b>47%</b>

For Groups 1, 2 and 3 the mix of variable and fixed was largely the same as it had been in previous years. The consideration of options other than fixed and variable charges within each group is discussed in the tariff derivation section below. The elements of capacity and regional peak charge were changed for the Group 4 consumers as at 1 April 2013, to address the change in network consumption patterns.

It is important to note that for residential consumers the requirement to offer Low User compliant daily fixed charges for domestic consumers restricts the networks ability to recover costs evenly from all consumers. MLL considers it also impacts on the range of choices around the mix of fixed and variable charges for the residential group. MLL has addressed the challenge of recovering costs from some of the residential users with low consumption by obtaining an exemption from offering the Low User fixed charge option to domestic consumers (often holiday homes) which are located in remote areas of the network, and those with three phase supply, or capacity >15kVA.

In general, fixed charges are a lower proportion of total line charge revenue for lower capacity (kVA) users, including those in Groups 1 and 3. The higher variable component in the tariffs for Groups 1 and 3 reflect the patterns of supply with non half-hourly metering, lower investment costs for an incremental consumer, and a controllable portion of the load (water heating mostly for Group 1 consumers).

For Group 2, the irrigation consumers, the majority of the revenue is collected from fixed charges. This is because the usage is highly varied from year to year depending

on the seasonal weather patterns, but the costs to service this group do not vary according to throughput measured in kWh. The costs to provide the service to the consumer groups are incurred by the network regardless of whether it is a relatively dry or wet season.

Fixed charges are generally a greater proportion of revenue for the higher capacity (kVA) users in Groups 4. This is designed to reflect investment costs associated with peak demand, which is measured with half-hourly metering equipment. These customers also understand the concept of capacity provided and are encouraged to make decisions to ensure there is a reasonable utilisation of network assets where practicable.

Despite the allocation of significant proportions of costs in the above methodology to kilowatt hours, MLL assesses that most of its costs outlined above are actually fixed. If MLL were to recover its fixed proportion of costs in fixed charge tariffs, the fixed charge proportion would need to increase. Offering variable charges to consumers stimulates efforts to use energy efficiently but results in low user's costs being shared by other ICPs. The use of unit charges i.e. c/kWh, also aligns with what current smaller consumers generally understand, particularly in the residential area where concepts such as peak demand are not well understood. The variable charges are also valued by consumers as they can be responsive to their level of activity month to month.

Variable charges provide a balance to the other components of lines charges for Group 4, which are capacity based. A further consideration is that by maintaining a variable charge for large commercial/industrial consumers the transitions between the small/medium commercial consumers' plans will be easier to manage.

#### **4.8 The Derivation of the Prices to be Charged to Each Consumer Grouping**

The pricing methodology is required to include sufficient information for an independent expert to assess compliance with the pricing principles and explain the derivation of the tariffs to be charged to each consumer grouping.

The process that MLL employs to establish tariffs for each consumer group considers a range of factors including:

- To encourage consumption outside of peak demand periods to enhance the efficient utilisation of the network.
- The impact of consumers' demands on transmission charges.

- To ensure the costs of assets are recovered.
- Use of controllable supplies within peak demand periods.
- Legislative and regulatory pricing considerations, including the Low User regulations.

Any restructuring of the tariffs would also need to consider rate shocks for consumers and the long term interests of all stakeholders.

#### **4.8.1 Group 1 Prices – Residential Consumers**

MLL utilises the industry standard residential consumer definition to categorise customers as residential or commercial end use. Residential consumers are divided into two categories based on the capacity they require from the network. Larger capacity residential connections pay a higher daily fixed charge equivalent to the additional available capacity provided which reflects initial and ongoing asset costs. The same energy unit rates apply for both standard and large residential connections, i.e. <20kVA and >20kVA.

Daily fixed charges are set on the basis of two capacity bands, with rates of \$1.143 per day for installations with less than 20kVA capacity provided and \$2.286 per day for installations with greater than 20kVA capacity provided. The relativities between the fixed charges and the variable unit rates and the capacity threshold for the fixed charges have remained consistent with prior years.

Energy based scheduled rates are provided for uncontrolled energy, 13 hour controlled and 8 hour controlled energy. Energy rates are 8.457c/kWh for uncontrolled energy, 4.946 c/kWh for controlled load and 2.14 cents/kWh for uncontrolled load.

Tariff rate incentives are provided for controlled energy tariff codes to enable MLL to control energy consumption during peak periods of demand. Ripple controlled energy supplies are incentivised with lower energy consumption rates, in comparison to uncontrolled supplies.

The methodology for allocating the transmission cost component for the residential group is similar to that used in the previous year. The transmission costs will be recovered primarily through the revenue from uncontrolled units. 95% of Group 1's transmission costs is divided by the estimated units to give a transmission component of 2.983c/unit. The remaining 5% of the transmission costs are to be recovered through the 13 hour controlled units, which is equal to 0.407c/unit. A component is allocated to the 13 hour controlled tariff as occasionally controlled

load is required to be switched back on at times of “Transpower peak periods” (RCPD) to maintain consumer service levels. No transmission component is recovered from the night rate as the RCPD period does not occur between the 11pm and 7am night rate period.

There is a differential between the distribution component of the uncontrolled energy rate and that of the 13 hour controlled and a further differential in the unit night rate. The night rate is set at a level to recover minimal revenue, providing a strong signal that there is available network capacity at these times.

The methodology outlined above is cross checked by calculating the revenue that will be received from the controlled units and comparing this with the revenue that would have been received if they were charged at an uncontrolled rate. The difference is equal to the reduction in transmission costs that is made by reducing load during the RCPD periods. This means that the difference between the controlled and uncontrolled rates is in the correct order of magnitude.

MLL has a range of small scale distributed generation connected to its Network. Applications to connect distributed generation are treated in accordance with Part 6 of the Electricity Industry Participants Code.

From 1 April 2014 MLL has introduced an export charge of 0.5c/kWh designed to signal that distributed generation will have long term incremental cost impacts on the Network. This charge is consistent with signalling the impact of additional usage on future investment costs. It is salient distributed generation has the potential to increase voltage beyond regulatory limits.

#### **4.8.2 Group 2 Prices — Irrigation**

Irrigation has a distinct pattern of energy consumption that is unique when compared with the other consumer groups. The charges in this area are predominately capacity based which removes the seasonal uncertainty and variability of cost/revenue for both the consumer and the network and reflects the costs imposed on the network that are driven by the provision of capacity rather than actual usage. The current charges for this group are based on historical tariff patterns and relativities.

The minimum fixed charge threshold of 23kW is historical and this level has been maintained. The cost based on the daily rate for loads up to 23kW of \$2.743/day is equal to the cost based on the installed capacity rate of \$0.119/kW/day, at 23kW.

The transmission component (which is small as this group has minimal load at the time of the RCPD) has been recovered through the capacity charge by dividing the total transmission charge allocation by the estimation of chargeable capacity.

The seasonal rate has been set at 2.805c/kWh, a level between the night rate and the controlled rates that apply for the other Group 3 commercial consumers. The non seasonal rate is set at a level of 23.378c/kWh to discourage use outside of the seasonal period, consistent with the assumption made on the cost of delivering supply to these installations.

#### **4.8.3 Group 3 Prices – Non Residential Consumers – up to 140kVA**

This group has three consumption thresholds within it; up to 45kVA, 46 to 70kVA and 71 to 140kVA. There are further subgroups for the fixed charges which are based on narrower capacity bands.

A limited number of connections within this group are metered with ToU equipment for monitoring purposes only.

Fixed daily charges for this group increase with the capacity provided. For capacity less than 15kVA daily charges are higher than those for residential consumers which reflects the decreased diversity factor between users within this group and the requirements for different service levels such as performing some maintenance tasks outside of standard working hours to avoid business interruption.

Uncontrolled energy tariff rates decrease as an offset for the higher fixed charges. Two controlled energy tariff rates are available to incentivise consumers to utilise controlled tariffs where applicable.

Thirteen hour controlled rates and night rates are the same for all capacity bands within this group.

As consumer capacity increases, the fixed charges become more significant. This reduces the variability of revenue from the larger consumers within this group, reflecting that as the consumer size increases the cost of supplying them becomes more like a consumer within the Group 4 category (above 140kVA) where individual consumers influence the asset requirements at certain points in the network. Conversely the uncontrolled consumption charges become slightly lower with the higher capacity to reflect the economies in supplying the larger kVA connections.



The transmission component is recovered through the unit charge on uncontrolled energy being simply the transmission allocation divided by the estimated number of units.

The current charges for this group are based on historical tariff patterns and relativities. Options for refining the tariff structures for this group will continue to be evaluated in the future.

#### **4.8.4 Group 4 Prices – Time of Use Connections > 140kVA**

When a consumer has a capacity requirement greater than 140kVA at any time during the year, the company requires a ToU meter to be installed. ToU metering allows for a more detailed tariff structure and greater signalling of network constraints. Group 4 tariffs include; a fixed daily rate, a unit charge based on energy consumed, anytime assessed demand to reflect capacity provided to the site, and regional peak demand charges. Power factor charges are also levied if the power factor is less than 0.95 at the time of consumer peak demands. The capacity based charges make up a large component of the overall charges for Group 4 consumers.

There are 114 consumers in this group. The forecast revenue for this group for FY15 is \$11.52m, 27% of the total of all line charge revenue collected by MLL. A significant proportion of these consumers have a dedicated transformer for their supply.<sup>10</sup>

The pricing structure for the large commercial and industrial consumers is made up of four components:

- Fixed daily charge of \$6.90/day per installation which collects 2.5% of the target revenue from this group.
- Day and night variable unit rates c/kWh. The differential between the day and night rate is significant at 1.9c/kWh, and a useful signal to send to consumers to utilise energy at off peak times. As it is consistent with the retailers energy unit cost signal, it is likely to be a potential influence on consumer behaviour. On this basis the night rate was maintained. Up until 31 March 2013 there was a seasonal variation in the day unit rates but this was removed as it was viewed as unnecessarily complex. Variable charges will collect 20% of the target revenue from this group.

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<sup>10</sup> Where a transformer is shared between a number of customers from more than one consumer group the transformer capacity has been allocated to each group based on an approximation of the peak load of all the connected consumers.

- A capacity charge of \$11.05/kVA is levied based on 'assessed capacity'. The charge is levied in each month of the year on capacity currently being provided to each consumer. In assessing the current capacity provided, the size of the transformer if dedicated to the site, and consumers measured maximum demand over the previous three years are considered. Capacity charges will collect 59% of the target revenue from this group.
- A regional peak demand charge of \$5.77/kVA for all months of the year will collect the transmission costs for this group. The chargeable kVA used for the charge is the average of the six highest half hour peaks measured in each prior year winter month, May through to September between 7am to 10:30am and 4:30pm and 7pm each week day. The demands measured drive the charges for the following year i.e. this charge works in a similar way to the interconnection portion of Transpower's charges to MLL. The Regional Peak Demand charge will collect 10% of the revenue from this group.

All rates above are quoted for the majority of consumers within Group 4 who have low voltage supply.

In addition, power factor charges are applied to consumers, based on the difference between 0.95kVAr and their power factor measured during their six highest peak periods each month.

The winter peak charge that was disestablished as at 31 March 2013 was a sharp price signal consistent with a network constrained during the winter months. Recent investment in the network meant winter peak demand was no longer the only driver of network costs.

There were two major changes to the pricing structure for Group 4 consumers from 1 April 2014. The first was to smooth the consumer's cost during the year thereby eliminating the significant uplift in charges that had previously occurred over the winter months. (Some consumers had indicated that the increase in charges over the winter months was difficult to manage.) The second change was to develop a pricing incentive to encourage consumers to reduce load during RCPD periods. The introduction of a regional peak charge is a price signal which should stimulate behaviour and will ultimately reduce Marlborough Lines' costs, with consumers in Group 4 able to benefit from this reduction in transmission costs.

The opportunity existed for the network to encourage consumers to reduce the regional coincident peak demand. If this is achieved Transpower's interconnection charges will reduce with the benefit captured by the Group 4 consumers. 16.3MW

of the 59.0MW, 27% of the RCPD that is the basis of transmission charges for FY15 is attributable to the consumers within Group 4.

A price signal to reduce load during RCPD periods could be done in different ways. The approach chosen to nominate a defined “measurement period” for the five half hours in the morning and evening when traditionally MLL’s peaks have occurred, was seen as a good first option. No additional technology was required, and consumers who can move loads are certain to benefit. The use of the actual 12 half hour periods when the RCPD occurs each year, was considered and this may be ultimately appropriate for a few larger customers, however it was thought that the volatility may be difficult for many consumers to manage, and the lack of certainty around the benefit that can be achieved may discourage some consumers from attempting to move load.

Some transitional provisions were applied in the year to 31 March 2014, to avoid retrospective charges e.g. using the average of consumers’ winter peak demands for winter 2013 to determine charges for the year ending 31 March 2014. In effect the RCPD levels measured during the months May to September 2013 set charges in FY14 and FY15. An estimate for FY14 was based on the prior year’s data with a wash-up undertaken in November 2013.

Some Group 4 connections have taken responsibility for the maintenance of transformers. The pricing structure reflects this differential cost to the network.

#### **4.9 Proportion of Revenue by Price Component**

The proportion of revenue by price component is outlined in Table 10 in Appendix B.

#### **4.10 Non Standard Contracts**

There is currently only one non standard contract on the network, which is for the Waihopai Power station embedded in the Marlborough network. The price is fixed under a contract put in place in 1999 when MLL sold the generation assets to TrustPower. The price increases each year by CPI. The target revenue for the FY15 year is \$66,754.

#### **4.11 Power Factor Charges**

A charge for reactive energy, where power factors are below 0.95, is levied to encourage investments in improving power factors. We have observed payback periods for some customers investing in equipment to correct their power factor of 12-24 months.

#### **4.12 MLL Pricing Schedule**

The current MLL pricing schedule is available on the Marlborough Lines website.  
<http://www.marlboroughlines.co.nz/About-us/Disclosures/Pricing.aspx>

#### **4.13 Payments to Embedded Generators Used Solely for Generation**

There are three embedded generators on the network who generate primarily for generation purposes rather than to reduce their own consumption and export the excess volume. These generators receive monthly payments for avoided cost of transmission (ACOT). The ACOT payments are based on the average generation volume at the time of the 12 regional coincident peak demand periods multiplied by Transpower's interconnection rate. For the year commencing 1 April 2014 this rate is \$114.47/kW. This methodology in effect passes through the full value of the saving in transmission costs that has occurred as a result of them reducing the network load during the RCPD periods.

#### **4.14 Rewards for Consumers who Generate to Reduce their Consumption**

Although no payments are made to other 'load' customers who may reduce load during the RCPD periods, Group 4 customers benefit by managing their peak demands. The saving available depends on the time they elect to use their generators and their demand profile. Consumers within Group 4 who generate to reduce their peak demand level will benefit by a small reduction in their variable charges, but a potentially significant reduction in their capacity charges, and in some circumstances their regional peak demand charge.

#### **4.15 Future Changes**

MLL will continue to evaluate its price structure to ensure it meets the needs of consumers on the network. There are potential opportunities to develop a tariff suitable for non-irrigation seasonal loads. There is currently a step up in charges when a consumer reaches the 140kVA threshold if they have a low utilisation. We are committed to considering options that could smooth the transition between pricing groups and better reflect the costs placed on the network by incremental increases in load.

## 5. Compliance with the Pricing Principles

The following section examines the Electricity Authority’s Pricing Principles and considers the extent to which Marlborough Lines’ current Pricing Methodology is consistent with these principles. Our approach in this section is to outline our interpretation of each principle, discuss the practical and commercial constraints that may exist and illustrate how we have complied.

MLL certainly has had regard for these pricing principles in establishing their current network pricing methodology.

### 5.1 Pricing Principle (a)(i) - Subsidy Free Range

Pricing principle (a) (i) in the Pricing Principles and Disclosure Guidelines states that:

***“Prices are to signal the economic costs of service provision, by 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;”***

In previous methodology MLL has referred to the existence of ‘subsidies’ within the network pricing. However the issue and appropriate definition of subsidy was clarified in the report to the Electricity Authority - Review of Electricity Distribution Businesses’ 2013 Pricing Methodology<sup>11</sup>.

In the current document we have limited our use of the word ‘subsidy’ to the definition set out in the pricing principle (a)(i), i.e. a subsidy occurs only when the revenue received is not between the bounds of incremental costs and standalone costs, defined as follows:

*“Where incremental cost is the cost of operating and maintaining network assets to provide an additional unit of electricity to each consumer group. We interpret this as generally being a short run incremental cost measure. Standalone cost is the lowest cost alternative of serving each customer or customer group (at an equivalent or a higher level of service). In most cases, we would expect standalone cost to be set by a non-network solution (for example, a diesel generator or solar home system). These options are a more*

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<sup>11</sup> Castalia Strategic Advisors Report to the Electricity Authority, November 2013

*practical way for customers to bypass the network, rather than grouping together and moving to an entirely new network.”<sup>12</sup>*

### **5.1.1 MLL’s Interpretation**

Our interpretation is that prices we set for each designated consumer group must generate revenue from that consumer group that falls within the subsidy free band. The lower limits of this band is the cost of connecting that consumer group to the network (incremental costs) if the other groups were already serviced by the network, and the upper level of the band is the costs of serving that consumer group, as if they were the only consumer group (stand-alone costs).

The range provided by this definition is indeed quite wide as the nature of MLL’s electricity network means that there are extensive shared costs. Throughout the network consumer groups are inter-mingled e.g. the easily identifiable 33kV portion of the network generally supplies all consumer groups. Other costs incurred by the network business relate to functions, e.g. billing processes that are also provided for all customer groups, albeit in a slightly different form depending on the size of the consumer.

### **5.1.2 Compliance with Principle (a)(i)**

Our network prices are based on a cost allocation model that allocates costs across consumer groups using a number of key indicators of costs. The costs allocated are our actual costs that reflect the economies of scale present in operating the network business. As each consumer group is only allocated a portion of these costs the revenue received is less than the standalone costs of servicing them.

Principle (a)(i) also explicitly excludes the subsidies that arise from compliance with legislation and/or regulation. MLL considers that the Low User regulations have the potential to impose a very significant subsidy between consumers but not necessarily consumer groups on our particular network. In addition policy directives that may require the rate of price increase for rural and non-rural users to be equal would also prevent us from adequately recovering costs from individual consumers.

We initially addressed the issue of Low User regulations on our network to some extent by obtaining an exemption from offering Low User fixed charge compliant plans to approximately 10% of our consumers who are in the most distant and less

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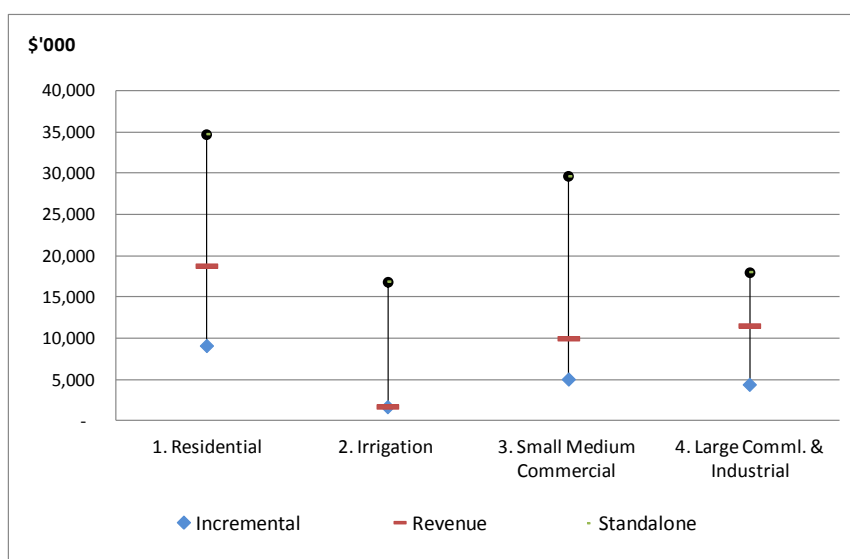
<sup>12</sup> Page 24 of the Castalia Strategic Advisors Report to the Electricity Authority – Review of Electricity Authority Distribution Businesses’ 2013 Pricing Methodologies, November 2013

populated areas of the network. The consumers within these areas of the network are deemed to be “remote”<sup>13</sup>. This reduces the potential for a subsidy from centrally located customers to other users. MLL extended the exclusion to residential customers with >15kVA and/or three phase supply.

To obtain this exemption, analysis of profitability of all network customers on a geographic segment basis was undertaken. This analysis has been updated from time to time and includes a detailed allocation of assets to each geographical segment. The results continue to reinforce the view that the requirement to offer low fixed charge tariffs leads to significant cross subsidisation among consumers in different geographic areas. The analysis supports the company’s approach to address this through the Low User exemption and discount qualification policy.

The graph below includes an estimate of the standalone and incremental costs and revenue for each consumer group. In all cases revenue is within the subsidy free zone.

**Figure 2 - Analysis of Revenue and Standalone and Incremental Costs**



## 5.2 Pricing Principle (a) ii - Level of Available Service Capacity

***“Prices are to signal the economic costs of service provision, having regard to the extent practicable, to the level of available service capacity.”***

The current structure of the New Zealand electricity market means that MLL supplies end use consumers via energy retailers. The distributor’s role in the supply chain

<sup>13</sup> Refer to Marlborough Lines website – exemption notices and map of remote zones.  
<http://www.marlboroughlines.co.nz/About-us/Disclosures/Pricing.aspx>

provides an indirect relationship with the consumer which means any price signals provided by MLL can potentially be repackaged differently by retailers.

There are currently eight retailers with active customers on the Marlborough network.

### **5.2.1 MLL's Interpretation of Principle (a)(ii)**

MLL's interpretation of this principle is that prices must distinguish between where additional capacity is readily available and where it is not available. On a practical level this will be achieved if the price structure encourages use when assets are under utilised.

Price signals sent by the network can be diminished in value when the distribution component is a small component of the consumers total electricity bill, typically 25-40% of the total charges.

Retailers also rebundle distribution tariffs. Notwithstanding the repackaging and dilution effects on price signals undertaken by the retailers, MLL considers it meets the requirements of Principle (a)(ii) by

- having an element of capacity based charges across all customer segments
- differentiating between interruptible and non-interruptible load, and
- by having day/night rates available for most consumers.

MLL's price structure of charges reflect the principle that as capacity requirements increase, the costs to provide service increases and therefore end users rightly are required to pay higher line charges.

MLL offers controlled load or limited availability prices to residential and commercial consumers, and irrigation installations. These prices reflect the network's ability to limit supply at a time when network demand is highest, or only supply at times when peak demands are very unlikely to occur, e.g. night rates are offered for supply between 11pm – 7am, and seasonal irrigation rates are offered during the summer months.

For residential consumers controlled load is generally offered for hot water cylinders that are then remotely switched off by the network during times of peak demand. Night rates are used to a lesser extent for heating appliances which utilise electricity supply only at night.



The network does not yet offer Time of Use rates to residential consumers. There has been a limited number of meters capable of providing this data installed within our network and to date there has been little interest. We anticipate making available some appropriate pricing in the future when this is required.

For small commercial consumers controlled rates are also offered. The uptake of utilisation of controllable load by small commercial consumers is much less as customers do not generally have a significant load that they only require on an interruptible basis.

The prices designed for irrigation installations are only available for loads capable of being interrupted and have additional seasonal restriction.

For larger commercial consumers a greater proportion of total line revenue is based on capacity charges consistent with the decreasing diversity of loads in this consumer group. A differential between the day/night unit tariffs is also provided to large consumers reflecting that network assets are utilised less at night. The signals provided by the network in this instance work in conjunction with the price signal provided by retailers where unit rates vary accordingly with the time of day.

There may be benefits if pricing reflected the additional capacity available in a particular location, however this would create different prices across the region, and in particular MLL's ability to do this is constrained by the requirement that urban and rural prices change at the same rates.

### **5.3 Pricing Principle (a)(iii) – Additional Usage on Future Investment Costs**

*"Prices are to signal the economic costs of service provision, by; signalling, to the extent practicable, the impact of additional usage on future investment costs."*

#### **5.3.1 MLL's Interpretation of Principle (a)(iii)**

This principle is very similar to Principle (a)(ii) with a focus on the growth of the network rather than utilisation of the existing capacity.

#### **5.3.2 MLL's Compliance with Principle (a)(iii)**

MLL utilises a number of tools to signal the cost of additional usage on future investment costs. One of these is the capital contribution system that requires consumers to contribute to the short run marginal cost of providing capacity for a new installation or additional capacity for an existing installation. This charge signals the impact of demand on investment by setting a price that is related to the end users future demand on the network. At present the rates are equivalent across the

network however these could be reviewed to reflect different likely future costs in different areas. However as MLL is a relatively small network there is a trade-off between “accuracy” and simplicity.

The controlled and interruptible load pricing tariffs offered to residential, small/medium commercial, and irrigation consumers meet the requirement of signalling the impact of additional usage on future investment costs. Variable charges may also signal the impact in an easy to understand and dynamic way.

For all consumer groups (residential, commercial, and irrigation) charges are stepped up as capacity provided is increased. For non Time of Use (ToU) commercial consumers this is done in relatively narrow bands, for ToU consumers this is done in 5kVA increments. Irrigation installations are also charged on a capacity basis linked to maximum possible capacity but restricted from operating during the peak periods.

For the larger commercial consumers with ToU metering, the daily and unit charge is greatly reduced with the majority of cost associated with capacity charges. The winter peak demand charges that operated until March 2013 reflected a situation where the network was constrained during periods of peak demand in the winter months. In three of the last seven years the network peak has occurred during April, the month that wineries have their highest demands. The network considered that going forward the winter peak demand charge was not reflecting future demand. A different price signal to encourage consumers to manage peak loads was introduced with a revision to the capacity charge in April 2013. The winter peak charge was replaced with a regional peak charge, which reflects the impact that regional coincident peak demands have on transmission charges and therefore network costs.

With network investment costs generally linked to consumer’s capacity requirements, MLL’s capacity based price structure ensures compliance with this principle.

#### **5.4 Pricing Principle (b) – Recovering Allowed Revenues**

Pricing principle (b) states:

***“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.”***

#### 5.4.1 MLL’s Interpretation of Principle (b)

This principle appears to encourage the network to have a pricing structure that provides consumers with a high elasticity of demand, a lower price relative to other consumers.

#### 5.4.2 MLL’s Compliance with Principle (b)

This is difficult for MLL to apply as price elasticity is not able to be observed or measured for individual end use consumers. However, MLL does consider that industrial customers will respond to prices more readily than residential consumers especially if they are in an energy intensive industry. Generally the industrial customers with a normal load utilisation face a lower unit cost on the Marlborough network consistent with their higher price elasticity.

It is worth noting that it appears that residential consumers are targeting energy efficient initiatives to reduce their consumption consistent with the dramatic increase in total electricity prices, hence demonstrating an elastic response to electricity pricing.

#### 5.5 Pricing Principle (c)(i) – Discourage Uneconomic Bypass

Pricing Principle (c)(i) states:

***“Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to discourage uneconomic bypass.”***

#### 5.5.1 MLL’s Interpretation of Principle (c)(i)

This principle deals with discouraging uneconomic bypass requiring the network not set prices so high that it encourages an alternative form of supply that would replicate the sunk assets of the original network supplier.

#### 5.5.2 MLL’s Compliance with Principle (c)(i)

The use of a cost allocation model, which ensures a price is set below a stand-alone price and the cost of alternative supply such as diesel generation, ensures consistency with this principle. However, MLL will consider whether the further use of non-standard pricing is appropriate in some instances, subject to consideration of all other factors. It is possible that uneconomic bypass could occur when price signals are set for overall network conditions that do not apply in a particular location where a consumer has unusual requirements.

It is also relevant the cost of photo voltaics is reducing and if coupled with low cost batteries has the potential to establish a new paradigm and possibly result in the stranding of some network assets. If such occurs this will be an expression of market forces.

## 5.6 Pricing Principle (c) ii – Price Quality Trade-offs

Pricing Principle (c)(ii) states:

***“Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to 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.”***

In our view one way of ensuring pricing is responsive to the requirements and circumstances of particular stakeholders in the future is to continue to consider non-standard arrangements where appropriate.

MLL has in the past met specific consumer needs by introducing new tariff structures. For example, seasonal irrigation tariffs and 20 hour controlled tariffs for bakeries. In the future, developing non-standard arrangements may be appropriate, subject to overall pricing criteria.

Standard pricing options for large consumers respond to particular needs by offering alternatives for consumers to own their own transformers, utilise generation and/or connect at differing points in the network. With respect to a price/quality trade-off, the recent price quality research suggests that the customers are generally happy with the current price quality trade-off. It is also very difficult for MLL to provide different quality levels for an individual or small group of ICPs within the overall network.

## 5.7 Pricing Principle (c) iii – Encouraging Investments in Alternatives

***“Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to, 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.”***

The distributed generation regulations provide that a distributor may only charge the incremental cost of connecting to their network. MLL pays all distributed generators on the network Avoided Cost of Transmission charges (ACOT) which encourages

generators to be operating during the transmission peak periods. MLL's lines charges for the new distributed generation to feed into the network have been set at zero where the capacity has been readily available. This allows the smaller embedded generators to connect to and utilise the network to deliver their generation to other connections without incurring network charges.

With respect to transmission and distribution alternatives, a number of MLL's consumers utilise generation capacity where they have a need for reliability beyond that which the network can reasonably provide and/or a short time of peak demand which the network cannot economically meet through installing additional capacity, e.g. wineries that have a peak processing period of two to three weeks only.

## **5.8 Pricing Principle (d) – Transparency, Stability and Certainty**

***“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.”***

MLL takes a number of steps to ensure our methodology is consistent with the above principle.

1. MLL consults with retailers on any planned changes to its pricing structure.
2. MLL has progressively simplified its pricing structure where differentials are no longer justified or the cost associated with the price schedule complexity outweighs the additional revenue collected. A recent example of this has been the removal of the seasonality component in the variable charge for Group 4 customers.
3. Simplification and rationalisation of the historical pricing structures has been undertaken.
4. The confirmation of a principles based approach by the Authority has been helpful to reduce some regulatory uncertainty. Some tariffs applicable to our Group 4 customers were amended, effective 1 April 2013, to promote more responsiveness to the transmission component of costs for this group.
5. MLL is committed to gradual transition of pricing changes to enable network users to respond accordingly. Significant changes are carefully considered with a view to making adjustments over a period of time.

## 5.9 Pricing Principle (e) – Have Regard to the Impact on Transaction Costs and Economic Equivalence

***“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.”***

As stated above, MLL has progressively moved to simplify its pricing structure over the last five years whilst maintaining pricing signals and appropriate relativities between tariffs. The changes made have reduced transaction costs to retailers, some consumers and the company. We have consulted with retailers on these proposed changes each year. An example of such change was the removal of an area distinction between those properties within the Marlborough District Council area and those within the Kaikoura District Council area where the Kaikoura District council levied a rate relative to the value of all of Marlborough Lines’ network assets in its area. This simplification has resulted in the removal of around 22 tariffs, reducing the number of tariffs in the schedule by 30%. (This has resulted in an increased level of cross sharing from other ICPs outside the Kaikoura area). A more recent example is that from 1 April 2014 “summation” of individual customer accounts was removed.

All consumers, irrespective of which retailer they use, are offered the same network prices. We do not provide any discounts or special terms to end use consumers based on their choice of retailer.

All retailers are subject to the same tariffs from MLL. We therefore consider that prices are economically equivalent across all retailers. The principle of no special terms provided to any particular retailer is entrenched in our current Use of System Agreement.

## Appendix A

### 1. Regulatory Framework

#### 1.1 Regulatory Requirements

The following section provides an overview of the main regulatory requirements that impact MLL's pricing decisions and disclosures.

MLL is subject to the following key regulatory requirements.

- Part 4 of the Commerce Act which makes it subject to Electricity Distribution Information Disclosure requirements.
- The Electricity Industry Act which provides that the Electricity Authority has particular responsibility for monitoring tariff structures and approaches.
- The "Low User Regulations" which require all EDB's to offer a low fixed charge option to domestic consumers (subject to limitations such as for permanent residences only).
- Restrictions on pricing differentials between urban and rural consumers.
- A range of obligations set out in the Electricity Participation Code.

#### 1.2 Information Disclosure Requirements

MLL is exempt from Price-Quality Regulation (PQ Regulation) provided for under Part 4 of the Commerce Act. Companies that are subject to PQ Regulations must follow the Default Price Path (DPP) which limits the rate of price increase to CPI, plus or minus an x factor (currently set at zero), plus any change in "pass through" and "recoverable" costs, after providing for changes in volumes.

Although not subject to Price-Quality Regulation MLL is still subject to the Information Disclosure (ID) regime. The ID requirements were significantly revised for the disclosure of information for the financial year 2013 with revisions in many areas including pricing. The ID requirements with respect to pricing outlined in the determination published 1 October 2012 are as follows:

##### *Disclosure of pricing methodologies*

- 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;*
- (3) *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.*

*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.*

*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;*
- (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;*
- (3) *State the target revenue expected to be collected for the disclosure year to which the pricing methodology applies;*
- (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.*
- (5) *State the consumer groups for which 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;*



- (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;*
- (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;*
- (8) *State the proportion of target revenue (if applicable) that is collected through each price component as publicly disclosed under clause 2.4.18.*

2.4.4 *Every disclosure under clause 2.4.1 above must, if the EDB has a pricing strategy –*

- (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;*
- (2) *Explain how and why prices for each consumer group are expected to change as a result of the pricing strategy;*
- (3) *If the pricing strategy has changed from the preceding disclosure year, identify the changes and explain the reasons for the changes.*

2.4.5 *Every disclosure under clause 2.4.1 above must–*

- (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;*
  - (b) *how the EDB determines whether to use a non-standard contract, including any criteria used;*
  - (c) *any specific criteria or methodology used to determine prices for consumers subject to non-standard contracts and the extent to which these criteria or that methodology are consistent with the pricing principles;*
- (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 line services to the consumer is interrupted. This description must explain -*

- (a) the extent of the differences in the relevant terms between standard contracts and non-standard contracts;*
- (b) any implications of this approach for determining prices for consumers subject to non-standard contracts;*
- (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 –*
  - (a) prices; and*
  - (b) value, structure and rationale for any payments to the owner of the distributed generation.*

### **1.3 Electricity Authority Pricing Principles and Information Disclosure Guidelines**

The predecessor to the current Electricity Authority, the Electricity Commission, had a work stream around the standardisation of distributor arrangements that included the prices EDBs charge for lines services. This programme of work included consultation with distributors, retailers, end use consumers and consumer representatives.

In February 2010 the Electricity Commission released the *Pricing Principles and Information Disclosure Guidelines* with a view that these would be progressively incorporated into EDB pricing Methodologies from 31 March 2011 onwards. The Electricity Authority has ratified these Pricing Principles and the associated Information Disclosure Guidelines.

#### **1.3.1 The Pricing 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.*
  - (ii) having regard, to the extent practicable, to the level of available service capacity; and*
  - (iii) signalling, to the extent practicable, the impact of additional usage on future investment costs.*

- (b) Where prices based on 'efficient' incremental costs would under-recover allowed revenues, the shortfall should be made up by setting prices in a manner that has regard to consumers' demand responsiveness, to the extent practicable.*
- (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;*
  - (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*
  - (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.**
- (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.*
- (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.*

Section 5 of this document discusses each of the principles in detail and demonstrates MLL's compliance with these principles.

#### **1.4 Low User Regulations**

MLL is also required to comply with the Low User Regulations. Section 14 and 15 of the Low User Regulations<sup>14</sup> require distributors and energy retailers to offer low fixed charge tariffs - distributors must make available a tariff with a fixed line charge component of no more than 15 cents per day, excluding GST, to residential consumers provided that it is a primary residence, not a holiday home.

The total charge for the low user plan, made up of the fixed and variable charges, must be equivalent to a standard price option for a typical domestic consumer. The

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<sup>14</sup> Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 (SR 2004/272) as at 1 April 2009

typical domestic consumer is defined as a user of 8,000kWh per annum in most areas of New Zealand.

A distributor's marginal cost to supply a residential ICP is generally higher than 15 cents per day, so if the usage on the connections is minimal, these regulations effectively require MLL to provide supply to a group of network users i.e. those residential consumers who use much less than the deemed typical consumer, from revenue collected from other consumers or collect less revenue than covers full costs. MLL requires customers to pay contributions towards new installations set at a level appropriate for an average rather than an extreme low user customer.

MLL has obtained an exemption from offering Low User tariffs to installations that are difficult to service and in sparsely populated areas of the network. These areas are referred to as "remote". 10% of the total network connections are within the "remote" areas. Typically installations within the "remote" areas do not cover their full costs of service. This situation prevails because of earlier regulatory requirements that meant uneconomic lines were built. The exemption MLL has from the application of the Low User fixed charge regime serves to limit the amount of the shortfall that is received from customers within these geographic areas.

The remote classification is also utilised in the administration of MLL's discount policy. The installations within the areas deemed "remote" do not qualify for network discounts on the basis that these connections are uneconomic to supply so there is no surplus revenue received.

MLL also has a second exemption for the purpose of the Low User Regulations. This exemption provides that if a residential installation has greater than 15kVA capacity supplied and/or has three phase supply, then low user compliant tariffs do not need to be offered.

Both of these exemptions are displayed on the company website  
<http://www.marlboroughlines.co.nz/About-us/Disclosures/Pricing.aspx>

## **1.5 Rural and Non - Rural Pricing**

Section 113 of the Electricity Industry Act 2010 provides for regulation to ensure that prices increase at an equal rate between rural and urban consumers. At this time no such regulation has been put in place but it is understood that a policy intent exists that there be equal rates of increases.

Electricity distributors had previously been directed through a Government Policy Statement to limit the increase of rural prices to the rate of that for urban consumers.

The rural and remote rural areas are invariably supplied from a single source of supply via radial lines (longest 326km) and inherently the reliability of these lines is less than for meshed lines in other networks with alternative options for supply. Typically the costs of vegetation control, maintenance and restoration of supply are much greater in the rural, and particularly rural remote areas, than those in urban areas, especially on a per consumer basis.

As the cost of delivering the lines services to rural customers is higher than to an equivalent customer in an urban environment, this would suggest that networks may not be able to fully recover the cost of servicing these customers through their lines charges.

This is particularly so in the company's more remote areas where the lines can only be reached by helicopter, boat, or specialist off-road vehicles or sometimes only foot.

## **1.6 Electricity Industry Participation Code**

### **1.6.1 Part 6 Distribution Generation**

Part 6 of the Code specifies pricing for distributed generation. These regulations specify that only incremental costs can be charged to distributed generators.

## Appendix B

**Table 10: Proportion of Revenue from each Price Component**

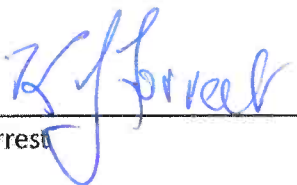
Price Code	% of Revenue	Price Code	% of Revenue
10	16.88%	BF	0.68%
AL	12.05%	DL	0.65%
DS	10.42%	PFT	0.54%
23	6.98%	WM	0.48%
11	5.12%	MDCFC	0.40%
DSNL	4.70%	PM	0.38%
NT	4.12%	50	0.29%
51	4.00%	22	0.23%
12	3.69%	97	0.23%
WL	3.30%	PFI	0.22%
40	3.10%	PH	0.20%
31	2.62%	18	0.18%
AM	2.21%	Wai	0.16%
RT	2.13%	17	0.11%
AH	1.80%	62	0.09%
16	1.68%	US	0.07%
NS	1.36%	80	0.06%
PK	1.34%	28	0.05%
DT	1.30%	20	0.03%
61	1.20%	30	0.02%
RV	1.16%	UL	0.02%
RX	1.09%	PMFC	0.01%
96	0.96%	RNZFC	0.01%
NH	0.88%	PSLT1	0.01%
WH	0.80%	DG	0.00%
BF	0.68%		

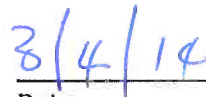
**Schedule 17 – Certification for Year-beginning Disclosures**

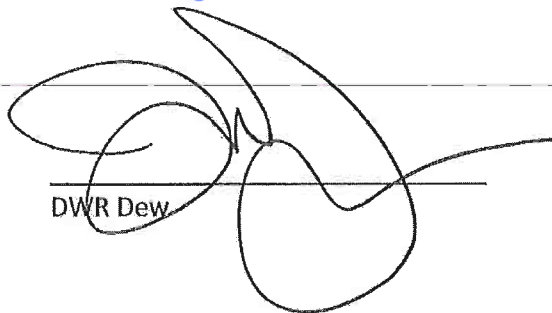
Clause 2.9.1 of section 2.9

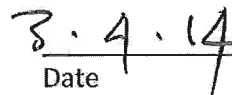
We, Kenneth John Forrest and David William Richard Dew, being directors of Marlborough Lines Limited, certify that, having made all reasonable enquiry, to the best of our knowledge-

- a) The following attached information of Marlborough Lines Limited prepared for the purposes of clause 2.4.1, clause 2.6.1 and subclauses 2.6.3(4) and 2.6.5(3) 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.

  
\_\_\_\_\_  
KJ Forrest

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
DWR Dew

  
\_\_\_\_\_  
Date