



Pricing Methodology Disclosure

For prices applying from 1 April 2016

Pursuant to:

Electricity Distribution (Information Disclosure) Requirements 2012

and

Distribution Pricing Principles and Information Disclosure Guidelines

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Glossary – Definitions and Abbreviations

AMD	Anytime Maximum Demand.
ACOT	Avoided Cost of Transmission is a payment made to a distributed generator based on output during time periods used to set Transpower’s interconnection charges. These times period are referred to as Regional Coincident Peak Demand, (RCPD) periods is highest.
Asset	Equipment or plant that is part of MLL’s electricity distribution network.
Bypass	If a consumer chooses to obtain its electricity supply from an alternative source to the distribution network.
Code	Electricity Industry Participation Code 2010.
Demand	The rate of expending electrical energy expressed in kilowatts (kW) or kilovolt amperes (kVA).
Commerce Commission (Commission)	Commerce Commission oversees the regulatory provisions of the Commerce Act 1986 which Electricity Distributors are subject to.
Consumer	An end-user who is supplied electricity.
Controllable Load	The load, mostly electrical water heating load, that MLL is able to switch off during periods of high Network demand.
Cost Allocation Model	A model that allocates the actual costs of owning and operating the distribution network to the consumer groups based on a cost allocation methodology.
Consumer Price Index (CPI)	A measure of the change in price of a basket of consumer goods and services.
Distributed Generation	Electricity generation that is connected directly to the distribution network. Also referred to as ‘embedded generation’.
Distributor or Electricity Distribution Business (EDB)	A business responsible for delivering electricity from the national grid to homes and businesses. Also commonly referred to as an ELB (Electricity Lines Business).
Distribution Pricing Principles	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”.

Electricity Authority (Authority)	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.
GXP	Grid Exit Point. The point where MLL’s network connects to Transpower’s transmission network and where electricity flows from Transpower’s network onto MLL’s network.
HV	High Voltage.
ICP	Installation Connection Point is where a consumer connects to MLL’s electricity distribution network.
kWh	Kilowatt hour is a measure of electricity consumption - this is the unit in which retail sales of electricity are measured.
kVA	Kilovolt Ampere.
Load Management	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.
LV	Low Voltage.
Network Peak Demand	When the network’s consumption is at its highest.
Pricing Methodology Disclosure Guidelines	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.
ToU	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) with significant other investments. This disclosure is for the Marlborough network. The network has approximately 25,000 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 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. MLL has around 120 staff based in Blenheim at a centrally located office and a depot for the Contracting activities.

The MLL Group also has investments including a 50% share of Nelson Electricity and 80% of the Yealands Wine Group.

MLL 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 does not have a contractual relationship for the network services with the consumers on its network.

MLL 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 (including Energy Online¹), Globug (subsidiary of Mighty River Power), Mercury Energy, Meridian Energy, Nova, Opunake Hydro, Pulse Energy (including Just Energy and Grey Power), Simply Energy, Tiny Mighty Power² and Trustpower.

Lines charges are billed to the retailers monthly, based on consumption data provided to MLL by consumers’ Metering Equipment Providers (MEP), which are selected by a consumer’s retailer.

1.2 Ownership Structure of MLL

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 last election for four trustees held in March 2016.

1.3 Price Changes for Current Year

MLL considered its prices for electricity distribution services and despite an increase in transmission charges of 3.2%, from 1 April 2016 did not change prices from this date. The structure of prices for all consumers remains unchanged from the prior year.

¹ Energy Online is a fully owned subsidiary of Genesis Energy Limited.

² Mercury Energy and Tiny Mighty Power are fully owned subsidiaries of Mighty River Power Limited.

Prices are set to reflect the needs of the company, the Marlborough consumers and stakeholders, together with the wide ranging requirements provided by the comprehensive regulatory framework.

Pricing will be reconsidered during the coming year.

1.4 Regulatory Status of MLL

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 MLL.

1.5 Background to Pricing Methodology Disclosure Document

MLL's Pricing Methodology is in the same format to that of last year's, though the disclosure continues to evolve to address pertinent issues.

The Electricity Authority commissioned consultants to review the pricing methodologies of all EDBs for the year beginning April 2013 for alignment with the pricing principles and Information Disclosure Guidelines³. The report was published in November 2013. Marlborough Lines has responded to the feedback received in that review.

An important aspect of the Pricing Methodology Disclosure is 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 and included in section 5.

1.6 Structure of Pricing Methodology Disclosure Document

Section 1. - Includes an introduction to MLL, the regulatory context for this disclosure and overview of the pricing process.

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.

³ 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 which assessed the prices for lines services for customers on the Marlborough 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. - Examines each of the pricing principles and demonstrates the consistency of MLL's pricing methodology with these principles and highlights some of the challenges that arise with the principles.

1.7 Overview of the Pricing for FY2016

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 network services. The decision to leave prices unchanged was made after reviewing a number of factors including; an estimate of costs for the 1 April 2016 to 31 March 2017 year, and recent significant profits obtained from the sale of its investments in Otago and Horizon Energy.

The total costs of operating the network business for the year from 1 April 2016 to 31 March 2017 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, General (Small/Medium Commercial), Larger Commercial/Industrial and Irrigation users.

The rationale for the consumer groups, the methodology to determine which group each consumer falls into and the network statistics for each of the consumer groups is outlined in section 4.

1.7.3 Overview of Cost Allocation Methodology

With total costs and consumer groups identified a cost allocation methodology is then applied to allocate the costs between the groups. An estimate of the total cost of providing network services for each consumer group is made.

An explanation of the allocation methodology is provided. The most significant cost allocator is the proportion of assets. An apportionment of all network assets (at replacement cost), is made to each ICP on the network. These values are then summated for each ICP and then again 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 use different allocation techniques. Some of the common options are discussed along with the reasons why MLL has applied the 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. Generally the more assets a consumer requires, the higher the cost of providing network services 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 Pricing Plans for Each Group

If a review of pricing plans was being conducted once the target revenue for each group is identified the specific pricing plans for each group would be designed and the prices set for each plan. However as discussed above, the prices and pricing plan structure did not change for the year beginning 1 April 2016.

Although most of the cost of operating an electricity network is fixed, revenue for network services is generally made up of fixed and variable pricing elements. A description of the current methodology with respect to the proportion of fixed and variable charges and the different pricing structures used for irrigation installations and large commercial industrial customers are discussed in section 4.0.

The pricing structures vary across the consumer groups and the structures used support the recovery of revenue consistent with the pricing principles.

1.7.5 Comparison of Annual Revenue and Allocated Cost for Each Group

A forecast of target revenue is compared with the cost allocated to each group. There may be differentials between revenues and the estimates of costs, which is also discussed.

1.8 General Issues with Cost Allocation Model

MLL has always utilised a cost allocation model to ensure prices are fair and equitable. It is also cognisant of the pricing principles published by the Authority. There are a number of different and valid approaches to the allocation of network costs to groups of consumers, although there are some limitations due to the availability of accurate information, the recent systems upgrade made by MLL provides higher quality data especially for apportioning assets to ICPs.

Many network assets and other non-asset related costs are shared over a large number of consumers which despite good quality information, 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 4.0.

1.9 Discount Policy

MLL has for some time had a policy of paying discounts to qualifying consumers in March, at the end of each financial year. The revenues stated in this report are net of the payment of discounts, consistent with the definition of revenue in the Information Disclosure Requirements for “posted discounts”.

MLL has chosen to set the discount as a relatively equal proportion of each price so each customer is rewarded proportionately through the discount process regardless of their pattern of consumption.

The exceptions to the discount being an equal proportion of each price are:

- the regional peak demand charge that applies to the large commercial and industrial consumers group is set at a level to recover the transmission costs only, and
- discounts are not paid to customers in the areas demonstrably unprofitable.

The discount is a credit for a portion of the lines charges paid for network services in the prior 12 month period⁴. Discounts are paid to a consumers' electricity retailer and the amount is credited on their account.

Consistent with the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004, (LFC Regulations), the costs faced by the typical residential user (as defined in the regulations) are equal on a pre and post discount basis.

⁴ 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.

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 pricing structures and approaches to distributor pricing.
- The Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulation 2004, the LFC Regulations, which require all EDBs to offer a low fixed charge option to domestic consumers using less than 8,000 or 9,000kWh per annum at their principal place of residence.
- 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 the regulatory requirements that impact MLL's pricing decisions and disclosures.

3. 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 operates and how this process influences specific charges for each consumer group.

MLL considers that a number of factors need to be taken into account when network prices are determined and changes to network charges should be undertaken on a consistent and progressive basis. Prices have been shaped by consumer feedback, government policy and regulation over a period of many years.

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

MLL conducts a comprehensive customer satisfaction survey each year. The results of the survey inform the company management and directors of consumer views and influence pricing decisions. In 2014 and 2016 MLL also undertook research on price quality issues. The results of the 2016 survey are currently being collated.

A stable price structure provides network users with the opportunity to respond to changes in price levels or charging structures. However new structures are also required to provide pricing signals consistent with the pricing principles and specifically to address changes in technology.

Within the network there is cost sharing, both within consumer groups and between consumer groups. The company will continue to refine the estimates made of 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 targets a revenue level consistent with the company's network operations achieving a commercial rate of return. An appropriate level of target revenue and a pricing structure that manages revenue risk are both important to ensure the financial sustainability of the company.

3.3 Payment of Discounts

MLL will continue to pay discounts for the 12 months ending 31 March 2017. The discount will continue to be in the form of a "posted" discount, which forms part of the company's published price schedule. The pre discount and discount prices are both on the price schedule. The comparison of revenues and costs in this disclosure state revenue net of the payments of discount.

As in prior years the discount payment will be subject to qualification criteria. More than 90% of consumers will receive a discount, however customers in areas deemed "remote" do not receive a discount because these areas are uneconomic to service. In addition an installation must be connected to the network and occupied on a qualification date in mid-March 2017.

3.4 Consideration of the Impact of Changes on Individual Consumers

As there has been no change to prices or pricing structures this year we have not needed to consider the impact of changes on individual customers. When changes are made the effects on individual consumers are considered carefully. Our approach in the past has been to avoid changes that produce a rate shock greater than 15% (of the delivery charge component) to any customer.

3.5 Prices to be Cost Reflective Subject to Consumer Considerations

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 is cost reflective and pricing that is relatively simple and easy to understand.

When determining what pricing structures are appropriate, MLL has considered the expectation of consumers and their understanding of concepts applicable to charges for distribution services for each consumer group, e.g. an industrial consumer is typically better placed to understand more complex price structures such as those based on peak demand than a domestic consumer.

Cost reflective pricing is often more complex but can have benefits compared to the standard two part pricing structure which is prevalent. (A two part pricing structure has a fixed charge specified as a cost per ICP per day and a unit charge, such as cents per kWh). Pricing signals may encourage responses that lower the costs to the network provider and therefore ultimately to individual customers and/or consumer groups.

MLL aims to develop and introduce pricing structures that provide signals to align consumer behaviour with network objectives where there are opportunities to drive desirable consumer behaviour. A move to more cost reflective pricing may be able to deliver long term benefits to consumers.

Despite the complexity of network economics MLL aims to provide pricing that is clear and understandable. To ensure there is a clear understanding of MLL network charges MLL has initiated contact with most of the customers within the large commercial / industrial consumer group. Discussion topics include future plans, required service levels, pricing and quality/reliability issues. The feedback received in these discussions is useful and provides some direction on the pricing structures that consumers may understand and respond to.

There is also regular liaison between company staff and the energy retailers who deal with the network charges for their customers.

A consistent price structure is also considered to be important. Frequent change creates unnecessary transaction costs and discourages consumers from responding to price signals that are provided. Changes to MLL's pricing structures in the future will be well considered and clearly communicated to customers.

3.6 Results of Consumer Research

MLL regularly undertakes customer research. 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 May 2015. Figure 1 below outlines the level of customer satisfaction in key areas.

Figure 1: 2015 Customer Satisfaction Results

	2012	2013	2014	2015
Reliability	93%	96%	96%	96%
Quality	91%	95%	93%	94%
Faults Quantity	88%	92%	91%	91%
Faults Service	95%	92%	91%	88%
Faults Duration	94%	89%	94%	83%

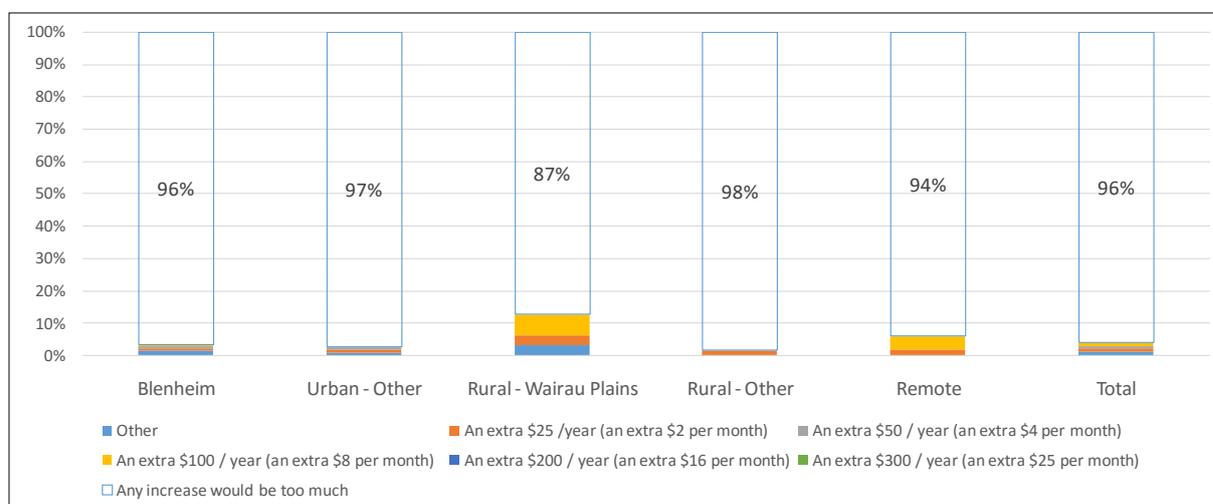
Although the customer satisfaction monitor had been sufficient for the company’s requirements in the past, further research was undertaken in 2014 and 2016 to address the revised ID requirements. Section 2.4.1.(3) of the ID directs EDBs to seek the views of consumers on price and quality matters and for the company to consider the views expressed by consumers in the pricing decisions made by the company.

The sampling process for the price quality research was more in-depth, with the data segmented for customer types and geographic areas. The results of the price quality research in 2014 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.

The customer research undertaken provides information which is carefully considered as part of the planning processes going forward.

Figure 2: Price Quality Trade-off Results – Domestic Customers



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 the costs of owning and operating the network to consumer groups. An explanation is provided on why each of the cost drivers are used to allocated the various costs to the defined consumer groups. Network statistics for each consumer group are also stated.

The estimate of revenue from each consumer group for the 12 months from 1 April 2016 is compared with the estimate of costs to serve each group. Aligning the costs and revenues where practicable is expected to occur over time. In some cases such alignment of costs and revenues may be inappropriate or difficult to achieve, one reason is because of regulatory requirements.

Another factor impacting the ability to alignment of revenue with estimates of costs is that pricing structures and prices have not been changed for the last two years. Except for a change to the rate to provide for the recovery of transmission charges for larger commercial/industrial customers from 1 April 2015, no changes have been made to prices as at 1 April 2015 or from 1 April 2016.

4.2 Assessment of Costs for the Year Beginning 1 April 2016

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

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 2016. The estimate of the RIV as at 31 March 2016 is \$219.279m. This is made up of the closing regulatory investment value of \$216.104m disclosed as at 31 March 2015, with estimates of capital expenditure, regulatory depreciation, and revaluation for the FY16 year. The value of this estimate of RIV is multiplied by the Commerce Commission's estimate of WACC at the 67th percentile for the current five year regulatory period of 5.97%⁵ to give a required return on investment of \$13.091m.

The mid-point WACC for Information Disclosure purposes for the current 2016 year is 5.37%. The return on investment based on a WACC of 5.37% would reduce by \$1.316m to \$11.775.

Figure 3 sets out the calculation used to determine the estimated Return on Investment component of total cost of owning and operating the network.

⁵ Cost of Capital Determination for Electricity Distribution Businesses' Default Price-Quality Paths and Transpower's Individual Price-Quality Path [2014] NZCC 28, Commerce Commission, 31 October 2014, Page 2.

Figure 3: Marlborough Lines Estimate of Regulatory Investment and Return

Calculation of Return on Investment		
Regulatory Investment Value (RIV) at 31 March 2015		216,104
<i>Regulatory Depn for FY15</i>	9,203	
<i>Addnl Depn estimate Capex</i>	179	
Estimate of Depn for FY16		9,382
Estimate of Revaluation at 0.3%		620
Estimated CAPEX for FY16 net of disposals		11,937
Estimated Regulatory Investment Value 31 March 2016		219,279
Return on RIV - DPP 67% WACC post tax -	5.97%	13,091
Return on RIV - ID FY16 post tax WACC mid point -	5.37%	11,775
Return on RIV - ID FY16 post tax WACC 25% -	4.66%	10,218
Return on RIV - ID FY16 post tax WACC 67% -	5.84%	12,806
Return on RIV - ID FY16 post tax WACC 75% -	6.09%	13,354

Figure 4 outlines the company's best estimate of costs for the network business for 1 April 2016 to 31 March 2017.

Figure 4: Marlborough Lines Network Cost Estimate by Category

\$'000	Costs
Transmission Interconnection	6,491
Transmission NIC Connection	1,066
System Operations & Mtce	9,537
Admin & Overheads	3,997
Depreciation	9,489
Taxation Expense	1,668
Return on Investment	13,091
Total Costs for FY15	45,339
Misc. Revenue	2,028
Costs Net of Misc. Revenue	43,311

In addition to revenue for lines services the network receives some miscellaneous revenue e.g. income from vested assets, capital contributions and sale of scrap material. The miscellaneous revenue received by the network is deducted from the estimate of total costs.

4.3 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 (domestic) or non-residential (non-domestic). The classification of a consumer into residential or non-residential is based upon their predominant end use and aligned with the commonly adopted definition for a domestic consumer and domestic premises as stated in section 5 of the Electricity Industry Act 2010.

Figure 5. Definitions of domestic consumer and premises - s5 Electricity Industry Act

Electricity Industry Act 2010

(5) Interpretation

In this Act, unless the context otherwise requires,—

domestic consumer means a person who purchases or uses electricity in respect of ***domestic*** premises

domestic premises means premises that are used or intended for occupation by a person principally as a place of residence; but does not include premises that constitute any part of premises described in section 5(c) to (k) of the Residential Tenancies Act 1986 (which refers to places such as jails, hospitals, hostels, hotels, and other places providing temporary accommodation)

The different characteristics of residential consumers, such as greater diversity in demand patterns, different consumption patterns, compared to businesses consumers make it logical to have a residential consumer group. Residential users also have a higher proportion of their total load associated with water and space heating which is 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 Fixed Charge Regulations.

Residential customers often 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 specified 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. The option of controlling the load provides operating flexibility for the network such as restricting usage during periods of peak network demand.

The unique pattern of consumption for irrigation purposes 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 29MVA but an estimated peak demand during RCPD period of around 1MW.

Group 3 are the general consumer groups, predominantly the small to medium commercial consumers. To be included within this group a customer must have a capacity requirement of less than 140kVA. Within this group there are a number of load groups 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 threshold of 140kVA for Group 4 has been consistent for Marlborough Lines pricing for services 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 required to be made by the network, the maintenance costs incurred, and is also an indication of their likely contribution to peak demands.

The four consumer groups are therefore Group 1 – Residential (Domestic), Group 2 - Irrigation, Group 3 – General - Small and Medium Commercial, and Group 4 - Larger Commercial and Industrial.

Figure 6 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 2016.

Figure 6: Consumer Groups no of ICPS

Group	Description	Fixed Charge Codes	No. of ICPS
1	Residential	DS,DSNL,DL,DT	21,249
2	Irrigation	PM,PH,PK	336
3	Small Med. Comml. <140 kVA	NS,NH,NT,US,UL,RT,RV,R:	3,292
4	Lge. Comml. & Industrial > 140kVA	BF,BHC,BHM	113
Total number of installations			24,990

4.4 Cost Allocation Methodology

4.4.1 Network Statistics

This section outlines the key statistics for the network as a whole and for each of the four consumer groups. These statistics are the basis of the allocation of costs to each of the consumer groups. The table below summarises the network statistics for each consumer group.

Figure 7: Network Statistics

Consumer Group	No. of ICPS	Consumption GWH/Yr	Capacity BDMD MVA	Peak Demand ADMD MVA	Demand RCPD MW	Assets \$m
1. Residential	21,249	143	354	29.5	28.7	206
2. Irrigation	336	18	29	2.6	1.0	25
3. Small Med Comml.	3,292	77	122	14.5	14.0	107
4. Lge. Comml. Industl	113	125	54	25.4	16.0	49
Total	24,990	363	559	71.9	59.7	387

The number of ICPs connected and historical consumption of units (kWh), for each ICP is readily available from the network's billing system. Estimating these variables for the coming year is part of the company's budgeting process.

The capacity provided is measured and stated on a before diversity maximum demand basis, (BDMD). For consumer Groups 1, 2 and 3, the value is calculated based on the fuse size as most of these installations do not have half hourly metering. All installations in Group 4 are required to have half hourly metering and therefore the maximum demand at each installation is known and added together to get a total for the group.

Peak Demand is the capacity required during periods of peak network demand. This is measured if available, or estimated on an after diversity maximum demand basis, (ADMD). Where half hourly metering is installed for larger customers the actual data is available. Where half hourly data is generally not available for the other smaller customers estimates are based on the fuse size and customer type.

The proportion of network demand utilised by the larger commercial and industrial customers at times of peak demand varies from year to year. For the most recent year is it 25.4MVA. The peaks periods for this assessment included some periods in April 2015 when the wine processing was underway and periods of high demand during the winter months of 2015.

For non-half hourly metered installations the actual demand at peak times is not available and therefore estimates are required. The estimates are supported by a knowledge base built up through 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 the peaks are occurring in the winter months 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.

4.4.2 Allocation of Assets

The allocation of assets between consumer groups can be done in a number of ways, with options available dependent on the data and flexibility of information systems. The approach taken by MLL was that for each ICP, the value of assets assigned to an ICP was calculated, then summated for a total of each consumer group.

Frequently the assets are shared, in that case the after diversity maximum demand (ADMD) is used to allocate the value of the asset across all of the ICPs supplied by that asset. 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 and associated sub-site assets values, if shared, were assigned to the ICPs they supply on the basis of their respective ADMDs.

- The value of the 11kV feeder assets were assigned in sections to all of the ICPs normally supplied by that feeder and using a particular section of the feeder on the basis of the ICP's ADMDs⁶.
- 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 ICPs on the basis of their use of the assets.

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 same proportion of economic assets. This approach means the costs of providing a supply to areas in remote locations such as the Marlborough Sounds is borne by all network consumers.

4.4.3 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 required for each consumer group. Each of these categories are considered to be asset related, i.e. driven by the quantum of assets in place for these customers.

Administration and overhead costs are related to the company's servicing of all customers and other company obligations. These are very much shared costs and not directly attributable to any particular customer. The number of ICPs and volume has been combined to form the cost allocator for the administration and overhead costs. The taxation charge, which is relatively small, has been allocated based on the forecast of revenue from network services for each group.

The costs to be allocated and cost allocator selected are summarised in Figure 8 below.

⁶ The division of the feeder into sections was done for the first time this year as a new information system provided this data.

Figure 8: Cost Allocator

\$'000	FY17 Estimated	Cost Allocator
Transmission Interconnection	6,491	Share of RCPD
Transmission NIC Connection	1,066	Share of Assets
System Operations & Mtce	9,537	Share of Assets
Admin & Overheads	3,997	MWH /ICPs
Depreciation	9,489	Share of Assets
Taxation Expense	1,668	Revenue
Return on Investment	13,091	Share of Assets
Total Costs for FY17	45,339	
Misc. Revenue	2,028	Proportion of Network Cost
Costs Net of Misc. Revenue	43,311	

4.4.4 Allocation of Transmission Costs to Groups

For Marlborough the majority of transmission charges are interconnection charges. Interconnection charges for the year from 1 April 2016 are based on the demand measured on the network during the 12 Regional Coincident Peak Demand (RCPD) periods in the 12 months prior to September 2015. Transmission charges from 1 April 2017 will be based on 100 rather than 12 peak periods.

The table below summarises the estimates of transmission charges for the 12 months from 1 April 2016.

Figure 9: Transmission Charges

		FY12	FY13	FY14	FY15	FY16	FY17	% Chge.
		Actual	Actual	Actual	Actual	Estimate	Estimate	
Interconnection rate	\$/ kW	\$76.14	\$90.66	\$99.44	\$114.47	\$110.35	\$114.64	3.9%
Demand at RCPD - MW	MW	59.60	54.65	62.65	59.02	59.69	59.68	0.0%
Intcontn. + ACOT	\$'000	4,538	4,955	6,230	6,756	6,587	6,841	3.9%
Connection Chrgs.	\$'000	562	578	617	604	607	601	-0.9%
New Investment Chrgs.	\$'000	639	560	466	523	494	464	-5.9%
Loss Rentals Rebates	\$'000	(498)	(593)	(379)	(274)	(367)	(350)	-4.6%
Total Transmission	\$'000	5,242	5,500	6,933	7,609	7,320	7,557	3.2%
<i>Annual Change</i>		<i>12.1%</i>	<i>4.9%</i>	<i>26.0%</i>	<i>9.8%</i>	<i>-3.8%</i>	<i>3.2%</i>	

Transmission costs of \$6.491m are allocated based on the actual and estimated contribution of each consumer group to total network demand during the RCPD periods. \$6.491m is made up of the interconnection charges of \$6,841m less the estimated \$0.350m of loss rental rebates for the period.

The larger commercial/industrial customers comprising consumer Group 4 used 15.95 MW of the 59.7MW of network demand during the 12 RCPD. This value is known as all consumers within this group have half hourly metering.

The remaining amount of interconnection charges, plus ACOT, less estimated loss rental rebates are allocated between the other three consumer groups using an estimation of their demand during these RCPD periods.

The \$1.066m of transmission costs relating to new investment and connection charges are allocated based on the share of network assets allocated to each group.

Figure 10 below summarises the variables used and allocation of transmission charges to each consumer group.

Figure 10: Allocation of Transmission Costs to Consumer Groups

Consumer Group	Demand at RCPD	Transmission Excl. NIC Connection	Assets	Transmission NIC Connection	Total
	MW	\$000	\$m	\$000	\$000
1. Residential	28.7	3,124	206	567	3,691
2. Irrigation	1.0	109	25	69	177
3. Small Med Comml.	14.0	1,523	107	296	1,819
4. Lge. Comml. Industl	16.0	1,735	49	135	1,870
Total	59.7	6,491	387	1,066	7,557

4.4.5 Allocation of Other Costs to Groups

Figure 11 below summarises the allocation of total costs net of miscellaneous revenue between the consumer groups.

Figure 11: Allocation of Costs to Consumer Groups

\$'000	Transmn.	System Opns & Mtce.	Admin & Overheads	Depn	Taxation	Return on Investment	Total Cost Allocated
Consumer Group							
1. Residential	3,691	4,802	2,351	4,778	707	6,592	22,922
2. Irrigation	177	580	118	577	54	796	2,302
3. Small Med Comml.	1,819	2,504	652	2,491	392	3,437	11,294
4. Lge. Comml. Industl	1,870	1,139	662	1,133	426	1,564	6,794
Total	7,557	9,025	3,782	8,980	1,579	12,388	43,311

4.4.6 Comparison of Cost Allocation and Expected Revenue

Figure 11 compares the estimated revenue for the 12 months from 1 April 2016 with the allocation of the estimated costs for the same period.

The estimate of revenue for the 12 months from 1 April 2016 is based on volumes forecast for each group with assumptions including irrigation volumes being that of an average year. The revenue though likely to be close to expected levels unless there is a significant unforeseeable event, can vary with the quantity of local product available for processing and weather patterns. Irrigation consumption is more variable from year to year than consumption by other consumer groups. Irrigation revenue is therefore more variable from year to year despite a significant portion of the revenue being fixed based on capacity provided.

Figure 12: Revenues Estimate by Consumer Groups and Cost Estimates

Consumer Group	Revenue Estimated \$'000	Cost Estimated \$'000	Difference Revenue \$	Difference Revenue %
1. Residential	15,243	22,922	(7,679)	-34%
2. Irrigation	1,157	2,302	(1,145)	-50%
3. Small Med Comml.	8,441	11,294	(2,852)	-25%
4. Lge. Comml. Industl	9,186	6,794	2,393	35%
Total	34,028	43,311	(9,283)	-21%

The company's overall expected revenue is less than what is required to cover the expected costs and make a return on investment in line with the industry cost of capital benchmark for the current regulatory period.

The difference is \$9.283m, with the revenue stated being net of the discount on lines charges paid annually to consumers. The estimate for lines charges for the coming year is \$8.003m. There the shortfall if the discount is added back on is \$1.28m, 2.95% of the estimated costs.

The expected revenue from the residential consumer group is below the costs produced by the allocation model, as is the revenue of the small to medium businesses.

In the case of the irrigation consumer group the expected revenue is close to half the costs allocated under the methodology. When specific pricing for irrigation customers was introduced the pricing was set to encourage the use of network assets at off-peak times.

The revenue expected from the larger commercial/industrial customer group is above the estimated costs.

However a cost allocation model can only ever be an estimate of network costs. This year MLL refined the way it allocated assets to each individual ICPs and therefore the totals to the groups. In some cases this has produced different results from the calculations made in the past. As there was no change in prices to any groups this year, the results of the cost allocation model did not influence any pricing decisions.

The current network charges for services includes historical elements. In the price changes made for the years beginning 1 April 2012, 2013 and 1 April 2014, efforts were made to rebalance the revenue from consumer segments to move towards a more cost reflective structure. The pricing schedule was also rationalised during this time with the number of pricing plans reduced. A significant change in the structure of the prices for the larger commercial/industrial customers was also implemented from 1 April 2013.

The EA is actively encouraging distributors to move towards more service-based pricing which may address some of the challenges and opportunities presented by the evolving technologies. There is also a possibility of a new transmission pricing methodology. The Electricity Networks Association (ENA) is also actively encouraging members to have more consistent pricing structures. In August 2015 the first version of the Distribution Pricing Guidelines were published by the ENA⁷. A second version with a wider scope including commercial price structures is expected to be completed this year.

These elements make it an opportune time for MLL to take a comprehensive look at its pricing structures and consider what changes if any are required and how they may be implemented.

4.5 Reason for Changes in Prices

MLL has chosen not to increase prices from 1 April 2016 but will reassess pricing again later in the year. It is worth noting that transmission charges for the 12 months from 1 April 2016 to 31 March 2017 are estimated to be \$7.557m. Although this is an increase from the \$7,320m for the prior year to 31 March 2016, it is close to the \$7.609m incurred for the 12 months to 31 March 2015.

4.6 Fixed and Variable Proportions

The proportion of total line charges currently being charged is 46% fixed, 54% variable.

For Group 4 the capacity charges have been included as fixed and the regional peak charge has been included within variable charges. The following table looks at the proportion of fixed and variable charges for each consumer group.

Figure 13: Proportion of Fixed and Variable Charges by Consumer Groups

Group	Revenue \$'000	Fixed Revenue \$'000	Fixed %
1. Residential	15,243	5,514.93	36%
2. Irrigation	1,157.04	612	53%
3. Small Medium Commercial	8,441.29	3,998	47%
4. Large Comml. & Industrial	9,186	5,419.81	59%
Total	34,028	15,545	46%

For all groups the mix of variable and fixed charges have remained the same in recent years. The consideration of other pricing structure for each group is discussed in the pricing 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 changing patterns in network consumption.

⁷ ENA Distribution Pricing Guidelines V1.1 August 2015.

For residential consumers the requirement to offer pricing plans consistent with the Low Fixed Charge Regulations restricts the network's 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 a low fixed charge pricing option to residential consumers which are located in remote areas of the network, and those with three phase supply, or capacity >15kVA. Many of these residences would be holiday homes and not eligible for a low fixed charge plan, however determining eligibility based on the principal place of residence criteria is sometimes difficult.

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, and therefore a price structure with a higher fixed component is more cost reflective.

Fixed charges are generally a greater proportion of revenue from charges for network services of 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. Variable charges provide a balance to the other components of lines charges for Group 4, which are capacity based.

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 charges, the fixed charge proportion would need to increase. Offering variable charges to consumers may stimulate efforts to use energy efficiently but results in the costs of consumers with low consumption being shared by other ICPs. The use of unit charges i.e. ¢/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 are responsive to their level of activity month to month.

Conversely there are other residential customers who are unable to reduce their consumption. These persons are cost sharing with the customers who have the ability to control consumption, by investing in energy efficient technology or alternative methods of supply such as solar hot water systems or solar panels for generation. In some instances this results in a wealth transfer from those least able to meet their electricity costs. This situation was highlighted in the Electricity Authority recent issues paper which looked at pricing for distribution services and evolving technologies⁸.

⁸ Electricity Authority, Implications of evolving technologies for pricing of distribution services - Consultation Paper, 3 November 2015.

The reality is that the operating costs for a network are largely fixed. It is inevitable that recovery of these costs on a variable basis will be inequitable for some customers.

4.7 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.

Since it is sometime since a completely new price structure was introduced individual prices for each consumer group are now based on historical factors.

When assessing whether the current prices are reasonable MLL considers the following questions: Do the current prices;

- encourage consumption outside of peak demand periods to enhance the efficient utilisation of the network,
- reflect the impact of consumers' demands on transmission charges,
- ensure the costs of assets are recovered,
- reflect the use of controllable supplies within peak demand periods,
- ensure the company complies with all legislative and regulatory pricing considerations, including the Low Fixed Charge Regulations.

It is likely that prices will be restructured in the near term with the Electricity Authority suggesting there would be benefits from a move away from the two part pricing structure to more service based pricing.

Any restructuring of prices will consider rate shocks for consumers and the long term interests of all stakeholders.

4.7.1 Consumer Group 1 - Residential Consumers -Prices

MLL utilises the industry standard residential consumer definition. Residential consumers are divided into two categories based on the capacity they require from the network. Larger capacity residential connections, >20kVA, pay a higher daily fixed price reflecting the initial and ongoing asset costs of providing a higher than normal level of capacity. The same price per unit of energy apply for both standard and large residential connections.

Fixed Daily charges are set on the basis of two capacity bands, with prices 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 over recent years.

Different c/kWh prices apply depending on whether supply is available at all times or restricted either to specified time periods or subject to interruption when required to manage network requirements.

Prices for uncontrolled energy is 8.457 ¢/kWh, for controlled energy, 4.946 ¢/kWh, and 2.14 ¢/kWh for energy used by hard wired appliances only available from 11pm – 7am.

The pricing rate incentives are provided for controlled energy to enable MLL to manage the demands on the network during peak periods. Ripple controlled energy supplies are incentivised with lower energy prices, in comparison to uncontrolled supplies.

The methodology for allocating the transmission cost component for the residential group has been consistent for the past years. 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 3.477¢/unit. The remaining 5% of the transmission costs are to be recovered through the 13 hour controlled units, which is equal to 0.500¢/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 RCPD to maintain consumer service levels. No transmission component is recovered from the night rate as the RCPD periods do not occur between the 11pm and 7am, the 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 level of prices and difference between controlled and uncontrolled prices 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 should be approximately equal to the reduction in transmission costs that is made by reducing load during the RCPD periods. As this is the case the difference between the controlled and uncontrolled rates is in the correct order of magnitude.

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

From 1 April 2014 MLL introduced a charge of 0.5¢/kWh on units imported from SSDG to the Marlborough network. This charge was designed to signal that distributed generation will have long term incremental costs impacts on the Network. For example distributed generation has the potential to increase voltage beyond regulatory limits when SSDG is importing generation.

4.7.2 Consumer Group 2 - Irrigation - Prices

Irrigation has a distinct pattern of energy consumption that is unique when compared with the other consumer groups. The requirements are very seasonal and consumption varies from year to year. The charges are predominately capacity based. This pricing structure reduces the variability of costs and revenues for both the customers and the network respectively and is more cost reflective as costs are driven by the provision of capacity rather than actual volume consumed from year to year.

The current charges for this group including the threshold of 23kW are based on historical patterns and relativities. The prices for the minimum fixed charge loads up to 23kW is \$2.743/day which is equal to the cost based on the installed capacity rate of \$0.119/kW/day for a customer with a 23kW pump.

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 estimated 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 commercial customer in Group 3. The non-seasonal rate is set at a level of 23.378c/kWh which discourages use outside of the seasonal period, which is consistent with the assumption made on the cost of providing a supply to these installations.

4.7.3 Consumer Group 3 – General (Small/Medium Business) Consumers – Prices

This group has three load groups/thresholds within it; up to 45kVA, 46 to 70kVA and 71 to 140kVA. There are further subgroups with the price per installation per day varying with the capacity required, based on fusing. A limited number of connections within this group are metered with half hourly equipment for monitoring purposes only.

Fixed daily charges for this group increase with the capacity provided. For installations with capacity requirements less than 15kVA daily charges are higher than those for residential consumers. This higher price reflects the decreased diversity factor between the 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 prices decrease as an offset for the higher fixed charges. Two controlled energy tariff rates are available to incentivise consumers to utilise controlled load options where applicable.

The prices for supplies on thirteen hour controlled rates and night controlled rates are the same for all customers in this group. This approach has been taken to limit the number of prices and is considered a reasonable simplification as most commercial customers use an uncontrolled supply.

As capacity requirements increase, the fixed charges become more significant. This reduces the variability of revenue from the larger customers within this group. The high fixed charges are more cost reflective as when a customer's capacity requirement increases, individual consumers or several consumers together 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 price on uncontrolled energy being simply the transmission allocation divided by the estimated number of units consumed by the group in the 12 month period.

The current charges for this group are based on historical tariff patterns and relativities. Pricing structures for this group will be re-evaluated in the future.

4.7.4 Consumer Group 4 – Larger Commercial/Industrial > 140kVA - Prices

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

There are 113 consumers in this group. The forecast revenue for this group for the 12 months commencing 1 April 2016 is \$9.186m, 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.⁹

The pricing structure for the large commercial and industrial consumers is made up of four main components plus the additional power factor charges¹⁰:

- 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 charges ¢/kWh. The differential between the day and night rate is significant at 1.9¢/kWh, and a useful pricing signal to consumers to utilise energy at off peak times. A day night variation is generally consistent with the retailers' energy unit cost signal¹¹, and therefore it is likely to be a potential influence on consumer behaviour. On this basis a night rate continues to be offered. 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 unit charges will collect 20% of the target revenue from this group.
- A capacity charge of \$11.05/kVA is levied based on 'assessed capacity'. The charge is levied in each month of the year on a fixed capacity being provided to each consumer. In assessing the capacity provided to customers, MLL measures the maximum demand over the previous three years and this, together with the size of the specific transformer drives the assessment of chargeable capacity. Capacity charges will collect approximately 57% of the target revenue from this group.
- A regional peak demand charge of \$8.97/kVA for all months of the year will collect the majority of the transmission costs for this group. The chargeable kVA used for the Regional Peak Demand charge is the average of half hourly demands during peak periods for transmission chargers of 7:30am – 10am and 4:30pm-7pm weekdays only, May through to September. With the change from 12 to 100 RCPD periods MLL will monitor if these parameters continue to be a good proxy for the RCPD periods.
- The demands measured during peak periods for transmission charges 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 19% of the revenue from this group.

The prices above are 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.

⁹ 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.

¹⁰ Power factor charges are estimated to collect less than 2% of the revenue from this group.

¹¹ Day/night periods offered by Retailers are generally 12-8am but there is sufficient overlap with the Distributors 11pm-7am.

The regional peak charge is a price signal that reflects a component of the cost of supply and may encourage consumers to reduce load during RCPD periods. The methodology used ensures consumers in Group 4 will benefit from any reduction in transmission costs that occur.

15.95MW of the 59.7MW, 27% of the RCPD that is the basis of transmission charges for the year from 1 March 2016 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 RCPD have occurred, was seen as a reasonable 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 however ruled out on the basis that the volatility may be difficult for many consumers to manage, and the lack of certainty around whether a benefit would actually be gained could discourage some consumers from load shifting.

For those customers in Group 4 who own their own transformer and are responsible for their maintenance there is a reduction in the price per kVA of the capacity charge to reflect the differential cost to the network.

4.8 Proportion of Revenue by Price Component

The proportion of revenue by price component is outlined in Figure 14 in Appendix B.

4.9 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 year from 1 April 2016 is \$66,355.

4.10 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.

4.11 MLL Pricing Schedule

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

4.12 Payments to Embedded Generators

There are three embedded generators on the network and one commercial SSDG that operates to supplement its own usage whilst importing some excess volume to the network. These four 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 pricing year commencing 1 April 2016 the interconnection rate is \$114.64/kW. This methodology in effect passes through the full value of the saving in transmission charges that has occurred as a result of embedded generators reducing the network load during the RCPD periods. The payment of ACOT to embedded generators is currently under consideration by the Authority.

4.13 Future Changes

MLL will continue to evaluate its price structure to ensure the needs of all consumers on the network are met. Future pricing options is an area of focus for most distributors currently. Evolving technologies are one of a number of factors driving distributors to carefully consider if their current pricing structures are fit for purpose.

5. Compliance with the Pricing Principles

The following section examines the Electricity Authority’s Pricing Principles and considers the extent to which MLL’s 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 Methodology¹².

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 practical way for customers to bypass the network, rather than grouping together and moving to an entirely new network.”¹³

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.

In some instances the extent of the 33kV and 11kV network utilised for a group of customers in a specific area may vary depending upon the configuration of the network at the time.

¹² Castalia Strategic Advisors Report to the Electricity Authority, November 2013.

¹³ Page 24 of the Castalia Strategic Advisors Report to the Electricity Authority – Review of Electricity Authority Distribution Businesses’ 2013 Pricing Methodologies, November 2013.

Throughout the network consumer groups are inter-mingled e.g. an 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 considered and compared with the cost allocation model described above. The costs allocated reflect the economies of scale present in operating the network and 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 LFC Regulations have the potential to impose a very significant subsidy between consumers but not necessarily consumer groups on our particular network. Going forward as the incidence of voltaic panels increase the number of those eligible for LFC will be greater with further subsidy from consumers not on LFC. Accordingly it will be necessary to alter the price structure in the interests of fairness and equity.

The current government policy that requires the rate of price increase for rural and non-rural users to be equal also prevents MLL from adequately recovering costs from individual consumers.

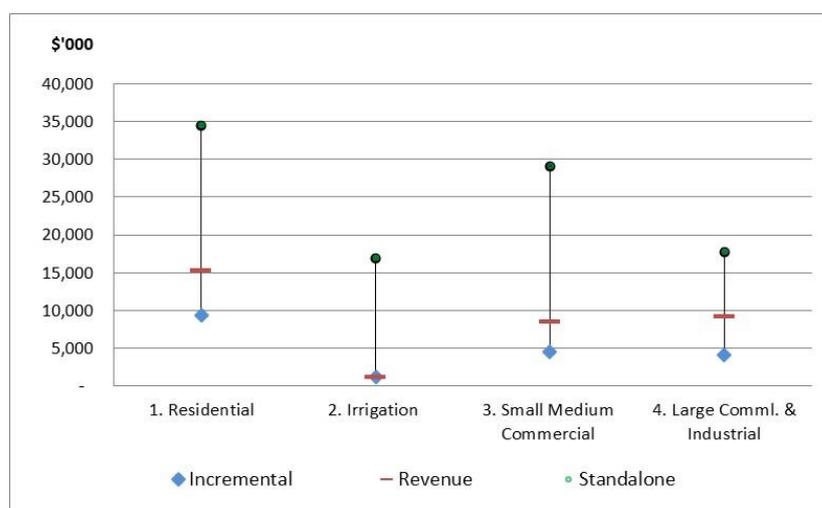
MLL has addressed the issue of LFC Regulations for the network to some extent by obtaining an exemption from offering low fixed charge plans to approximately 10% of our consumers who are in the most distant and less populated areas of the network. The consumers within these areas of the network are deemed to be “remote”¹⁴. This reduces the potential for greater subsidy from centrally located customers to other users who are already cost sharing. MLL further reduced the provision of low fixed charge plans by applying for an exemption which also excludes residential customers with >15kVA and/or three phase supply.

Analysis of profitability of all network customers on a geographic segment basis was undertaken to obtain this exemption. A detailed allocation of assets to each geographical segment, is also undertaken to complete the allocation of costs to consumers outlined in this disclosure. The results continue to show that the requirement to offer low fixed charge pricing plans leads to significant cross subsidisation among consumers in different geographic areas. The analysis supports the company’s approach to address this through the exemptions obtained and the 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.

¹⁴ Refer to Marlborough Lines website – exemption notices and map of remote zones. <http://www.marlboroughlines.co.nz/About-us/Disclosures/Pricing.aspx>

Figure 13: 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 provides an indirect relationship with the consumer which means any price signals provided by MLL can potentially be repackaged or rebundled differently by retailers.

The impacts of components of network pricing can be diminished especially when the total distribution component is a small component of the consumers’ total electricity costs, in the order of 30% of the overall cost of delivered energy.

There are currently 12 retailers operating 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 underutilised.

Notwithstanding the repackaging and dilution effects on price signals offered, 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 pricing structures reflect the principle that as capacity requirements increase, the costs to provide network services increase and users rightly pay higher charges for network services.

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 energy prices for irrigation 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 available 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 the MLL network and to date there has been little interest. The development of pricing to address evolving technologies will be a focus for the company in the coming year.

Consultation with retailers and customers will be included to ensure the benefits of new pricing options are maximised. However, overall the cost/benefits of new options will need to be considered. Ultimately MLL has to achieve sufficient revenue to meet its service and shareholder obligations regardless of how its pricing is packaged. With any pricing regime not all customers will derive the same benefits.

For small commercial consumers controlled rates are also offered, however used less frequently as commercial customers do not generally have a significant load which they are prepared to have interrupted.

Irrigation pricing is offered on the basis that irrigation loads are capable of being interrupted and have seasonal restrictions.

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 according to 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 increase the multiplicity of rates which is generally opposed by retailers. MLL's ability to introduce regional pricing within the network may also be 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 marginal costs of providing capacity for a new installation or additional capacity for an existing installation. These charges signal the impact of demand on the investment required by setting a price that is related to the end users future demand on the network.

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 half-hourly metered commercial consumers this is done in relatively narrow bands, for half-hourly metered consumers this is done in 5kVA increments. Irrigation installations are also charged on a capacity required basis but can be restricted from operating during the peak periods.

For the larger commercial consumers with half hourly 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 four of the last seven years the network peak has occurred during April, the month that wineries have their highest demands. The company considered that going forward the winter peak demand charge was not reflecting future investment costs. 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 consumers' contribution to regional coincident peak demands have on transmission charges and therefore network costs more directly.

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 higher load utilisation face a lower unit cost on the Marlborough network consistent with their potentially 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 significant increase in delivered energy prices in recent years, 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, promotes 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. Typically the cost of an alternative supply of the same capacity and reliability of the grid supplied electricity is much greater than the cost of a delivered electricity supply.

It is also relevant the cost of photovoltaics 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 pricing options. 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 price quality research suggests that the customers are generally satisfied with the current price quality trade-off.

This is especially so in remote rural areas where supply is already uneconomic and the costs of providing N-1 reliability are prohibitive. Equally it is not practical to provide a lesser quality of supply at lower cost to individual or small groups of customers when they are part of a 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 Cost of Transmission charges (ACOT) to distributed generators on the network which encourages generators to be operating during the transmission peak periods.

MLL’s charges 0.5c/kWh to distributed generation to feed into the network. This allows the SSDG to connect to and utilise the network to deliver their generation to other connections without incurring significant network charges.

With respect to transmission and distribution alternatives, a number of MLL’s customers have back up generation capacity where they have a need for reliability beyond that which the network can reasonably provide, e.g. wineries that have a peak processing period of two to three weeks only, and during this time an outage greater than a few hours could severely impact their operations.

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. Simplification and rationalisation of the historical pricing structures has been undertaken.
3. MLL has progressively simplified its pricing structure where differentials are no longer justified or the cost associated with the price schedule complexity outweighs the benefits. An example of this has been the removal of the seasonality component in the variable charge for Group 4 customers.

4. The confirmation of a principles based approach by the Authority reduced regulatory uncertainty for a period. Some tariffs applicable to Group 4 customers were amended, effective 1 April 2013, to promote more responsiveness to transmission charges for this group.
5. MLL is committed to gradual transition of pricing changes to enable network users to respond accordingly. Any potential 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 recent years whilst maintaining pricing signals and appropriate relativities between prices. 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 MLL’ 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 with consumers outside the Kaikoura area). A more recent example is that from 1 April 2014 “summation” of individual customer accounts was removed.

However it is relevant there is a trade-off between reducing the number of price categories or complexity of pricing and increasing cost sharing or not providing pricing to suit a specific category of customer.

We do not provide any discounts or special terms to end use customers based on their choice of retailer. All retailers are subject to the same prices 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 LFC Regulations which require all EDB's to offer a low fixed charge option to domestic consumers (subject to limitations such as for principal place of residence 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 provided for under Part 4 of the Commerce Act. Companies that are subject to price control must follow the Default Price Path (DPP) which limits the rate of price increase to CPI, plus or minus an x factor, plus any change in "pass through" and "recoverable" costs, after providing for changes in volumes.

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;**

- (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 Electricity (Low Fixed Charge) Tariff Option for Domestic Consumers Regulations 2004 (LFC Regulations)

MLL is also required to comply with the LFC Regulations. Section 14 and 15 of the LFC Regulations require distributors and energy retailers to offer low fixed charge pricing plans - distributors must make available a price with a fixed line charge component of no more than 15 cents per day, excluding GST, to domestic consumers provided that it is a principal place of residence, not a holiday home.

The total charges for the low fixed charge pricing plan, made up of the fixed and variable charges, must be equivalent to a standard price option for a typical domestic consumer, defined as a user of 8,000kWh per annum in most areas of New Zealand.

A distributor's marginal cost to supply a residential connection is generally higher than 15 cents per day, so if the usage on the connections is minimal, LFC 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, funded in part from revenue collected from other consumers or collect less revenue than covers the full costs of operating the network.

It is the firm view of Marlborough Lines the purpose and merits of this Government policy need to be critically examined.

MLL has obtained a renewal of its exemption from offering Low Fixed charge pricing plans to connections 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 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 under the LFC Regulations. This exemption provides that if a residential installation has greater than 15kVA capacity supplied and/or has three phase supply, then low fixed charge plans 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 be introduced to limit prices increasing at a greater rate for rural consumers than for those in urban areas. At this time no such regulation has been put in place but it is understood that government policy is that there be equal rates of increases for urban and rural consumers.

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 charges for network services.

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

Figure 14: Proportion of Revenue from each Price Component

Price Code	% of Revenue	Price Code	% of Revenue
10	15.49%	WM	0.61%
AL	11.58%	BF	0.58%
DS	8.87%	PFT	0.47%
11	7.35%	MDCFC	0.40%
23	6.98%	PM	0.37%
DSNL	5.15%	PFI	0.28%
NT	4.04%	50	0.27%
51	3.69%	22	0.22%
WL	3.58%	PH	0.20%
12	3.13%	Wai	0.19%
40	3.11%	97	0.17%
31	2.62%	18	0.16%
16	2.31%	17	0.13%
RT	2.20%	62	0.10%
AM	2.16%	US	0.09%
AH	1.56%	80	0.05%
NS	1.44%	BHC/BHM	0.05%
61	1.44%	28	0.04%
PK	1.43%	20	0.02%
DT	1.28%	PMFC	0.02%
96	1.16%	UL	0.01%
RV	1.13%	DG	0.01%
RX	1.09%	30	0.01%
NH	0.92%	RNZFC	0.01%
WH	0.91%	PSLT1	0.01%
DL	0.90%		