## **PRICING METHODOLOGY DISCLOSURE**

FOR PRICES EFFECTIVE 1 APRIL 2011

## **Marlborough Lines Limited**

**Pursuant to:** 

**Electricity Information Disclosure Requirements Issued 31 March 2008** 



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## 1. Background

Marlborough Lines Limited (MLL) is an electricity distribution business (EDB). The network has approximately 24,000 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 supply network also extends to a number of very isolated areas (including the Marlborough Sounds), that pose unique challenges for electricity supply. Unlike many other regional networks the company has a single point of supply (in Blenheim) with an extensive sub-transmission system and zone substations.

MLL is owned by the Marlborough Electric Power Trust (MEPT), which holds shares on behalf of the consumers connected to the network in Marlborough. MLL also has an electrical contracting business in Marlborough and investments in other related businesses including Nelson Electricity, OtagoNet, Otago Power Services and Horizon Energy.

MLL has reviewed its prices again this year for electricity distribution services. New prices were published to take effect from 1 April 2011. The prices set reflect the needs of the company and its customers / stakeholders, together with the legislative and regulatory requirements provided by the comprehensive regulatory framework. MLL meets the criteria specified for a consumer owned electricity distribution business under Part 4 of the Commerce Act and is currently exempt from the Default Price-quality Path (DPP) provisions.

Although exempt from the DPP, MLL is still required to comply with a number of regulatory reporting obligations including the Information Disclosures. Pursuant to requirement 14(4) of the Electricity Distribution (Information Disclosure) Requirements 2008, requirements 22 and 23 of the previous disclosure requirements continue to apply. These provisions are from the Electricity Information Disclosure Requirement issued 31 March 2004 (Original Requirements).

Requirement 22 of the Original Requirements requires EDB's to publicly disclose the methodology used at the beginning of each financial year to determine the lines charges

payable by consumers connected to their distribution network. Requirement 23 sets out what needs to be included in the Pricing Disclosure which is discussed in more detail in the Regulatory Framework section of this document.

This year MLL's Pricing Methodology Disclosure has been prepared in accordance with the Distribution Pricing Principles and Information Disclosure Guidelines published by the Electricity Commission in February 2010. These guidelines request a commentary on the consistency or otherwise of the company's pricing methodology with a set of voluntary pricing principles issued in February 2010 by the Electricity Commission. The Electricity Commission has since been disbanded and a number of its previous responsibilities passed to a new regulatory body, the Electricity Authority, which was established at the end of last year. Therefore this year's Pricing Methodology Disclosure is significantly different from that published in previous years.

MLL's Pricing Methodology Disclosure focuses on the structure and allocation of the distribution costs and the pass through of the transmission costs (including Transpower charges and avoided cost of transmission paid to embedded generators) to the consumers. This disclosure is consistent with the current regulatory framework. The disclosure is applicable to MLL's Marlborough electricity network activities only and excludes nonnetwork businesses and operations.

#### 2. Overview

The Pricing Methodology Disclosure begins by outlining the regulatory context for this year's Disclosure including the principles confirmed by the Electricity Authority. The main part of the document is an overview of the methodology and cost allocation model applied to the prices for lines charges for customers on MLL's electricity network. The final section of the document discusses each of the pricing principles in turn and how the current methodology used is consistent with them.

As required, the document discusses the costs of the network business that need to be recovered through lines charges. The costs have been grouped into the categories of; operating costs, administration and overheads costs, transmission charges, depreciation, taxation and a return on the assets used in the network business. The numerical value of each of these cost components is clearly stated.

All the network customers are grouped together into a number of consumer groups based on common characteristics. The four broad consumer groups referred to in the cost allocation model are; Residential, Small Commercial, Large Commercial (Time of Use) and Irrigation. The document discusses the rationale for grouping of consumers in this way and the methodology to determine which group each consumer falls into. The network statistics relating to each consumer group is clearly stated.

A cost allocation methodology is also discussed. The methodology details how the components of network costs are allocated between the customer groups. The methodology utilises <a href="three">three</a> key cost allocators which reasonably apportion the costs to each of the consumer groups. The cost allocation model is used to ensure that the revenue received from each consumer group aligns with an appropriate allocation of network costs.

The first allocator is the Before Diversity Maximum Demand (BDMD) of each consumer summed together for the total for each consumer group. The second is the number of ICPs in each consumer group. The last allocator is the kilowatt hours consumed by each ICP summated for the group's total.

MLL recognises the requirement to develop and use a cost allocation model. However, it also acknowledges there are a number of limitations to such an approach and that there are many different approaches that could be taken to allocate network costs to groups of consumers. Most assets and other non-asset related costs of the network are shared over a great number of consumers and therefore the allocation of costs to consumer groups is not straightforward. In essence costs have to be allocated rather than accurately attributed to a defined group of consumers.

This document also discusses an alternative allocation of costs to consumers and the then grouping up of those consumers into groups. MLL proposes to undertake in the current year a significant review of its costs and customer tariffs to ensure that its current structure best meets the changing nature of its network assets and end use customers.

A description of the current methodology with respect to the proportion of fixed and variable charges is also discussed.

MLL has for some time had a policy of paying discounts to qualifying consumers at the end of each financial year. The revenues stated in this report are before the payment of discounts. Discounts are not included as a cost to be recovered. In most cases the discount offered on each tariff is an equal proportion of each tariff. Low user regulations require tariffs to be equal for the standard residential user at 8,000 kWh before and after discounts. By setting the discount as an equal proportion of each tariff, each consumer is rewarded equally through the discount process regardless of the mix of their consumption across tariffs. In most cases the current structure of the discount distributes to consumers in a relatively equal proportion to the charges paid for network services in the prior 12 month period. This structure is viewed as being an equitable method of distributing the benefit of the Consumers' ownership of the company to its shareholders.

### 3. Regulatory Framework

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

MLL is regulated by the Commerce Commission under Part 4 of the Commerce Act, and by the Electricity Authority under section 42 of the Electricity Industry Act. The Authority has particular responsibility for monitoring tariff structures and approaches. Compliance is also required with the "Low User Regulations" which require EDB's to offer a low fixed charge option to domestic consumers (limited to permanent residences only). Section 113 of the Electricity Industry Act 2010 provides for further regulation that may limit the rate of price increase between rural and urban consumers.

#### 3.1 Disclosure Requirements

The Commerce Commission's Original Requirements require that an EDB provides the following:

- 23. Contents of pricing methodology disclosure Every disclosure under requirement 22 must-
- (a) Describe the methodology used to calculate the prices charged or to be charged; and
- (b) Include the key components of the revenue required to cover costs and profits of the disclosing entity's line business activities, including cost of capital, transmission charges, which must include the numerical value of each of the components; and
- (c) State the consumer groups used to calculate the prices charged or to be charged, including
  - (i) The rationale for the consumer grouping; and
  - (ii) The method by which the disclosing entity determines which group consumers are in; and
  - (ii) For each of these consumer groups, the statistics relating to that group which were used in the methodology; and
- (d) Describe the method by which the disclosing entity allocated the components of the revenue required to cover costs of its line business activities amongst consumer groups,

which must include the numerical values of different components allocated to each consumer group and the rationales for allocating it in this manner; and (e) Describe the method by which the disclosing entity determined the proportion of its charges which are fixed and the proportion which are variable, and the rationale for determining the proportions in this manner.

#### 3.2 Pricing Principles and Information Disclosure Guidelines

The predecessor to the current Electricity Authority had a work stream that included distributor pricing, in particular standardisation of pricing. The work included consultation with distributors, retailers and end use consumers' representatives. In February 2010 the Electricity Commission released the final *Pricing Principles and Information Disclosure Guidelines* to assist distributors to meet the requirements of their next disclosures. The guidelines outline that distributors are required to state how their pricing aligns with the principles as part of the Pricing Disclosures required by 31 March 2011.

#### The final Pricing Principles are

- (a) Prices are to signal the economic costs of service provision, by:
  - (i) being subsidy free (equal to or greater than incremental costs, and less than or equal to standalone costs), except where subsidies arise from compliance with legislation and/or other regulations and /or the Government Policy Statement;"
  - (ii) having regard, to the extent practicable, to the level of available service capacity; and
  - (iii) signaling, to the extent practicable, the impact of additional usage on future investment costs.
- (b) Where prices based on 'efficient' incremental costs would under-recover allowed revenues, the shortfall should be made up by setting prices in a manner that has regard to consumers' demand responsiveness, to the extent practicable.
- (c) Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to:
  - (i) discourage uneconomic bypass;

- (ii) allow for negotiation to better reflect the economic value of services and enable stakeholders to make price/quality trade-offs or non standard arrangement for services; and
- (iii) where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives (e.g. distributed generation or demand response) and technology innovation.
- (d) Development of prices should be transparent, promote price stability and certainty for stakeholders, and changes to prices should have regard to the impact on stakeholders.
- (e) Development of prices should have regard to the impact of transaction costs on retailers, consumers and other stakeholders and should be economically equivalent across retailers.

#### 3.3 Other Regulatory Constraints on Pricing

MLL is exempt from the DPP provisions which would otherwise limit the rate of annual price increase to CPI, plus any change in "pass through" and "recoverable" costs.

#### **Low User Regulations**

MLL is required to comply with the Low User Regulations. These require distributors (and energy retailers) to offer low fixed charge tariffs, with a line charge component of no more that 15 cents per day to residential consumers (subject to the residence being a primary residence, not a holiday home etc). The total price, made up of the fixed and variable charges, must be equivalent to a standard price option for an average user, deemed in Marlborough to be one which consumes 8,000kWh per annum. As a distributor's fixed cost to supply a residential ICP would generally be higher than 15 cents per day, the Regulations effectively require the distributor to subsidise a particular group of network users.

MLL has applied for and been granted an exemption from offering low user tariffs to geographically remote installations within its network area. The remote installations make up around 10% of the total connections and reduce the level of cross subsidisation that occurs. The installations with the areas deemed remote do not qualify for network discounts.

#### Rural and Non - Rural Pricing

Section 113 of the Electricity Industry Act 2010 provides a policy intent that prices increase at an equal rate between rural and urban consumers. Distributors had been directed through a Government Policy Statement to limit the increase of rural prices to the rate of that for urban consumers. As the cost of delivering the services to rural customers is higher, this has a similar effect to the low user regulations and requires a distributor to subside one group of consumers from another.

The degree of the subsidy can be limited to some extent by differentiating the service level provided for example by building a less intensive network for rural customers which provides less reliability without the benefits of a meshed network that urban consumers would have access to.

#### 4. Cost Allocation and Derivation of Tariffs

The methodology outlined below is based on the use of three main cost drivers to allocate costs to the defined consumer groups. These costs drivers are combined and applied to each group of costs identified. MLL will continue to pay discounts for the current financial year ending 31 March 2012. The estimates of revenues and costs contained in this report are prior to the payment of discounts to consumers.

#### 4.1 The key components of the costs

Prices for network services are set to generate a required level of revenue for the coming year. This required revenue level is based on the Company's best estimate of costs for the coming period and includes an estimate of the return required on the assets of the Network business. The following table outlines the components of costs that set the level of revenue required, including a return on investments. The estimates included are based on the Company's budget for FY12.

Table 1. Marlborough Lines - Cost Estimates FY12

Cost Components Network Business	FY2012 Est \$000
System Operations & Maintenance	7,714
Administration & Overheads	4,489
Transmission Costs Including Avoided Transmission	5,348
Depreciation	7,272
Taxation Expense	973
Return on Investment	14,044
Total Costs	39,840

Source: MLL Company Budget FY12

Marlborough Lines' Return on Assets is based on an estimation of the cost of capital of the network business and an estimate of the asset for regulatory purposes as at 31 March 2011. The estimate of RAB as at 31 March 2011 is \$180.52m, made up of the closing RAB disclosed as at 31 March 2010 of \$165.96m and the most recent estimate of the FY11 Capital Expenditure for the regulated business.

In the future the Company will consider including the components of CPI adjustment, asset disposals (if applicable) and regulatory depreciation in making a forward estimate of the RAB for Pricing Methodology purposes.

#### 4.2 Consumer Groups

All network consumers are categorised into five broad consumer groups. These were determined by assessing the predominant end use of each installation and the installed capacity of each connection. The five consumer groups are Group 1 - Residential, Group 2 - Small Commercial, Group 3 - Medium Commercial, Group 4 - Large Commercial (ToU), and Group 5 - Irrigation.

Initially consumers are categorised as being residential or non-residential. The classification of a consumer into residential or non-residential use is based upon their predominant end use. The different characteristics of residential consumers compared to businesses consumers make it logical to have a residential consumer group. Residential consumers have different consumption patterns from businesses and have a higher proportion of their total load associated with water and space heating. Water and space heating loads are generally able to be interrupted by the Company's ripple control system.

Non-residential consumers (excluding irrigation) are divided into three groups depending on the maximum capacity supplied to the installation, measured in kVA. Groups 2 and 3 are small commercial customers. The differentiation between groups 2 and 3 occurs at 40kVA. Group 4 is made up of customers that have capacity provided to meet demands that are in excess of 140kVA. These customers are required to have half hourly or Time of Use (TOU) metering installed. Group 4 also includes large customers with 11kV supplies.

The grouping of most of the non-residential consumers by capacity supplied was considered to be the best way to reflect the initial and ongoing investment made, the maintenance costs required and as an indication of their contribution to peak demands.

Group 5 is an irrigation consumer group which includes both low and high kVA capacity consumers. These users have a distinct pattern of consumption and have therefore been grouped separately from other commercial users.

Table 2. Consumer Groups

Group	Description	Price Code	No of ICPs
Group 1	Residential	DS,DL,DT	20,578
Group 2	Non-Residential < 41kVA	NS,NH,NT	2,856
Group 3	Non-Residential 42 to 140kVA	RT,RF,RV,RX	389
Group 4	Non-Residential > 140kVA includes 11 kV	BF	120
Group 5	Irrigation	PM,PH,PK	336
Total			24,279

#### 4.3 Allocation Method and Rationale

This section deals with the allocation of the components of costs to establish the required revenue. The allocation of costs to consumer groups is based on assessed cost drivers. The three indicators of costs identified for each of the groups are; the kWHs consumed, the installed capacity, and the number of ICPs. The following table outlines the Network statistics for each Consumer group.

Table 3. Consumer Group – Network Statistics

Cost Driver	MWH	MWH %	KVA	KVA %	No of ICPs	% of ICPs	
Group 1 - Residential	148,910	41.1%	343,670	63.1%	20,578	84.8%	
Group 2 - Small Commercial	39,171	10.8%	83,719	15.4%	2,856	11.8%	
Group 3 - Midsize Commercial	36,259	10.0%	33,510	6.2%	389	1.6%	
Group 4 - Commercial ToU	121,097	33.4%	56,690	10.4%	120	0.5%	
Group 5 - Irrigation	17,095	4.7%	26,638	4.9%	336	1.4%	
Total	362,532	100%	544,227	100%	24,279	100%	

MLL considers that the cost drivers have been selected on an objective basis. The intention is for each cost driver to provide a substantive relationship to the underlying activity driving each component of cost.

We have identified that four of the six cost categories are essentially asset related. Systems Operations and Maintenance, Transmission Costs, Depreciation, and Return on Investment are driven by the assets required to service each consumer group. As a proxy for the share of assets for each consumer group we have used a mix of the before diversity maximum demand estimated by the installed capacity for each group measured in KVA and the total KWh used by the group. For maintenance, depreciation, and return on investment the group's share of the Network total KVA and KWH have been equally weighted. For the transmission costs the weighting has been altered to 70% KWh and 30% kVA as higher consumption levels are more likely to coincide with regional peaks which influence Transpower's charges.

Administration and overhead costs are considered to be more related to the Company's servicing of consumers, which is better characterised by a combination of the number of ICPs and kWH. These indicators have been predominantly weighted to kWh to allocate costs to the consumer groups. Both of these cost indicators represent a broader level of consumer use and activity rather than the level of installed capacity. The taxation charge, which is relatively small, has also been allocated in this way.

The table below shows how each component of costs identified in Table 1, has been allocated amongst each of the consumer groups based on the best deemed indicator of cost available. The budgeted revenue from each consumer group is also included.

Table 4. Allocation of Costs to Consumer Groups

Cost Categories \$000	System Operations &	Administration & Overheads	Transmission Costs	Depreciation	Taxation Expense	Return on Investment	Total	Budgeted Revenue
	Maintenance		Including Avoided Transmission					
Allocated Cost Drivers	KWH / KVA	ICPs / KWH	KWH / KVA	KWH / KVA	ICPs / KWH	KWH / KVA		
Group 1	4,020	2,040	2,551	3,790	442	7,319	20,161	15,712
Group 2	1,010	489	651	952	106	1,839	5,048	4,840
Group 3	623	411	473	588	89	1,135	3,319	3,317
Group 4	1,690	1,352	1,418	1,593	293	3,077	9,423	9,460
Group 5	371	197	255	349	43	675	1,889	1,192
Totals	7,714	4,489	5,348	7,272	973	14,044	39,840	34,521

For the commercial customers the budgeted revenue broadly aligns with the costs as allocated. In the case of the irrigation consumer group the expected revenue is less than the costs allocated under this methodology. The pricing that was introduced for irrigators on

the network were set at a level to utilise network assets and off-peak times therefore a relatively lower revenue number would be expected.

The company's overall expected revenue is less than what is required currently to make a return on investment in line with the industries stated cost of capital at the 75<sup>th</sup> percentile. The overall shortfall between costs and revenues is essentially the difference between the costs and revenues for the residential consumer group.

The current tariff structure is based on historical factors and a more complex analysis of historical network load patterns. The methodology presented in this report is a preliminary analysis of a relatively simplistic cost allocation model. In the coming year the company will complete a full re-examination of the costs allocated to each consumer group. It may be that a more detailed analysis, particularly in the area of assets utilised by each group, demonstrates a slightly different conclusion.

#### 4.4 Fixed and variable proportions

The proportion of fixed charges versus variable charges has been based on historical pricing methodologies. MLL has maintained this pricing mix to provide consistent pricing signals to consumers.

The introduction of the low user daily fixed charges for domestic consumers has to some degree challenged the efforts made to accurately recover costs fairly from all consumers. MLL has partially addressed the cross-subsidisation inherent in the low user tariff by obtaining an exemption from offering the low user fixed charge option to domestic consumers who are located in remote areas of the network.

The proportion of line charges currently being charged is 31% fixed, 47% variable and 22% demand based charges. Demand based charges only apply to Groups 4 and 5.

Variable charges are generally higher for lower capacity (kVA) users, including groups 1, 2 and 3. The higher variable component in the tariffs for groups 1, 2 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 customers).

Fixed charges are generally higher for higher capacity (kVA) users including groups 4 and 5.

This is designed to reflect investment costs associated with peak demand, which is measured with half-hourly metering equipment.

Despite the allocation of significant proportions of costs in the above methodology to kilowatt hours, MLL assesses that most of its costs outlined above are actually fixed. If MLL were to recover its fixed proportion of costs in fixed charge tariffs, the fixed charge proportion would need to increase. However, offering variable charges to consumers stimulates efforts to use energy efficiently.

#### 4.5 The derivation of the tariffs to be charged to each consumer grouping

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

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

- To encourage consumption outside of peak demand periods;
- To ensure the costs of assets are recovered;
- Use of controllable supplies when peak demand periods arise;
- Legislative and regulatory pricing considerations, including the Low User regulations;
- Restructure of the tariff need to consider rate shocks for consumers.

#### **Group 1 Tariffs – Residential Consumers**

Daily fixed charges are set on the basis of kVA capacity, with rates for <20kVA capacity and >20kVA. Energy based tariff rates are provided for uncontrolled energy, 13 hour controlled and 8 hour controlled energy. Tariff rate incentives are provided for controlled energy tariff

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

Larger capacity residential connections pay a higher daily fixed charge to compensate for additional available capacity to consume energy. The same energy consumption rates apply for connections up to 20 kVA and above 20 kVA. Differential tariff rates for residential connections are applied to fixed charges, to reflect initial and ongoing asset costs.

Low User options are available to non remote connections, consistent with the exemption received. Low User tariffs have been created to comply with the Regulation.

#### Group 2 Tariffs – Non Residential Consumers – up to 41 kVA.

Daily fixed charges increase as kVA increases within this consumer group. Three controlled energy tariff rates are available to incentivise consumers to utilise controlled tariffs where applicable.

#### Group 3 Tariffs - Non Residential Consumers - 42<>140 kVA

A limited number of connections within this group are metered with TOU equipment for monitoring purposes only. Fixed daily charges for this group increase with the capacity provided. Uncontrolled energy tariff rates decrease as an off-set to the higher fixed charges. This structure is designed to reduce the variability of revenue. The uncontrolled consumption charges are slightly lower than group 2, to compensate for economies in supplying these larger kVA connections.

#### Group 4 Tariffs – Time of Use Connections > 140 kVA

TOU metering allows for a more detailed tariff structure and greater signaling of network constraints. Group 4 tariffs include; a fixed daily rate, a unit charge based on energy consumed, anytime assessed demand to reflect capacity provided to the site and winter peak demand charges. The capacity based charges, including the anytime demand and winter peak demand, make up a large component of the overall charges for Group 4 consumers.

Some group 4 connections have taken responsibility for the maintenance of transformers with the pricing tariff structure reflecting this differential cost to the network.

#### **Group 5 Tariffs – Irrigation**

Irrigation has a distinct pattern of energy consumption that is unique to the other consumer groups. The charges in this area are predominately capacity based which removes the seasonal uncertainty and variability of cost/revenue for both the consumer and the Network.

#### 4.6 Power Factor Charges

A charge for reactive energy, where power factors are below 0.95, is levied to encourage investments in improving power factors.

#### 4.7 MLL Pricing Schedule

The current MLL pricing schedule can be sourced from the following website reference: <a href="http://www.marlboroughlines.co.nz/Disclosures/Pricing">http://www.marlboroughlines.co.nz/Disclosures/Pricing</a>

# 5. Compliance with Electricity Authority's Pricing Principles

The following section examines the Electricity Authority's Pricing Principles and considers the extent to which Marlborough Lines' current Pricing Methodology is consistent with these principles. The discussion also looks at the opportunities to have further regard for these principles' as the Company's pricing methodology is developed in the future.

We examine each principle of the Electricity Authority guidelines in turn.

#### Pricing Principle (a) i - a subsidy free range

"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;"

Firstly we agree with the principle that Network prices should be subsidy free. We interpret the requirement for subsidy-free prices as stated above, to require us to set prices for each particular consumer group so that the revenues from that consumer group should be within a band. The lower limits of the band is the cost of connecting that consumer group to the network (incremental costs) and the upper level of the band 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 defined quite wide. The nature of MLL's regulated business means that there are extensive shared costs. Throughout the network consumer groups are inter-mingled. E.g. the easily identifiable 33kV portion of the network 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 customer. Therefore if MLL were to cease supply to any of the particular customer groups there would be a limited reduction in costs.

We recognise that we have not quantitatively assessed standalone costs for each customer group or customer. This would be a significant undertaking and one we propose to do for a selection of larger commercial customers. However, we believe that the nature of our cost allocation model inherently ensures we comply with this principle. Our Network prices are

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

MLL notes that there was a very significant subsidy between consumers imposed on our particular network with the introduction of the low user regulations. Directives which prohibit the differential rate of price increase for rural and non-rural users also prevent us from adequately recovering costs from individual consumers. We have partially addressed the issue by successfully seeking an exemption from offering low user fixed charge compliant tariffs to approximately ten percent of our customers who are within areas of the Network deemed as "Remote". This partially reduces the subsidy from centrally located customers to remote users.

As discussed above we intend to review our current cost allocation methodology and in particular review the specific assets utilised by consumers by region and consumer group. As part of this process we expect to generate a quantitative assessment of stand-alone costs for some consumers within the segments. We could then assess the relative position of these consumers within the spectrum of the subsidy range.

#### 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 supply chain means Marlborough Lines supplies end use consumers via nine retailers on the network<sup>2</sup>. The network's relationship with the consumer is indirect which means that any price signals provided by Marlborough Lines can potentially be re-packaged differently by each of the retailers.

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<sup>&</sup>lt;sup>1</sup> Refer to Marlborough Lines website – exemption notice and map

<sup>&</sup>lt;sup>2</sup> Retail brands operating on MLL network as at March 2011 were TrustPower, Contact Energy, Genesis, Meridian, Just Energy, Mercury, Tiny Mighty Power, Simply Energy

The effect of any network price signal is diminished by the low relative value of the distribution component of the customers total electricity bill. In 2010 Marlborough Lines charges, excluding transmission costs (on a pre-discount basis) made up 30.6% <sup>3</sup> of the total \$2,295 charged for an 'average' domestic consumer.

Notwithstanding the repackaging and dilution of the price signals provided by the network, MLL meets the requirement by having a capacity based charge across all customer segments and differentiating between interruptable and non-interruptable load.

MLL's tariff structure is significantly capacity based. Prices for each group reflect the principle that as capacity requirements increase, end users pay higher charges. For larger commercial customers a greater proportion of total line revenue is based on capacity charges.

MLL offers controlled load or limited availability prices to residential, small commercial (<140kVA), and irrigation installations. These prices reflect the Network's ability to limit supply when the Network is facing peak demand, or only supply at times when peak demands are very unlikely to occur, eg night rates are offered for supply between 11pm – 7am. For residential consumers controlled load is generally offered for hot water cylinders which are then remotely switched off by the network during times of peak demand. Night rates are used to a lesser extent generally for heating appliances which utilise electricity supply only at night.

For small commercial customers controlled rates are also offered though the uptake of these rates is much less as customers do not generally have a significant load that they utilise on a limited basis.

The special tariffs are only available to irrigation installations on the network that are controlled and have an additional restriction of seasonal availability only.

The network does not yet offer time of use rates to residential customers but will make these available once 'smart meters' are installed which can utilise such differentials.

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<sup>&</sup>lt;sup>3</sup> Reference – Marlborough Lines 2010 Annual Report, Page 16

#### Pricing Principle (a) iii - 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.

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

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

The network utilises a number of tariffs to signal the cost of additional usage on future investment costs. In our view the most effective pricing structure to signal the impact of demand on investment is where the price is related to the end users demand during the peak demand period on the network.

For the larger commercial consumers with ToU metering the daily and unit charge is greatly reduced with the majority of cost associated with capacity charges. Most of the capacity charge is seasonally based with winter peak demand charges signalling the historical winter peak as well as the impact of coincident regional peak demands that drive the majority of transmission costs.

With Network investment generally linked to capacity, MLL's capacity based price structure ensures compliance with this principle.

#### Pricing Principle (b) - Ramsey Pricing

"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"

MLL interprets this pricing principle as Ramsey pricing, whereby pricing at marginal cost is not appropriate for a natural monopoly as it would provide insufficient revenue to cover total cost. Ramsey pricing requires the utilisation of a tariff structure to recover average costs, with the additional costs over marginal cost, being targeted in line with consumers' responsiveness to price. In theory if all consumers shared the same marginal costs, consumers with a high price electricity of demand should be offered a lower price relative to other consumers. However, price elasticities are not able to be observed or measured for end use consumers. We believe the consumer segmentation inherent in the Network pricing structure is consistent with this principle. The Network utilises variable charges for all consumer groups and in particular for smaller end use customers to recover charges that are largely fixed. This is the only practical way of allowing consumers with differing willingness to pay to respond to price signals in line with their elasticity of demand.

#### Pricing Principle (c) i – discourage uneconomic bypass

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

This principle deals with discouraging uneconomic bypass and requires the network to not set prices so high that it encourages an alternative form of network supply which would replicate the sunken assets of the original network supplier. The use of a cost allocation model which ensures a price is set below a stand-alone price, ensures consistency with this principle for the majority of customers. Additionally, MLL proposes to investigate whether the further use of non-standard pricing is most appropriate in some instances, which would allow all the specific factors for a particular consumer to be considered.

#### Pricing Principle (c) ii – price quality trade-offs

"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 the best way of ensuring pricing is responsive to the requirements and circumstances of particular stakeholders is to enter into non-standard arrangements where appropriate.

MLL has in the past met specific customer needs by introducing new tariff structures. For example, seasonal irrigation tariffs and 20 hour controlled tariffs for bakeries. In the future, the further extension of non-standard arrangements may be appropriate.

Standard pricing options for large customers respond to their particular needs by offering alternatives for them to own their own transformers and connect at differing points in the network.

#### Pricing Principle (c) iii – encouraging investments in alternatives

"Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to, where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives (e.g. distributed generation or demand response) and technology innovation"

The distributed generation regulations provide that a distributor may only charge the incremental cost of connecting to their network. MLL pays all distributed generators on the network Avoided Cost of Transmission charges (ACOT) which encourages generators to be operating during the transmission peak periods. MLL's lines charges for the new distributed generation to feed into the Network have been set at zero where the capacity has been readily available. This allows the smaller embedded generators to connect to and utilise the network to deliver their generation to other connections without incurring network charges.

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

#### Pricing Principle (d) – transparency, stability and certainty

"Development of prices should be transparent, promote price stability and certainty for stakeholders, and changes to prices should have regard to the impact on stakeholders"

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

- 1. MLL consults with retailers on any planned changes to its pricing structure.
- 2. MLL has progressively simplified its pricing structure where differentials are no longer justified or the cost associated with the tariff complexity outweighs the additional revenue collected.
- 3. Whilst simplification and rationalisation has been undertaken, MLL has essentially maintained its historically based pricing structure. This is because over the recent years there has been the potential of regulatory intervention into distribution pricing. With the confirmation of a principles based approach, MLL will complete an extensive review of its cost allocation model/tariff structure in the coming year.
- 4. MLL will develop policies around managing rate shock to ensure the impact on stakeholders is mitigated. If there are any significant changes that need to be made these will be phased in over time.

## 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 moved to simplify its pricing structure over the last two years whilst maintaining the historical pricing signals and relativities between tariffs. The changes made have reduced transaction costs to retailers, some customers and ourselves. 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. This simplification has resulted in the removal of around 22 tariffs, reducing the number of tariffs in the schedule by 30 percent.

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

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