The Lines Company 2013 Pricing Methodology Evaluation

What we have been asked to do

The Electricity Authority engaged Castalia to carry out an independent evaluation of the pricing methodologies published by the 29 electricity distributors in New Zealand. This document provides our evaluation of The Lines Company's 2013 pricing methodology[1] against:

- The **Information Disclosure Guidelines** (Table 1). The guidelines set out the information that should be provided in distributor pricing methodologies.
- The **Pricing Principles** (Table 2). The principles contain economic benchmarks that should be reflected in pricing methodologies to the extent practicable.

The purpose of this review is to understand how distributors interpret the guidelines and principles, and to provide suggestions on how to improve distributor pricing methodologies. This review does not focus on ensuring compliance with the guidelines and principles.

Our understanding of The Lines Company's methodology

The table below summarises our understanding of the methodology that The Lines Company uses to determine prices for its general customer group. The purpose of this example is to explain our understanding of The Lines Company's pricing methodology using the example of one consumer group.

	Approach	Rationale
Customer categories	Customers are grouped by the following cost drivers: location, difference in Transpower charges, extent of controlled load, willingness to accept risk in reliability, willingness to subsidise other regions, density, and dedicated assets	Some of the cost drivers influence the cost of servicing the customers, and other drivers indicate the willingness of customers to pay for the service they receive
Cost allocation	▪ Transmission costs are passed through ▪ Operating costs are allocated based on historical averages ▪ Customer related costs are allocated based on proportion of customers in the region ▪ Value-related costs are allocated based on replacement value of relevant assets, and ▪ The costs of collection are allocated by the same proportion as the total of other costs	No rationale is provided for the allocation of costs, except that value-related costs aim to smooth costs across the age of assets in service
Charging basis	Customers are charged a fixed network charge, a variable load charge (based on uncontrolled kW load during network constraints), dedicated asset fees, and service fees	Fixed charges ensure all connections contribute to network cost, and reduces variability in total charges (dampens impact of load charges). Load charges reflect the impact of customers on network capacity requirements

[1] The Lines Company's 2013 pricing methodology is available online at: http://www.thelinescompany.co.nz/template.cfm?content=pricing_2013

Overview of our evaluation of The Lines Company's methodology

The Lines Company pricing methodology is unusual in its predominant use of kW demand charges for all consumer groups (including households). In many respects, this charging approach closely aligns with the intent of the Authority's pricing principles by aligning prices with the economic costs of service provision (which are driven by peak demand, rather than kWh consumption). However, the rationale for this approach and the impact of any limitations (such as the inability to measure peak demand at all customer premises) need to be clearly explained in the pricing methodology. In our view, the pricing methodology would be improved by:

- Explaining the rationale for the reliance on kW demand charges. The methodology refers to a 2007 report, but fails to explain why that study concluded that kW demand charges would be beneficial for TLC and its customers.
- Stating what proportion of customers have profiled demand, as opposed to time of use meters that accurately record peak demands for the purpose of setting tariffs (and how this proportion is expected to change with the roll out of smart meters).

The main issue identified from our evaluation of The Lines Company's methodology against the information disclosure guidelines is that the division of customers into groups is unclear. The customer groups are not clearly identified up front, and there are inconsistent levels of consumer groups throughout the methodology and appendices. This lack of clarity also affects the understanding of the cost allocation and tariff derivations. The methodology could also more closely align with the information disclosure guidelines by providing a clear link between the revenues recovered and the different tariffs charged to each consumer group.

Our main concern with the alignment of the pricing methodology against the pricing principles is the lack of clear justification for concentrating on charging customers through demand based charges. This appears to be significantly influenced by a large number of temporary accommodation customers connected to the network (although the proportion of temporary accommodation customers on the TLC network is not identified). The pricing approach ensures that temporary accommodation customers make a similar contribution to recovering network costs as domestic customers. However, it is unclear whether general customers (including temporary accommodation customers) have any incentive to reduce their peak loads, without knowing if their peak load is coinciding with the regional peak. This is particularly the case for customers whose charges are based on a standardised load profile, rather than time of use meters.

Table 1: Evaluation of the Pricing Methodology against the Information Disclosure Guidelines

Guideline	What is done well?	What is missing?
(a) Prices should be based on a well-defined, clearly explained and published methodology, with any material revisions to the methodology notified and clearly marked	▪ The methodology is published on the website ▪ Price changes are identified on page 7 and no changes to the methodology appear to have occurred ▪ The language of the methodology is reasonably clear	▪ The structure of the methodology could be improved by – Incorporating the tables from the appendices into the relevant sections of the methodology – Improving the levels of titles and subtitles (particular in section 9) ▪ Given that the TLC methodology is unconventional, we would expect to see more information on the reasons for shifting from conventional kWh variable charges to kW demand based charges
(b) The pricing methodology disclosed should demonstrate: **(i)** How the methodology links to the pricing principles and any non-compliance	▪ A summary of the alignment with the pricing principles is provided on pages 1-4 ▪ The Lines Company has identified non-alignment through the occurrence of subsidies	▪ Refer to our evaluation for areas of non-alignment with the pricing principles
(ii) The rationale for consumer groupings and the method for determining the allocation of consumers to the consumer groupings	▪ The methodology has identified cost drivers that are used to allocate customers to groups ▪ The rationale for using each cost driver is provided ▪ The customer groups are identified	▪ The methodology does not explain how the cost drivers are applied to determine the consumer groups (e.g. which regions are load controlled?). The fourth and seventh cost drivers also appear to be decision-making tools, rather than cost drivers that can be applied to allocate consumers ▪ The rationale for the division of consumers into six communities of interest is not explained ▪ The boundaries between major users and general customers are not defined, and the rationale for splitting these customers is not given. As a result, customers are not able to identify which group they fall into. It also appears in the appendices that consumers are split into smaller groups depending on their load profiles and network density. This should be clearly linked to the consumer groupings on pages 6-7

Guideline	What is done well?	What is missing?
(iii) Quantification of key components of costs and revenues	▪ A clear table is provided in schedule B	▪ It would be helpful to have consistent terminology in the tables with that used throughout in the methodology (e.g. We are unsure if it correct to assume that 'mtce' (maintenance) from the table in schedule B is the same as 'operating costs' throughout the methodology) ▪ Similarly, the table of asset values on page 21 should be more clearly labelled and explained.
(iv) An explanation of the cost allocation methodology and the rationale for the allocation to each consumer grouping	▪ The methodology provides a rationale for the approach to allocating value-related costs ▪ The methodology identifies how costs are allocated between standard and non-standard contracts	▪ No rationale is provided for using different allocators to allocate costs to consumer groups. It would be helpful to identify the alternative allocators, and then provide the reason for using the chosen allocator ▪ The methodology does not clearly explain how costs are allocated between general customers and major users. It currently appears that they are all grouped together (and are therefore effectively treated as one consumer group)
(v) An explanation of the derivation of the tariffs to be charged to each consumer group and the rationale for the tariff design	▪ The tariff design is partially described with some rationale presented in sections 9.7 to 9.9	▪ The relationship between pricing components and tariffs is not fully described or is unclear. For example – It is not clear if service fees (page 13) are recovering the costs of collection (section 9.6), or if the collection costs are recovered another way – The method for calculating and allocating dedicated asset fees is not described ▪ It would be helpful to present a tariff table to improve clarity about what tariffs are charged to each consumer group

Guideline	What is done well?	What is missing?
(vi) Pricing arrangements that will be used to share the value of any deferral of investment in distribution and transmission assets, with the investors in alternatives such as distributed generation or load management, where alternatives are practicable and where network economics warrant.	▪ Page 17 describes the pricing arrangements for distributed generation, which includes charges paid to, and from, the generator	
(c) The pricing methodology should: **(i)** Employ industry standard terminology, where possible	▪ The methodology uses standard terminology and provides a glossary	▪ Terminology is not consistent between the methodology and the tables in the appendices
(ii) Where a change to the previous pricing methodology is implemented, describe the impact on consumer classes and the transition arrangements implemented to introduce the new methodology.	▪ The methodology identifies that charges have increased due to Transpower charges changing, and the impact to each region is identified. All other charges are increasing by 3.5% ▪ The Lines Company states that historically it has used gradual approaches to price adjustments to avoid price shocks	▪ The methodology does not identify the impact to different customer groups within each region from the changes in to prices. It would be particularly helpful to identify the impact on the overall bill for each consumer group (or the average consumer within that group). ▪ No transition arrangements are identified for customers that will need to transition from being charged based on load profiling to being charged on ToU metering. It is also unclear how different the charges are to know if a transition process is likely to be required for different customer groups

Key to evaluation	Does not guidelines	Partially follows guidelines	Follows guidelines

Table 2: Evaluation of the Pricing Methodology against the Pricing Principles

Pricing principles	What is done well	What is missing
(a) Prices are to signal the economic costs of service provision by: **(i)** being subsidy free (equal to or greater than incremental costs, and less than or equal to standalone costs), except where subsidies arise from compliance with legislation and/or other regulation	▪ The methodology provides an accurate definition of incremental costs on page 2, and a good definition of subsidies is provided on page 16	▪ In response to this pricing principle (page 2) the methodology states that the total charges should be "less than or equal to the average total cost of service." However, our view is that relationship between charges and the cost of service is an point of equity (whether customers are contributing more or less than average costs of service) than subsidy (whether customers are contributing at least the incremental costs of serving them) ▪ The methodology identifies subsidies (page 14) but does not clearly explain which group is providing subsidises (and which group is receiving them). Additionally, no evidence is provided that these are subsidies (and the extent of the subsidy), rather than price discrimination (that is, customers are not paying more than the incremental cost of serving them). Similarly, rural and domestic subsidies are identified (page 2) ▪ On page 14 the methodology also states that some of the intra-region cross subsidies "represent the ability of some communities to pay at a greater level than others". This appears to be a form of price discrimination rather than subsidising a group of consumers
(ii) having regard, to the extent practicable, to the level of available service capacity	▪ Prices have attempted to signal the level of available service capacity by charging fixed charges based on network capacity, and variable charges based on customer's contribution to peak loads	▪ The methodology does not include a description of the current service capacity and the proportion that is current used ▪ Without the tariff schedule in the methodology it is unclear if the fixed and/or variable charges are encouraging consumers to use available capacity and not contribute to regional constraints. In particular, general customers that do not yet have time of use meters are charged based on a standardised profile, which provides no incentives to change their load profile to use available service capacity. Even customers with time of use meters will have limited ability to forecast regional peaks to move their load to off-peak times

Pricing principles	What is done well	What is missing
(iii) signalling, to the extent practicable, the impact of additional usage on future investment costs	▪ Controllable load is offered to all customers, and peak demand charges are charged to major users (independent of network peaks)	▪ The methodology does not provide a summary of the investment requirements or a link between the prices offered to consumers and how those prices signal the additional investment requirements. For example, we would expect to see the expected cost and timing of installing ToU meters throughout the entire network
(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	▪ Although not explicitly identified, the seventh cost driver appears to address price responsiveness, by identifying that there is a risk of industrial customers relocating to other locations if the prices charged to them are too high	▪ The methodology identifies that the target revenue is under-recovering the revenue allowance under the DPP and that the shortfall is not even across customers. However, the methodology does not identify if revenue recovery is taking advantage of the price responsiveness of customers (and how that was determined) ▪ Without an estimate of incremental costs it is unclear if prices are actually based on recovering efficient incremental costs ▪ The explanation of alignment with this pricing principle is not accurately applied to The Lines Company's methodology
(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	▪ The Lines Company identifies the customers that would be most likely to uneconomically bypass the network, and that non-standard contracts are offered to those consumers to mitigate the risk of uneconomic bypass	▪ The methodology does not identify when uneconomic bypass would occur (i.e. define when bypass is uneconomic, compared to economic bypass) ▪ The Lines Company should explain how the non-standard contracts ensure that the bypass is discouraged or avoided
(ii) allow for negotiation to better reflect the economic value of services and enable stakeholders to make price/quality trade-offs or non-standard arrangements for services	▪ The Lines Company has consulted with customers and offered the option of increasing outages for delaying and minimising future price increases ▪ Schedule D provides a summary on the size and number of non-standard contracts	▪ It is unclear if there is a hard or soft division between the customer contributions of major contracts over $5 million, and those under $5 million. The gap between their contributions is very large (page 21) ▪ No definition is provided between short-term and medium-term non-standard contracts

Pricing principles	What is done well	What is missing
(iii) where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives and technology innovation	▪ The methodology identifies the pricing arrangements for distributed generation, which includes paying ACOT to generators	
(d) Development of prices should be transparent, promote price stability and certainty for stakeholders, and changes to prices should have regard to the impact to stakeholders	▪ The Lines Company encourages stability by charging a flat bill over a 12 month period directly to their customers. The methodology is also gradually closing the gap between total cost and total revenues ▪ Consumers are consulted on changes to the methodology, and retailers are not impacted as they do not operate in the network	▪ Given that The Lines Company directly deals with customers, it is even more important for the pricing methodology to clearly explain the development of prices. We feel there is room to significantly improve the transparency of the approach through the description provided in the methodology
(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	▪ The Lines Company charges customers directly and therefore imposes no transaction costs on retailers, and economic equivalence does not apply. ▪ Transaction costs are smoothed for customers with a fixed bill spread over the following 12 month period	

Key to Assessment	Does not align with principles	Partially aligns with principles	Aligns with principles