Evaluation of Electra 2013 Pricing Methodology

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 Electra'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 Electra's methodology

The table below summarises our understanding of the methodology that Electra's uses to determine prices for its mass market consumer group. This example is provided to explain our understanding of Electra's pricing methodology (this is not a comprehensive description of how the pricing methodology works for all customers).

	Approach	Rationale
Customer categories	All customers are grouped together.	Electra has few large customers, and lacks mid-sized commercial load. Therefore, the substantial common costs between consumers do not justify the increased transaction costs of splitting consumers into more groups.
Cost allocation	Three cost divers are used to allocate costs to customers (network capacity, consumer connections, and consumer specific asset usage). However, it is unclear if costs are allocated to sub-groups	The rationale is not presented.
Charging basis	All customers are offered the same set of fixed and variable tariff combinations (including Anytime, managed saver, triple saver, standard industrial, super thrifty, and street lighting). Some of these tariffs include a combination of peak, off-peak and night charges.	Electra allows customers to choose the most appropriate tariff for their consumption patterns.

[1] Electra's 2013 pricing methodology is available online at: http://www.electra.co.nz/docs/disclosures/pricing_methodology_2013_combined_with_certificate.pdf

Overview of our evaluation of Electra's methodology

Our evaluation of Electra's 2013 pricing methodology identified some confusion in the approach to grouping consumers, allocating costs, and deriving tariffs that recover costs. The methodology states that due to the relative homogeneity of its customers, Electra groups all consumers into a single consumer group. As a result, all costs are allocated to that consumer group, and all customers are offered the same tariff options. However, the introduction of the "Triple Saver" tariff the approach of treating all consumers equally appears to have changed this approach. Other tariff options and exceptions (e.g. street lighting) to the initial approach are also mentioned, however we remained unsure whether the new options are in fact distinct customer groups, as parts of the methodology would indicate (such as figure 5).

The methodology also states that a cost allocation model was developed in 2012 to verify the tariffs that were generated from the above approach. It is not clear what the purpose of this allocation model is, or if Electra intends to transition to relying on this model for setting prices in the future.

In our view, the methodology would be clearer and more coherent if customers were split into two or three consumer groups. Costs could then be allocated to each group in a manner that generally reflects the different costs of servicing those consumers. Electra could then offer tariff options aligned to the needs of each group to recover the costs allocated to that consumer group and seek to influence consumer behaviour in efficient ways (where practicable).

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 and prices are published online, and prices are also published in the local newspaper ▪ A summary of key changes to the methodology and prices(since 2011) is presented clearly	▪ Figure 8 would be improved by clearly defining the units (rather than c/unit) and presenting the fixed and variable charges in their tariff tables. It is also not clear whether the tariffs in figure 8 are referring to levelised tariffs (fixed and variable spread across an assumed consumption level) or just the variable component ▪ Clarity could be improved throughout the methodology, for example – Figures 3 and 5 appear to use year-end, while figure 8 appears to use year-beginning – The terminology changes between tariff descriptions and the table on page 26
(b) The pricing methodology disclosed should demonstrate: **(i)** How the methodology links to the pricing principles and any non-compliance	▪ Explicit links to the pricing principles are provided in the appendix, and implicitly throughout the methodology	▪ There are a few instances of non-compliance with the pricing principles. Refer to our evaluation of the pricing principles for further details. ▪ Electra identifies that they are not fully complying with the pricing principle (a-ii), yet we feel that their prices are reflective of the available service capacity, and Electra is therefore complying

Guideline	What is done well?	What is missing?
(ii) The rationale for consumer groupings and the method for determining the allocation of consumers to the consumer groupings	▪ The rationale (page 16) for the one consumer group is based on the homogenous nature of customers across the network	▪ Electra appears to group all consumers into the one group, but also discusses the various tariff options that are only applicable to consumer sub-groups. These sub-groups should be identified upfront. The methodology should then identify whether these tariffs are different due to the costs these customers impose on the network, or due to different price responsiveness (or other behavioural characteristics) of the consumers. The former should be categorised as consumers groups, the latter can be addressed through tariff design ▪ It would help if the methodology provided a clearer categorisation of consumers. It currently appears that over time a natural differentiation has arisen between customers with a different level of consumption, which has required the establishment of new consumer groups – e.g. larger industrial consumers using the Standard Industrial Tariff. However, this evolution is not described clearly
(iii) Quantification of key components of costs and revenues	Electra quantifies major cost and revenue components in Figure 3, and compares them to those in the previous pricing year	

Guideline	What is done well?	What is missing?
(iv) An explanation of the cost allocation ~~methodology~~ and the rationale for the allocation to each consumer grouping	▪ Electra clearly identifies cost drivers used to allocate costs in section 8	▪ Electra identifies that it has developed a new cost allocation model, but this model has not been used to allocate costs. Instead, Electra has used the model "to test whether the current prices are consistent with implied allocations of costs". The methodology should detail exactly how costs have been allocated to consumers, or how the cost drivers are applied. ▪ Electra alludes to allocating costs to "each group", despite initially stating that all consumers are in one group. This suggests that the tariff groups presented on figure 5 could be consumer groups, but the allocation of costs to these groups remains unclear ▪ The methodology should provide the rationale for the approach taken to allocate costs to consumers. This could be done by including a table with the key cost components, the allocators used to allocate each of these costs, and the rationale for using those allocators (compared to any alternatives). This would help to ensure that the costs allocated (and therefore recovered through tariffs) are transparent to consumers
(v) An explanation of the derivation of the tariffs to be charged to each consumer group and the rationale for the tariff design	▪ Figure 4 provides a summary of tariffs charged on the network, and the rationale for the design of these tariffs ▪ Figure 8 presents the percentage of revenue that is recovered from each tariff group, and includes a comparison to the previous pricing year	▪ There is no link provided to show how the tariffs for each consumer group are recovering the costs allocated to each consumer group ▪ It appears that all tariffs (except the new standard industrial tariff and street/public lighting tariffs) have the same fixed charge of 15 cents per day. However, the methodology does not describe how the variable components of all tariffs have been calculated for each consumer group to recover the costs of that 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.	▪ The methodology describes that pricing arrangements for the (less than) 20 distributed generators currently connected to the grid	
(c) The pricing methodology should: **(i)** Employ industry standard terminology, where possible	▪ The methodology applies industry standard terminology	
(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.	▪ A summary of changes to the methodology since 2011 has been summarized on page 7	▪ The methodology does not clearly describe the impact to consumers resulting from the changes to the methodology. Information is provided on the change in overall revenues and the proportion of revenues that is recovered from each tariff group, but it is hard to see how much the changes impacts the bills of the average customer in each group ▪ It appears that transition arrangements are not required but this is hard to confirm without clearly knowing what the impact of price changes are on each set of consumers

Key to evaluation	Does not follow 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	▪ Electra provides a definition of incremental and standalone cost ▪ It appears that consumers pay the costs of new connections upfront, which helps to recover the long run incremental costs (remaining prices just need to recover short run incremental costs to be subsidy free)	▪ Electra does not provide estimates for incremental or standalone costs relevant to its network ▪ The rationale for recovering the operating and maintenance portion of incremental costs (page 28) is not convincing, particularly given that there are no estimations for these costs (page 15). As a result, the methodology gives little evidence to determine if cross-subsidies are occurring or not (i.e. if the lowest users are recovering incremental costs) ▪ The methodology identifies circuit length as a relevant cost driver, but does not appear to apply it in the pricing methodology. It would be helpful for the methodology to explain how the potential for cross-subsidy (from not taking into account the circuit length) are avoided
(ii) having regard, to the extent practicable, to the level of available service capacity	▪ The tariffs (including thrifty and triple saver)offer good price signals to move consumption from peak to off-peak hours to use available service capacity ▪ The methodology identifies capacity constraints at both GXPs, and Electra is in discussions with Transpower about upgrading the GXPs	▪ Electra states that it does not provide appropriate signals through its prices (page 29). This suggests that Electra believes it needs to provide different pricing signals to different parts of the network that are reaching capacity. However, all consumers on the network are impacted by the GXPs, and all receive the same pricing options. Therefore, we believe that this principle has been largely met ▪ It is unclear how the kWh consumption charges proxies for capacity (page 22)

Pricing principles	What is done well	What is missing
(iii) signalling, to the extent practicable, the impact of additional usage on future investment costs	▪ Electra offers ToU and controlled load pricing options that give consumers the option to reduce consumption at peak times, reducing the need for investment on the network ▪ The methodology identifies that substantial investment is required at the GXP points on the network	▪ Electra has not provided any estimates for the timing or expected investment costs (born by Electra customers) for upgrading the two GXPs. We would expect to see these costs presented, particularly considering the investments are imminent. We would also expect the methodology to describe how these costs will be recovered through prices ▪ It would also be good to see a description of other parts of the network that will require upgrading to support the GXPs' larger capacity (once upgraded) ▪ Electra should provide an analysis of peak demand growth, to illustrate the size of investment required now or in the medium term.
(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		▪ The current prices are not responding to consumer willingness or ability to pay. The existing tariff options allow consumers to choose tariffs based on their own consumption profiles. There may be two consumers that have the same consumption profile, and a different willingness to pay. These consumers may still choose the same tariff. As a result, the tariffs are not necessarily encouraging the more price responsive customer to pay less
(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	▪ Electra identifies that uneconomic bypass has not occurred on its network to date	▪ The methodology should describe when uneconomic bypass is most likely to occur, and how Electra is discouraging uneconomic bypass ▪ It could also be helpful to identify whether or not the risks of uneconomic bypass could change when the GXPs are upgraded (depending on the portion of the upgrade costs that are borne by Transpower and Electra)

Pricing principles	What is done well	What is missing
(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	▪ Electra conducts an annual market research survey (most recent in 2012) that covers reliability, service quality, and pricing (page 9) ▪ The methodology has identified that no non-standard contracts currently exist ▪ Electra provides the opportunity for consumers to upgrade the quality of their supply, through the network extension policy	▪ It would be good to see a brief description of the network extension policy that applies to consumers wanting to upgrade the quality of supply (page 31)
(iii) where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives and technology innovation	▪ The methodology identifies the existing distributed generation in the network, and does not charge for energy entering the grid ▪ Incentives are provided through prices for consumers to invest in technological innovation (controllable hot water cylinders, night storage)	▪ We would expect to see that Electra pays ACOT to distributed generators (particularly given the GXPs are requiring upgrading) to encourage generation and avoid the investment
(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	▪ Electra appears to have strong communication with retailers, and consumers through its annual survey ▪ Electra provides consumers with the choice to move into the new standard industrial tariff ▪ The pricing strategy identifies that Electra will make incremental changes in the future to encourage price stability while increasing the differential between peak and off peak (page 27)	▪ The principle is referring to the transparent development of the prices, rather than the transparent publishing of the methodology ▪ It appears that the price changes are small in 2013. However, without the direct analysis of the impact of those changes to consumer bills, it is hard to tell if transitional approaches are required this year. If transitional approaches are needed, the methodology should describe the transitional approach taken
(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	▪ Electra applies the same prices to all retailers operating in their network ▪ Electra appears to keep an eye on transaction costs, and communicated with retailers early (November 2012) about the implementation of the new Standard Industrial Tariff	▪ It would be good to see Electra consider any transaction costs to retailers that are operating across contiguous networks (retailers face transaction costs from dealing with different pricing methodologies between contiguous distributors)

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