



## Evaluation of Electricity Ashburton’s 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 Electricity Ashburton’s 2013 pricing methodology<sup>1</sup> 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 Electricity Ashburton’s methodology

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

	Approach	Rationale
<b>Customer categories</b>	Low voltage connections have a 400 volt connection and have kWh metering	No rationale provided
<b>Cost allocation</b>	Costs are allocated based on replacement costs of allocated assets, number of connections, and network capacity (kVA)	No rationale provided
<b>Charging basis</b>	Fixed charges include a low user charge tariff and charges proportioned according to connection capacity (kVA). Variable tariffs consist of controlled (for off peak and night rates) and uncontrolled energy (kWh) rates	The low user charge tariff is provided to meet regulatory requirements. Off peak and night rates are provided as an incentive for the uptake controllable load, but no rationale is provided for offering controllable load

### Overview of our evaluation of Electricity Ashburton’s methodology

The methodology is concise and the information presented is relevant. However, we consider that the methodology does not follow a logical structure, and this reduces its effectiveness. A

<sup>1</sup> Electricity Ashburton’s 2013 pricing methodology is available online at: <http://www.eanetworks.co.nz/Files/EA-Networks-Pricing-Methodology-2013-v1-0.pdf>

better structure would be to first define the relevant customer groups, then identify and allocate costs to those consumer groups, and finally to derive tariffs and explain the charging basis. The structure of the methodology is also weakened by simply attaching the previous year's methodology as an appendix. The 2013 methodology should try to integrate new information and updated data into a standalone methodology to avoid confusion and make the methodology easier to follow.

In terms of our evaluation of the information disclosure guidelines, we consider that the methodology would be strengthened by providing a rationale for consumer groupings, as well as for the allocation of costs to consumer groups, and for the tariff design. This would allow the reader to understand whether the methodology follows an efficient and common sense approach to grouping and charging consumers. The methodology does present very useful statistics at the back of the document. The pricing allocation model summary table is particularly valuable. The methodology could further explain however how some of the statistics were derived. For example, it is not clear how network capacity can equal measured demand (for all customer groups except General).

With regard to our evaluation of the pricing principles, the methodology does not provide information on issues such as cross-subsidisation, uneconomic bypass, and economical equivalence across retailers. Some of these issues call for a high-level analysis to be answered properly, for example by estimating the incremental costs of serving different consumer groups to check for cross-subsidies.

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

Guideline	What is done well?	What is missing?
<p><b>(a)</b> Prices should be based on a well-defined, clearly explained and published methodology, with any material revisions to the methodology notified and clearly marked</p>	<ul style="list-style-type: none"> <li>▪ The methodology presents no changes to prices or to the underlying methodology for determining prices</li> <li>▪ The methodology is published on Electricity Ashburton’s website</li> </ul>	<ul style="list-style-type: none"> <li>▪ The document does not follow a logical structure, i.e. define consumer groups, identify and allocate costs, derive tariffs and explain the charging basis</li> </ul>
<p><b>(b)</b> The pricing methodology disclosed should demonstrate:</p> <p><b>(i)</b> How the methodology links to the pricing principles and any non-compliance</p> <p><b>(ii)</b> The rationale for consumer groupings and the method for determining the allocation of consumers to the consumer groupings</p> <p><b>(iii)</b> Quantification of key components of costs and revenues</p> <p><b>(iv)</b> An explanation of the cost allocation methodology and the rationale for the allocation to each consumer grouping</p>	<ul style="list-style-type: none"> <li>▪ The factors leading to each load group are identified</li> <li>▪ The major cost/revenue components are identified in a table on page 4</li> <li>▪ The methodology presents a set of costs allocators</li> </ul>	<ul style="list-style-type: none"> <li>▪ The methodology does not provide explicit links to the pricing methodology nor identifies instances of non-compliance</li> <li>▪ We have identified cases of non-alignment to the pricing principles and noted them in our pricing principles review</li> <li>▪ The methodology does not provide a rationale for customer groupings</li> <li>▪ A description is provided for classifying load groups but not so for customer groups. We would expect this description given that the data provided in the allocation model is at the customer group level. The model appears to allocate costs at a customer group level so we would expect to see a description for that level of grouping</li> <li>▪ The methodology does not provide a rationale for the allocation of costs</li> <li>▪ The methodology does not provide a clear description of how costs are assigned to different consumer groups. For example, it is not clear how the utilisation of the different asset classes is calculated for each load group nor how operation and maintenance costs are allocated to consumers by the replacement cost of allocated assets</li> <li>▪ The relationship between costs and consumer groups is not identified</li> </ul>

Guideline	What is done well?	What is missing?	
<p>(v) An explanation of the derivation of the tariffs to be charged to each consumer group and the rationale for the tariff design</p>	<ul style="list-style-type: none"> <li>The methodology attempts to provide on page 9 a brief high-level description of how overall prices recover required revenues for each load group</li> </ul>	<ul style="list-style-type: none"> <li>The methodology does not provide a rationale for the tariff design</li> <li>We would expect to see how tariffs are divided into fixed, variable and demand charges for each consumer group</li> <li>The methodology does not identify the link between costs allocated to each group and the way tariffs recover those costs</li> </ul>	
<p>(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.</p>	<ul style="list-style-type: none"> <li>The methodology presents the pricing arrangements it has with small and large distributed generators used to share the value of savings</li> <li>The tariff table presented in the appendix lists the tariffs applied to distributed generators</li> </ul>	<ul style="list-style-type: none"> <li>The methodology is very unclear with regard to how savings are shared between Electricity Ashburton and both small and large generators</li> </ul>	
<p>(c) The pricing methodology should:</p> <p>(i) Employ industry standard terminology, where possible</p> <p>(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.</p>	<ul style="list-style-type: none"> <li>The document uses industry standard terminology</li> <li>Electricity Ashburton has not changed its prices from the previous year nor has it modified the underlying methodology for determining prices</li> <li>Price changes are generally pro-rated across all groups so as to minimize changes to prices between groups</li> </ul>	<ul style="list-style-type: none"> <li>The methodology should show the two cases of price change for distributed generators mentioned on footnote 1 since this is not apparent from the appendix tables. The appendix tables show fluctuations in the transmission and network components of prices (but not total prices) yet the methodology does not explain these changes</li> </ul>	
<b>Key to evaluation</b>	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
<p><b>(a)</b> Prices are to signal the economic costs of service provision by:</p> <p><b>(i)</b> 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</p>		<ul style="list-style-type: none"> <li>▪ The methodology should provide an explanation of the approach to defining and calculating incremental and standalone costs</li> <li>▪ The methodology should identify cases, if any, where prices are not subsidy free and the measures taken to resolve such cases</li> </ul>
<p><b>(ii)</b> having regard, to the extent practicable, to the level of available service capacity</p>	<ul style="list-style-type: none"> <li>▪ Estimates of network capacity are presented on page 10</li> <li>▪ Electricity Ashburton offers off-peak and night rates so as to shift demand from peak to off-peak</li> </ul>	<ul style="list-style-type: none"> <li>▪ It is not clear how network capacity has been derived given that network capacity equals measured demand for all customers except General</li> <li>▪ We would expect to see an explanation of the relationship between prices and service capacity</li> </ul>
<p><b>(iii)</b> signalling, to the extent practicable, the impact of additional usage on future investment costs</p>	<ul style="list-style-type: none"> <li>▪ Electricity Ashburton offers controllable load tariffs</li> </ul>	<ul style="list-style-type: none"> <li>▪ We would expect to see:               <ul style="list-style-type: none"> <li>– Forecasts of investment needs to meet future demand</li> <li>– An analysis of peak demand growth by consumer group to illustrate the relationship between prices and future investment</li> </ul> </li> </ul>
<p><b>(b)</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</p>		<ul style="list-style-type: none"> <li>▪ The methodology does not allow the reader to recognize whether this principle applies</li> <li>▪ We would expect to see ways in which consumer demand responsiveness is assessed and how this is applied to prices</li> </ul>
<p><b>(c)</b> Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to:</p> <p><b>(i)</b> discourage uneconomic bypass</p>		<ul style="list-style-type: none"> <li>▪ The methodology does not identify where it expects uneconomic bypass to occur nor does it explain the approach taken to mitigate such occurrences</li> </ul>

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	<ul style="list-style-type: none"> <li>▪ Customer’s opinions are gaged by:               <ul style="list-style-type: none"> <li>– Annual surveys on price/quality trade-offs for residential and small business customers</li> <li>– Independent face-to-face interviews with large industrial customers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ The methodology should provide a summary of the feedback received from customers</li> </ul>	
(iii) where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives and technology innovation	<ul style="list-style-type: none"> <li>▪ The methodology has arrangements in place which share network benefits of distributed generation with small and large generators</li> </ul>	<ul style="list-style-type: none"> <li>▪ The description of how distributed generation is encouraged through the pricing methodology is not clear, especially for the case of small generators</li> </ul>	
(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	<ul style="list-style-type: none"> <li>▪ A good level of customer feedback is received through a variety of ways (surveys, interviews, close contact with major customers)</li> <li>▪ The output of surveys is used when determining prices and other business matters such as capital investment</li> <li>▪ Price changes are generally pro-rated amongst customer groups so as to minimize price shock to any one group</li> </ul>	<ul style="list-style-type: none"> <li>▪ The methodology should show how the feedback received through surveys is reflected in prices and capital investment plans</li> </ul>	
(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		<ul style="list-style-type: none"> <li>▪ We would expect to see a description of the most relevant transaction costs and how these are mitigated</li> <li>▪ The methodology should mention whether economical equivalence is maintained across retailers. It is not clear whether any differences in Use of System Agreements affect economical equivalence across retailers</li> </ul>	
<b>Key to Assessment</b>	Does not align with principles	Partially aligns with principles	Aligns with principles