



Evaluation of Buller Electricity 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 Buller Electricity’s 2013 pricing methodology¹ 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 Buller Electricity’s methodology

The table below summarises our understanding of the methodology that Buller Electricity uses to determine prices for its load group 1 consumer group. The purpose of this example is to explain our understanding of Buller Electricity’s pricing methodology using the example of one consumer group (this is not a comprehensive description of how the pricing methodology works for all customers).

	Approach	Rationale
Customer categories	Consumers in this load group have up to 15 kVA capacity loads supplied at 400V, and therefore use the low voltage urban and/or rural meshed network	The rationale for this grouping is to reflect the costs incurred to supply low voltage users
Cost allocation	Costs are allocated using the historical share of assets that corresponds to each load group. Load group 1 is assigned 24 percent of the total share	No rationale is provided
Charging basis	Customers in load group 1 are charged fixed and variable tariffs	The rationale for the fixed tariffs is to reflect the costs imposed on the network (for large demands). The rationale for variable tariffs is to provide some price signal for usage during periods of congestion

¹ Buller Electricity’s 2013 pricing methodology is available online at:
<http://www.bullerelectricity.co.nz/assets/Disclosure/pricing-methodology-2013-web.pdf>

Overview of our evaluation of Buller Electricity’s methodology

The main way that the methodology could be improved is in obtaining a closer alignment with the pricing principles. The methodology contains contradictory regarding the existence of cross subsidies: stating that the network has subsidy free tariffs, while also identifying cases of cross subsidies across the network. The methodology also confuses economic bypass with uneconomic bypass—the latter occurring when prices above incremental cost encourage customers to seek another source of supply, but the total costs of service provision increase. The methodology should also explain how prices signal the level of available service capacity and of additional usage on future investment costs.

The primary concerns arising from our evaluation of the pricing methodology against the information disclosure guidelines relate to the cost allocation methodology and the rationale for allocating customers to each consumer group. Although Buller Electricity allocates costs using a historical share of assets corresponding to the usage by each group (an approach which is clearly described and is straightforward), no rationale is provided for adopting this approach. A rationale for allocating costs to customer groups would help the reader understand the relationship between load groups and costs. In addition, the methodology should clearly list any non-asset cost allocators used and how these factors are applied.

Further feedback on these issues is provided in our evaluation below.

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

Guideline	What is done well?	What is missing?
<p>(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</p>	<ul style="list-style-type: none"> ▪ The methodology briefly describes the revenue changes since the last pricing methodology ▪ The methodology reads well and is easy to follow 	<ul style="list-style-type: none"> ▪ The document could follow a more logical structure by defining customer groups first, then presenting costs and allocating them, and finally deriving tariffs to recover the costs ▪ We could not find the document on Buller Electricity’s website at the start of April 2013, although it is now published on the website
<p>(b) The pricing methodology disclosed should demonstrate:</p> <p>(i) How the methodology links to the pricing principles and any non-compliance</p> <p>(ii) The rationale for consumer groupings and the method for determining the allocation of consumers to the consumer groupings</p> <p>(iii) Quantification of key components of costs and revenues</p>	<ul style="list-style-type: none"> ▪ The methodology explicitly links to the pricing principles through a section showing how it satisfies the principles ▪ Consumers are clearly categorised into load groups ▪ The factors leading to each load group are presented and applied to each category ▪ A rationale is provided on page 14 for grouping consumers ▪ The major cost components are presented on a table under section 2.2 ▪ A good description of the items these costs account for is also provided 	<ul style="list-style-type: none"> ▪ The methodology contradicts itself by recognizing cases of cross-subsidy, yet stating that the network is subsidy-free ▪ We have found further cases of non-alignment with the pricing principles and present them in our pricing principles review ▪ The methodology could explain why it splits load groups in the way it does. For example, why are load groups 1 and 2 separate groups?

Guideline	What is done well?	What is missing?
<p>(iv) An explanation of the cost allocation methodology and the rationale for the allocation to each consumer grouping</p>	<ul style="list-style-type: none"> ▪ The methodology allocates costs to load groups using a historical share of assets corresponding to each group 	<ul style="list-style-type: none"> ▪ The methodology should describe how the share of assets has been obtained and why this is a good basis for allocating costs (i.e. the rationale for allocation). This would help understand the relationship between costs and load groups ▪ The methodology should clearly list the cost allocators used. The table on page 14 implies that both GWhs and number of connections are used as cost allocators. However, the share of assets is equivalent to a load group’s GWhs share alone
<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"> ▪ A description of fixed charges is presented on page 13 with a reasonable rationale provided ▪ A description of some variable charges (controlled load, demand, power factor) and the rationale behind them is presented on page 9 	<ul style="list-style-type: none"> ▪ The methodology should show how tariffs are derived to recover the costs that are allocated to different customer groups
<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"> ▪ The methodology should clearly describe the pricing arrangements it has in place to encourage alternative investments. For example, the methodology states that it supports the connection of embedded generation to the network—this support should be described
<p>(c) The pricing methodology should:</p> <p>(i) Employ industry standard terminology, where possible</p>	<p>The methodology uses industry standard terminology</p>	

Guideline	What is done well?	What is missing?	
<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"> ▪ The methodology briefly describes the changes to prices on page 5 ▪ The methodology has transitional arrangements in place to mitigate price shock 	<ul style="list-style-type: none"> ▪ The methodology should show how much of the price increase is due to transmission cost increases and how much is due to changes for more efficient pricing. Also, the methodology should explain what it means by moving “line charges to a more efficient level” on page 5 ▪ The impact of price changes on each load group should be described 	
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
<p>(a) Prices are to signal the economic costs of service provision by:</p> <p>(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</p>	<ul style="list-style-type: none"> ▪ The methodology recognizes cases of cross-subsidization within its network ▪ Capital contributions are charged for upgrades and extensions to ensure they make economic sense to the network ▪ The methodology states that Buller Electricity is commencing work to understand the extent and magnitude of cross-subsidies occurring in the network 	<ul style="list-style-type: none"> ▪ The methodology is contradictory in that it asserts being subsidy free in response to principle 1a on page 9. The cases of cross-subsidization pointed out by the methodology may in fact be instances of price discrimination, with different consumers making different contributions to recovering the fixed costs of the network—but with all consumer groups paying more than incremental cost ▪ We would expect to see an approach to defining and calculating incremental and standalone costs
<p>(ii) having regard, to the extent practicable, to the level of available service capacity</p>	<ul style="list-style-type: none"> ▪ Buller Electricity has demand charges which incentivise large customers to consume outside congestion periods 	<ul style="list-style-type: none"> ▪ The methodology should provide a description of current service capacity and how much is currently being used to meet demand ▪ The methodology should identify the relationship between prices and service capacity
<p>(iii) signalling, to the extent practicable, the impact of additional usage on future investment costs</p>	<ul style="list-style-type: none"> ▪ Buller Electricity offers controlled load, which provides some price reductions to consumers that have their consumption curtailed during peaks (when investment is most likely to be needed) 	<ul style="list-style-type: none"> ▪ We would expect to see: <ul style="list-style-type: none"> – Forecasts of investment needs to meet future demand – A description of the relationship between prices and future investment
<p>(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"> ▪ For variable tariffs to be truly demand responsive, they would need to charge consumers according to their price-elasticity of demand, i.e. consumers who react less to price increases should face higher variable charges. ▪ The methodology does not attempt to gauge the demand responsiveness of different consumers
<p>(c) Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to:</p>		<ul style="list-style-type: none"> ▪ The methodology confuses economic bypass with uneconomic bypass. When prices are set above standalone cost, the efficient outcome would be for the distributor to lower prices below standalone cost

Pricing principles	What is done well	What is missing
(i) discourage uneconomic bypass		<p>(but still above incremental cost) and retain the customer. Uneconomic bypass is a risk where prices require a particular customer or customers to make a contribution towards the fixed costs of the network that make alternative supply options more attractive. This is a bad outcome for other customers of the network because any contribution towards fixed costs is valuable</p> <ul style="list-style-type: none"> ▪ We would expect to see a description of when Buller Electricity expects uneconomic bypass to occur and its approach to mitigating 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 arrangements for services	<ul style="list-style-type: none"> ▪ Buller Electricity holds regular consultations with stakeholders and the general public ▪ Buller Electricity has no non-standard contracts but is open to negotiating them where necessary 	
(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"> ▪ The methodology should explain how the support for embedded generation encourages transmission and distribution alternatives
(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"> ▪ An adequate level of consultation is held with stakeholders ▪ Transitional arrangements are in place to avoid price shocks and the timeframes for implementing them are provided ▪ Tariffs are stable in that they have not been reweighted 	<ul style="list-style-type: none"> ▪ The methodology confuses the publication of prices with prices that are transparent

Pricing principles	What is done well	What is missing	
(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"> ▪ The methodology recognizes the introduction of new tariffs as a transaction cost. For the 2013/14 year no new tariffs or tariff structures have been introduced ▪ Buller Electricity applies the same tariff structure to all retailers 		
Key to Assessment	Does not align with principles	Partially aligns with principles	Aligns with principles