



Evaluation of Unison 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 Unison’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 Unison’s methodology

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

	Approach	Rationale
Customer categories	Consumers are split by region, and then by their installed kVA	Each region has very different cost structures, but no rationale is provided for using kVA to allocate consumers to groups
Cost allocation	Costs are allocated to regions, and then to price categories by: utilised asset value, per ICP, MWh of consumption, modeled AMD, CMD, loss factor, and interconnection rates	Unison allocates pass-through costs on the same basis as the cost is derived from. AMD is used to reflect capacity requirements and diversity, while remaining stable over time. Utilized asset value is used to reflect the build and maintenance costs incurred by Unison
Charging basis	Low user domestic customers are charged lower fixed charges and higher variable charges. Domestic customers with higher capacity requirements (fuse size) are charged a higher fixed tariff and a lower variable tariff	Existing tariffs are manually adjusted each year to comply with regulatory requirements and Unison’s objectives (low user fixed charge regulations and the default price path)

¹ Unison’s 2013 pricing methodology is available online at: <http://www.unison.co.nz/Pricing-Information>

Overview of our evaluation of Unison’s methodology

Unison’s pricing methodology is well-written and presents some useful diagrams and tables. However, the methodology presents unnecessary information at the beginning which makes the document longer than needed. We were also left a little confused about how costs are allocated to consumers. Unison states that allocating costs at the price category level would lead to discontinuities in the tariff structures, especially where there are few consumers. Unison therefore claims to allocate costs to broader customer groups. However, on page 38 the methodology appears to calculate the utilised asset value and allocate costs to pricing categories.

There were two main concerns that arose from our evaluation against the pricing principles. First, the methodology does not present any indication of the future investment costs required to meet expected demand, and whether those costs have any relationship with prices. Although this information can be found in Union’s asset management plan, it would be useful to understand how prices reflect the costs of any future investments across different network locations (even at the broad level of “Taupo and Rotorua” and “Hawkes Bay”). This link could encourage consumers to reduce their demand to delay investment requirements, providing a benefit in the form of lower tariffs. Second, the methodology does not gauge the demand responsiveness of different consumer groups, and may not recover revenues from consumers who are less price-responsive. While this may be impractical to do at a consumer level, it may be practical at a more aggregated consumer group level.

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"> ▪ Changes to the structure of Unison’s pricing are clearly explained on pages 19-20, and the reasons for price changes are provided on page 46 ▪ The methodology is published on the website, and the language used is clear 	<ul style="list-style-type: none"> ▪ The methodology could be structured in a more logical way, for example, explaining the tariff options after the cost allocation model to create a closer link to the fixed and variable charges
<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> <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 presents an appendix to incorporate explicit links to the principles ▪ The language throughout the methodology also directly links to the pricing principles ▪ The methodology clearly identifies the three groups (classified by installed capacity) that are used in the cost allocation model (page 37) ▪ Section 10 provides clear tables of the costs and revenues that need to be recovered by region and from each consumer group ▪ Section 9.3 identifies the factors used to allocate costs to consumer groups, and Section 9.5 provides the rationale for allocating costs to the consumer groups ▪ An overview of the cost allocation model is presented in 9.1 	<ul style="list-style-type: none"> ▪ We have found two areas of non-alignment and noted them in our evaluation of the pricing principles ▪ No rationale is provided for the allocation of consumers to the three consumer groups ▪ The methodology should define which price categories fall into each consumer groups ▪ There appears to be some ambiguity in the definition of the pricing categories and consumer groups <ul style="list-style-type: none"> – A consumer that has an installed capacity of less than 69kVA may fall into the medium or small user groups – A business that has less than 29kVA could fall into the mass market or commercial consumer groups ▪ The cost allocation model appears to allocate costs to price categories (page 38), but the methodology states on page 37 that cost are only allocated to three consumer groups ▪ The figure on page 38 does not explain what is meant by “costs mostly allocated” or “costs mostly directly attributed” ▪ It would be good to see how modeled AMD is calculated

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> <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 tariff options are identified in section 8.2 ▪ Unison’s objectives and rationale for the tariff design and relativities are explained <p>▪ Section 13 describes the pricing arrangements for customers considering investing in distributed generation</p>	<ul style="list-style-type: none"> ▪ We would expect to see the derivation of tariffs from the cost allocation model, and some examples of how they have been manually adjusted to meet Unison’s objectives. ▪ The tariff tables that present the revenue recovered does not provide any added value. 	
<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"> ▪ Unison describes the changes to the pricing structure, and describes some of the impact to relevant consumer groups. Unison also identifies that no changes to the methodology have occurred. ▪ Transition arrangements for changes to the pricing structure are explained 	<ul style="list-style-type: none"> ▪ The difference between goal revenue and required revenue is not clear, and we were confused by the dates used for expected revenue (p. 21). Other distributors manage to present their methodologies without using this distinction ▪ The methodology would be strengthened by illustrating the percentage change in prices for a consumer moving to the new price categories in section 5.2 ▪ Unison states on page 16 that this year’s allowable revenues will increase by more than 10 percent. The methodology should further explain the impact of this increase on the prices applied to each price category 	
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
<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 provides a very good and accurate explanation of how Unison interprets incremental and standalone costs (page 55) ▪ Unison provides an estimation of the standalone cost of serving the industrial consumers (page 56), and an estimation of incremental costs on page 31 ▪ Unison explains how it avoids cross-subsidies between regions, and requires capital contributions to cover the incremental costs of new connections 	<ul style="list-style-type: none"> ▪ Since Unison highlights the difference in cost structures between the regions, it would be good to see future estimations of long run incremental costs by region
<p>(ii) having regard, to the extent practicable, to the level of available service capacity</p>	<ul style="list-style-type: none"> ▪ Unison offers ToU metering, and night tariffs with a material discount to encourage consumers to switch load from peak to off-peak ▪ Unison identifies on page 29 that the primary cost driver is the value of assets used by consumers (proxied by the fuse capacity of an ICP, where AMD is not possible to calculate). As the fuse capacity is increased, Unison increases the fixed tariff rates to reflect the capacity requirements 	<ul style="list-style-type: none"> ▪ Unison does not provide a description of the levels of service capacity and how much is currently being used
<p>(iii) signalling, to the extent practicable, the impact of additional usage on future investment costs</p>	<ul style="list-style-type: none"> ▪ Unison offers differentials between controlled and uncontrolled usage, within each price category, and increases fixed charges as large consumers increase their capacity 	<ul style="list-style-type: none"> ▪ To properly signal the impact of additional usage on future investment costs, we would expect to see: <ul style="list-style-type: none"> – Forecasts of investment needs to meet future demand – Analysis of peak demand growth by consumer group and network location to illustrate the relationship between prices and future investment – A link drawn between the breakdown in prices (which has been provided) and future investment needs
<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"> ▪ It is not obvious from the methodology whether this principle applies ▪ Unison does not attempt to gauge demand responsiveness, nor does it set prices in a manner that attempts to take into account the price responsiveness of different consumer groups

Pricing principles	What is done well	What is missing
<p>(c) Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to:</p> <p>(i) discourage uneconomic bypass</p>	<ul style="list-style-type: none"> ▪ Unison identifies cases where there is a risk of uneconomic bypass, and identifies ways to mitigate the risk by allowing such consumers to negotiate their specific needs ▪ Unison offers savings for consumers who choose to own their own transformer 	<p>The methodology states that by the use of a proportional cost allocation approach pricing is set below standalone costs and therefore uneconomic bypass is avoided. However, the methodology does not illustrate how it minimises the risk of consumer groups being allocated a portion of the cost higher than what is due to them. A clear explanation of how standalone costs are calculated could help to clarify this</p>
<p>(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</p>	<ul style="list-style-type: none"> ▪ Unison conducts regular customer surveys to get feedback on price-quality trade-offs, and presents a summary of the findings ▪ Unison clearly identifies the number of non-standard contracts, the threshold for negotiating a contract, and the general approach used to determine charges under these contracts 	
<p>(iii) where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives and technology innovation</p>	<ul style="list-style-type: none"> ▪ The methodology distinguishes between distributed generators who are “solely generators” and “those who generate for their own consumption”. Unison is willing to pay sole generators ACOT at the Transpower interconnection rate of \$99.44/kW. Unison rewards the remaining distributed generators in three ways: <ul style="list-style-type: none"> – Variable network charges are reduced – The interconnection charge component used in calculating their tariff is reduced as their Coincident Peak Demand is reduced – The proportion of network asset values allocated to the customer is reduced as the Anytime Maximum Demand that they place on the network is reduced 	
<p>(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</p>	<ul style="list-style-type: none"> ▪ Regular consultations and surveys with consumers ▪ Unison appears to maintain good communication with retailers (e.g. notification of customers split into different tariff categories) ▪ Aims to limit price increases to 10% to encourage price stability (although this was not possible this year) ▪ Unison publishes a pricing policy that details the charges between tariffs and price categories 	

Pricing principles	What is done well	What is missing	
<p>(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</p>	<ul style="list-style-type: none"> ▪ All retailers face the same tariff schedules ▪ Unison uses the same price categories across the two regions to minimise transaction costs for retailers ▪ At retailers request, Unison has introduced \$0/kWh tariff for distributed generators to encourage the collection of data 	<ul style="list-style-type: none"> ▪ Unison appears to have a large number of tariffs that may impose significant transaction costs on retailers 	
Key to Assessment	Does not align with principles	Partially aligns with principles	Aligns with principles