



Evaluation of Northpower 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 Northpower’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 Northpower’s methodology

The table below summarises our understanding of the methodology that Northpower uses to determine prices for one consumer group—mass market consumers—and does not illustrate our understanding of the remaining consumer groups. This example is provided to explain our understanding of Northpower’s pricing methodology.

	Approach	Rationale
Customer categories	One group that includes all ICPs with non-half hour metering (excluding unmetered ICPs)	Appears to use the type of meters to indicate the size of site (and therefore level of demand)
Cost allocation	The costs of directly attributed assets are allocated based on share of demand. Remaining costs may be alternatively allocated or directly passed-through	Most assets are directly allocated to consumers incurring costs. For assets that are not directly attributable, the rationale is not provided. The allocation of transmission costs is intended to reflect the impact of the consumer group on regional peak demand.
Charging basis	Fixed tariffs cover specific assets utilised by mass market group. Variable tariffs cover the remaining costs, proportioned by consumption	Fixed charges comply with low user fixed charge regulations. Variable tariffs are used for consistency with historical expectations of ‘user-pays’ approach

¹ Northpower’s 2013 pricing methodology is available online at: http://northpower.com/images/uploads/Pricing_methodology_disclosure-2013.pdf

Overview of our evaluation of Northpower's methodology

The main issue identified from our evaluation of Northpower's pricing methodology against the information disclosure guidelines is that insufficient information is provided on how costs are allocated to different customer groups. The methodology provides useful data on some of the factors used to allocate costs, but does not clearly link the application of these factors to the costs allocated to different customers. For example, large customers are allocated transmission costs based on their share of regional coincident peak demand. However, from reading the methodology we were not able to identify how each customer's share of regional coincident peak demand leads to their allocated transmission costs.

The methodology does not provide estimates of the standalone and incremental costs of providing distribution services on Northpower's network. As a result, it is not possible to determine whether cross-subsidies are occurring. This is because cross-subsidies occur where a particular group of consumers pays an amount that is less than the incremental costs of serving those customers.

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"> ▪ Presents a summary of the key changes since the last pricing methodology ▪ Methodology is available on Northpower’s 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> <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"> ▪ Appendix 3 provides a table showing how the methodology responds to the pricing principles ▪ Two significant sources of cross-subsidy are identified and described <p>Consumers are clearly grouped into three categories</p> <ul style="list-style-type: none"> ▪ The factors for establishing the categories (primarily based on the range of assets utilised but also influenced by the type of metering) are identified and applied to consumer groups <p>The major costs and revenue components are presented in table 5</p>	<ul style="list-style-type: none"> ▪ Cross-subsidies are identified without reference to an incremental cost benchmark ▪ Additional areas of non-compliance with the pricing principles are noted in Table 2 of this evaluation below <p>The methodology should be explicit that 400V distribution assets are allocated to mass-market sites</p> <ul style="list-style-type: none"> ▪ No description is provided of pricing plans DM1 and ND1 identified on page 18 <p>It is not clear how the allocators presented in tables 1 to 4 of the methodology are applied to obtain the values presented in table 5. This makes it difficult to assess the rationale for cost allocation</p> <ul style="list-style-type: none"> ▪ In the case of the Very Large Industrial customer group, should detail what makes up the “appropriate share of the total Transpower Connection Charge” ▪ The ND10 Price Plan is described as being the same as the mass-market methodology, but with “appropriate adjustments for metering charges”. Not clear what adjustments are applied or whether they are significant ▪ Not clear how daily charges are calculated for mass-market customers

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>The methodology lacks:</p> <ul style="list-style-type: none"> ▪ A list showing the different tariffs that are charged ▪ How those tariffs are composed of fixed and variable charges ▪ The rationale behind the balance of fixed and variable charges levied on 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>	<p>The methodology states that Northpower complies with Part 6 of the Code for large-scale distributed generators, and explains why small-scale generators do not receive avoided cost of transmission charges</p>	<p>The methodology does not identify how investors in alternatives would be rewarded for any benefits that result from deferring or avoiding distribution investment</p>	
<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>	<p>The methodology uses industry standard terminology</p> <p>No changes to the previous pricing methodology have been implemented</p>		
<p>Key to evaluation</p>	<p>Does not follow guidelines</p>	<p>Partially follows guidelines</p>	<p>Follows guidelines</p>

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

Pricing principle	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>	<p>The methodology identifies two significant sources of cross-subsidies in the mass market—rural customers, and low-use residential customers on a low fixed daily charge (due to regulation)</p>	<ul style="list-style-type: none"> ▪ The methodology does not provide estimates of incremental and standalone costs of supplying each customer group. ▪ Without an estimate of incremental costs, it is not possible to conclude that a cross-subsidy exists. As a result, the methodology does not provide any estimate of the level of cross-subsidies between customer groups
<p>(ii) having regard, to the extent practicable, to the level of available service capacity</p>	<p>The methodology identifies that peak demand is used as a proxy for capacity, and that prices are charged on the basis of capacity</p>	<ul style="list-style-type: none"> ▪ The methodology does not describe the current service capacity on the network for each consumer group, nor the relationship between the prices charged to different consumers and available service capacity ▪ Network cost drivers during peak and off peak demand are not explained
<p>(iii) signalling, to the extent practicable, the impact of additional usage on future investment costs</p>	<ul style="list-style-type: none"> ▪ Peak consumption components of the ND9 pricing group are provided and Table 3 presents current peak regional demand for each major consumer group ▪ The methodology identifies that mass market customers receive price signals for the costs of network investment 	<ul style="list-style-type: none"> ▪ The methodology does not present forecasts of investment needs to meet future demands on the network ▪ Current peak demand by group is presented in Table 3, but no information or analysis is provided of forecast peak demand growth by customer group ▪ The methodology should identify whether ND10 prices are linked to demand (in the same way as ND9 prices).

Pricing principle	What is done well?	What is missing?
<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>	<p>The methodology identifies the link between demand response and giving mass market customers the option of having a controlled or uncontrolled load at different prices</p>	<ul style="list-style-type: none"> ▪ The methodology does not identify whether this principle applies, i.e. whether or not efficient incremental costs would under-recover allowed revenues ▪ The methodology states that consumers have delegated demand responsiveness to Northpower through controlled load. Although this is true for customers that select the controlled load option, customers are also responding to price signals when deciding between the controlled and uncontrolled tariff options ▪ There is no attempt to identify whether the three major consumer categories have different demand responsiveness ▪ Different charges for each customer group are not identified
<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> <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"> ▪ The methodology identifies when they expect uneconomic bypass to occur for each consumer group ▪ Some cases where price-quality trade-offs were available are identified ▪ Consumer surveys are referenced that have been carried out for several years ▪ A summary of the number and size of connections under non-standard connections is presented 	<p>The methodology explains that transmission costs are directly passed through (for large consumers), but does not identify how <i>uneconomic</i> bypass is being discouraged through other components of the prices offered.</p> <p>The methodology does not provide a description of price quality trade-offs for the half-hourly metered group</p>

Pricing principle	What is done well?	What is missing?	
<p>(iii) where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives and technology innovation</p>	<p>Northpower identifies two groups of distributed generators (large and small-scale)</p>	<ul style="list-style-type: none"> ▪ It is unclear how much is paid to distributed generators for avoiding transmission costs under this pricing methodology ▪ “genuine contributions to avoided transmission costs” would be better phrased as “actual contributions...” ▪ The methodology does not appear to provide any incentives for distribution alternatives ▪ Given the geographic location of Northpower, we would expect that the network economics might warrant incentives to encourage distributed generation that exceed the requirements of the Code 	
<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"> ▪ A summary of changes to prices is identified in section 5.2 ▪ The methodology seeks to achieve consistency with past pricing methodologies 		
<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"> ▪ Northpower has respected economic equivalence by applying a single set of Line Charge Pricing Plans across all retailers ▪ The methodology states that transaction costs have been minimised through a process of tariff rationalisation over time 		
<p>Key to evaluation</p>	<p>Does not comply with principles</p>	<p>Partially complies with principles</p>	<p>Complies with principles</p>