ROADMAP TO PRICING REFORM

CENTRALINES

THE NEED FOR REFORM AND OUR PROCESS FOR CHANGE

Centralines, along with other distributors, has a goal of reforming distribution prices so that they are more reflective of the costs and services different consumers receive.

The current structure of distribution prices is not sustainable. Without change, residential electricity bills could rise 10 percent in the next 10 years (*i*). Change is required to ensure New Zealanders do not pay more for using electricity in the long-term, and to give consumers greater control over their energy bills.

This plan has been prepared to give consumers and the Electricity Authority an indication of Cenralines' intended approach to pricing reform. It covers the following key areas:

• The current situation: Centralines, distribution pricing and the electricity industry environment

- The need for change: the issue with current distribution price structures
- Process for change
- Customer consultation
- Indicative timeframes

There are different options for setting more cost-reflective prices, which we want to test with consumers. Along with distributors, a range of stakeholders – government, retailers and customer advocates – are actively participating in this pricing reform process. We recognise that close collaboration and alignment across stakeholders, especially with consumers and retailers, will be important for distribution pricing reform to be successful.

(1) Electricity Authority, Signposting the Future

THE CURRENT SITUATION: CENTRALINES, DISTRIBUTION PRICING AND THE ELECTRICITY INDUSTRY

About Centralines

Centralines is one of 29 distribution companies in New Zealand. It distributes electricity to customers across the Central Hawke's Bay region. The Centralines network has over \$54 million worth of assets, is 1,700km in length, and supplies around 8,500 connection points. Centralines is owned by the CHB Consumer Power Trust on behalf of the consumers in Central Hawke's Bay.

Centralines is responsible for distributing electricity from Transpower's national grid to electricity consumers. Advances in new technology are likely to result in Centralines distributing electricity generated by consumers within the network.

As the only supplier of network services in our regions, Centralines is regulated by:

- The Commerce Commission (Commission) under Part 4 of the Commerce Act 1986, and
- The Electricity Authority (Authority) under the Electricity Industry Act 2010 and other regulations.

The Commission regulates Centralines' overall prices to make sure that revenues are only sufficient to cover Centralines' costs of providing, maintaining and operating the network. It also regulates the quality of Centralines' services.

The Authority has a more specific role in regulating the structure of Centralines' prices. It produces a set of requirements against which Centralines' must justify its pricing approach. The Authority is a strong supporter of network pricing reform.

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Current distribution price structures

When we are talking about distribution pricing reform, we are referring to just the delivery component of a household's electricity bill.

For a typical residential consumer, distribution charges (Centralines charges) are just over a third of an electricity bill. Electricity retailers pay Centralines charges so consumers don't often see our prices. Retailers bill consumers, bundling all the components of the electricity services together into the one bill, including our pricing, generation costs, GST, retail and metering costs.

Distribution prices cover the costs of the local distribution network (Centralines network) and our share of using the national grid for transmission (Transpower).

Network prices are made up of:

- A fixed daily price of 15 cents a day for a low user or \$1.15 for a standard user, and
- A flat variable charge (ranging from 4.2c/kWh for controlled hot water to 14.5 c/kWh for anytime uncontrolled use).

Centralines also has a number of different price categories to reflect the fact some customers use energy in different ways to the average customer - such as controlled loads, night rates and day rates, and time-of-use prices.

THE ELECTRICITY MARKET

(National average)



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meeting the electricity needs of all consumers.

While current network prices are easy for consumers to understand, they do not show consumers the value of using the network at different times of the day.

It is not the amount of electricity delivered that determines the cost of providing the network service (which prices are currently structured around). It's the capacity and infrastructure required to meet consumers' peak demands based on where they live that drives network costs. Centralines' network experiences similar levels of peak demand in both the winter and the summer due to irrigation in the summer offsetting reduced demand from the heating on cold winter days.

Network demand is typically the highest on cold, wet, winter evenings when people have high heating requirements. The more electricity people use at the same time, the more power lines and electrical infrastructure needed.

RESIDENTIAL DEMAND

How households typically use power during the day.



With the emergence of new technologies — solar panels, electric vehicles, battery panels, smart metering to name a few — consumers now have more choice and control around how they use energy.

While the opportunities presented by these technologies are exciting, they also lead to market distortions for both consumers and distributors under current distribution pricing arrangements and create adverse impacts.

These adverse impacts include some consumers paying more than their fair share of network prices and, conversely, some paying less. It also results in artificially stimulating technology uptake in some cases and slowing it down in others. Importantly, consumers now need to face price signals that more clearly relate to underlying costs. Independent studies show that if distribution price structures stay as they are now, consumers who rely solely on the distribution network to get electricity could see an increase in their distribution charges of 10 percent in the next five years and up to 30 percent in the next 10 years (2).

A recent report by Concept Consulting has found that the cost of these distortions will fall most heavily on New Zealand's lowest income earners. For these consumers an average bill increase of around \$100 per year is expected, with rises of \$350 per year or more in some cases. (3)

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⁽²⁾ Electricity Authority, Signposting the Future

⁽³⁾ Concept Consulting, March 2017: New Technologies Study - Part 3: Social impacts

Service-based, cost-reflective pricing will promote fairness and choice

More cost-reflective, service-based prices that Centralines plans to move towards will promote fairness between customers and help customers make better decisions about the true value of different technology choices.

Ultimately, over the longer term, if prices relate well to the underlying costs then behavioural changes by individual customers should reduce pressure on Centralines and other network businesses to invest in the equipment to upgrade capacity.

Historically, distribution price structures have been constrained by simple metering technologies. Until recently, meters could only measure the total electricity used (consumption) over one or two months.

However, the installation and rollout of smart meters means the technology to measure electricity use at different times of the day is available now. This enables new pricing approaches that align the price consumers pay with the services they buy.

How electricity prices are structured affects how consumers respond to these opportunities. Increases in electricity use at peak demand times would require Centralines to increase network capacity. Distributors must build and maintain a network to support the delivery of electricity at peak demand. Price signals to reflect the cost of this increased demand will avoid inefficient and costly investment for both distributors and customers. For example:

- The network evening peak could increase with the rise of electric vehicle charging after work. A price change to signal the higher costs of supplying at peak times would aim to reward consumers for recharging at off-peak times – such as overnight as opposed to straight after work – when prices would be lower.
- The highest network peak demand occurs during the winter evenings, a time when solar systems do not help to reduce the peak. There is no change in solar customers need for network support. To avoid those without solar subsidising those who have installed solar, the costs of building and maintaining the network demand must be shared fairly among all electricity users. Prices that reflect peak demand would give customers considering solar the opportunity to make decisions that reflect the change in Centralines' costs, rather than costs being shifted to other consumers through higher charges.

In the short-term, pricing reform will not deliver higher profits or revenues to network businesses like Centralines – some prices will go up, but others will go down to offset this.

In the long-term, we expect that pricing reform will improve use of the existing network and take pressure off upgrading the network to meet higher peak demands. Network prices will be lower than they otherwise would be, because of lower investment requirements.

Why do we need to change price structures?

Customers face increasing choices about electricity use

- prices need to signal the value or costs of those choices.





Our goal

Centralines' goal with pricing reform is to introduce distribution network prices that are more reflective of actual network costs and the services that customers receive. Distribution pricing is also key to ensuring the technological advancements in the electricity industry evolve efficiently and without distortion to investment and consumption decisions.

There are different approaches to establishing more costreflective, service-based prices, each with their advantages and disadvantages.

Centralines recognises that it will take some time for consumers to understand what the changes mean and therefore a transition path may be required to smooth the impacts on consumers over time.

Pricing structures need to reflect costs, ensuring:

Smarter energy use - it is not just about how much energy is used, but also when it is used.

- Fairness removing cross-subsidies between consumers in the short-term.
- Consumer choice facilitating options around the use of existing and new technologies
- Efficient investment clear signals from the market on electricity use at different times of the day allows distributors to plan and operate their network more efficiently.
- Lower prices reduced investment in network capacity would benefit consumers with lower prices over time due to consumption decisions that reduce pressure on the network at peak times. (4)
- Sustainable distribution networks to support the new energy future.

(4) By providing better choices to customers about the service they want, the Electricity Authority believes prices would be 10% lower in five years and 30% in ten years

Price changes to date

Centralines has already made progress in introducing more cost-reflective, servicebased price offerings, though the large majority of our customers are still on legacy pricing options.

- Distributed generation/solar price 1. category. In April 2016, Centralines introduced a distributed generation (DG) price category for residential consumers installing solar after that date. This is because customers with solar still have the same need for the electricity network. The poles, wires or transformers that Centralines uses to supply customers with solar are still needed when the sun is not shinina. However, because of reduced consumption these customers were no longer paying a fair share for the provision of the network. Had Centralines not introduced this new price category, prices to consumers without solar would have risen.
- Optional time-of-use (TOU) 2 pricing. In April 2017, Centralines improved its TOU price offering, by raising the difference between offpeak and peak prices (providing a greater reward for customers who are flexible with their use). We also extended eligibility to this price category for customers installing solar.

Customers with solar still have the same need for the network at peak times.

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New distribution pricing options under consideration

The Electricity Networks Association (ENA) released the paper "New Pricing Options for Electricity Distributors" in November 2016 for discussion. The final paper will be a useful resource and will provide Centralines with technical guidance on costreflective pricing structures.

The ENA is encouraging distributors to consult with consumers and their communities to understand consumer preferences in designing alternative pricing structures, which Centralines is undertaking.

We agree with the following generally accepted principles and features of service-based pricing. Centralines future distribution pricing will be:

- Cost-reflective fair and free of inefficiencies and crosssubsidies between consumers as far as possible.
- Service-based reflect the services being provided.
- Actionable provide price signals that consumers can choose to respond to.
- Durable/effective in the long-term independent of market, technology and policy changes.
- Compliant meet regulatory requirements.
- Simple transparent and easy to understand.
- Stable and predictable avoid volatility. (5)

(5) The Electricity Networks Association (ENA) New Pricing Options for Electricity Distributors in November 2016 From these principles, five network pricing types were identified that could be used either on their own or in combination to meet consumer and industry needs in the future. Centralines will be exploring these options with consumers and retailers to determine its future network pricing:

- TOU consumption prices that vary depending on the time of consumption. Centralines currently has this option available.
- Installed capacity a charge for having a certain capacity installed and available at a connection point (agreed maximum demand).
- Booked or "nominated" capacity is the size of the fuse agreed between the distributor and the consumer (agreed maximum demand level at a consumer's household).
- Customer peak demand consumer's maximum demand at any time, often referred to as anytime maximum demand (AMD) prices.
- Network peak demand charges are based on the network demand peaks rather than the demand peaks of individual connections.

The ENA paper recognises that distributors all face different circumstances and therefore there is no recommendation of specific types of pricing over others. The ENA anticipates that a "second phase" of pricing change may evolve, providing locational and dynamic pricing in response to new market developments.

From a practical perspective, implementation of new pricing structures will need to be supported by the industry's billing and data management systems, and smart meters. (6)

(6) Feedback from retailers and distributors suggest the capabilities in these areas are still a work in progress that consideration will have to be given too.



Consideration of the consumer perspective when implementing successful service-based pricing is key. It is important Centralines understands and incorporates into distribution pricing changes customer perspectives and motivations.

The Authority has produced 'Guidelines for consulting on distributor tariff structure changes', which Centralines will be adhering to as it undertakes its customer consultation. They guide distributors on the scope, approach and process of consultation on price structure changes. Key features include the following:

- The distributor must approach the matter with an open mind, and be prepared to change or even start a process afresh.
- There are no universal requirements on the form of consultation, and any type of interaction (whether oral or written) that allows adequate expression and consideration of views will be sufficient.
- Consultation must be allowed enough time, with genuine effort.
- Consultation involves the statement of a proposal not yet finally decided on, listening to what others should say, considering their responses, and then deciding what to do.

Importantly, the form and method of consultation undertaken must foster mutual trust between the consumer and the distributor. There are valuable lessons to take from the move towards cost-reflective pricing in Australia, along with behavioural response research that has been undertaken. Centralines will also be using these findings to help inform and shape future network pricing.

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Next steps

As noted, Centralines has already taken some steps to deploy more cost-reflective, service-based distribution pricing options. Our analysis, does however, indicate that time of use pricing is only weakly cost-reflective, because it is still based on total customer consumption, rather than measures of peak usage. We would like to explore with consumers and other stakeholders, the merits of stronger price signals and how these could be packaged.

Initially, to initiate customer understanding, and respond to queries of why pricing changes are needed, Centralines' intended plan is to ensure wide customer distribution of information. A communications plan is underway. Included as tactics in this plan are:

- Dedicated email to interested participants to distribute future pricing information.
- Brochures and use of printed material.

- A section on Centralines' website.
- Local community events to provide direct interaction with customers.

If necessary, Centralines will also consider the potential benefits of conducting real-world trials of different approaches with a limited group of consumers to validate findings of consumer research.

ACTIVITY	TIMEFRAME
Develop specific pricing options and consultation materials	April 2017 to November 2017
Undertake customer consultation	December 2017 to April 2018
Develop preferred pricing option	May 2018
Make decisions on implementation timetable, including need for small-scale trials	June 2018 to December 2018

Based on Centralines' analysis to date, pricing reform will likely result in material shifts in consumers' bills. Consumers that have low throughput (kWh), but high peak requirements (kW) - meaning they do not use much electricity overall, but when they do use the network it is at a relatively high rate - would face increased network delivery charges. As a result, there is reasonable likelihood that a multi-year transition period will be required to smooth the impact of pricing reform.

Due to the Commission's regulatory requirements associated with price restructuring, Centralines' expectation is that substantive pricing reform is unlikely to commence until the year beginning 1 April, 2020.

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