What future options are being considered for charging lines costs?

Time-of-Use pricing

"Time-of use-pricing" means paying less to use the network when it's not that busy, and more when it's really busy.

It's designed for customers to save money by shifting their usage a little each day. It is particularly relevant to upcoming technologies such as electric vehicles or home storage batteries.

Think of this as being like:

Car parking, which can be much cheaper at night time or in the weekend.

Capacity pricing

"Capacity pricing" is where a customer nominates an agreed maximum of electricity supply at any one time.

If they go over this, delivery will continue: either with a possible excess charge applied, or an automatic ugrade to a higher plan.

Think of this as being like:

Nominating an expected upper limit for the electricity you'll use at any one time – say the equivalent of running four single bar heaters at once (approx 4kW), six bar heaters (6kW) or seven bar heaters (7kW) at once.

Demand pricing

"Customer demand pricing" means charging based on a customer's biggest hours of usage over, say, the previous month. Network lines prices would relate to the maximum rate of energy consumption at any one time rather than the overall level of energy consumption.

Think of this as being like:

Being charged for your lines on the basis of the actual maximum rate of electricity you used at any one time over the last month – whether that's the equivalent of four single bar heaters (4kW) or seven bar heaters (7kW) etc.

These options could be used separately or in combination

What happens next?

The ENA has produced a technical discussion paper that expands on some of the ideas presented in this summary. It examines current and expected pricing issues facing distribution businesses and suggests future options for pricing of services – although we have stopped short of promoting particular options.

To be successful, any changes must be fully supported by consumers – along with other important stakeholders such as electricity retailers.

Pricing discussions need to focus on the end consumer and encourage consumers' active participation in the conversation around the options.

The first stage of our consultations around new pricing options is with our industry and government stakeholders.

We want to ensure that we are all in broad agreement with the issues and options that we will take to our consumers.

Once we have consulted with our stakeholders and got their feedback, we will begin to look at how best to bring our consumers into the discussion in a meaningful way.

We need to have a thorough understanding of our consumers – their level of awareness around lines charging, the current pricing structures and how best to communicate and engage with them.

Finally, and before any decisions are taken, the electricity distribution businesses will move into a direct consultation and engagement programme, seeking consumer preferences in terms of lines charges.

Once we have listened to the public's views, we will look to reflect this feedback in the design of our pricing structures, with the aim of ensuring consumers have access to an electricity distribution network that is reliable, future-focused and cost-effective.

Succesful pricing reform will also help ensure that the distribution networks themselves are operating on an efficient, sustainable footing into the future.

The full pricing options discussion paper can be found at www.ena.org.nz/new-pricing-options

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NOVEMBER 2016

Electricity Networks Association

The Electricity Networks Association represents the 29 companies that provide and maintain the power lines that deliver electricity to individual homes or business.

The association supports its members in terms of developing policy, regulatory matters, compliance and government relations.

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Charging Matters

– Considering new ways to pay for electricity networks

Better matching lines prices with the costs of supply

Introduction

New Zealand's electricity distribution businesses (EDBs) – also known as lines companies – are working with their industry association, the Electricity Networks Association (ENA), to consider options for reform of the lines prices charged to consumers.

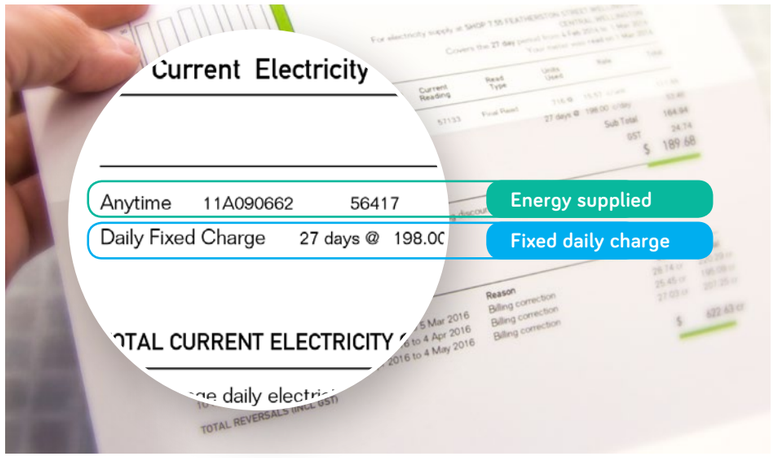
The reform is motivated by the desire to firstly lessen peaks in demand so as to reduce the need for costly infrastructure upgrades, and secondly, to better align charging with true costs across all consumers.

Various pricing options that better reflect the actual costs of supply to individual consumers are being considered.

The detailed exploration of the need for reform and the possible options is contained in a comprehensive discussion document developed by the ENA and its members – *New Pricing Options for Electricity Distributors*.

This summary document is intended just as the first stage of a longer discussion that will ultimately seek to bring consumers themselves into the conversation.

At this point we are wanting to ensure our stakeholders in the electricity sector, government agencies and associated industry groups are aware of both the issues the sector is facing, and the pathway we are proposing to fully consider new pricing options.



The need to change how lines costs are charged

The case for reform

New technologies are ushering in innovative ways that consumers use, generate, store, and manage the electricity flowing through their household's wires. It's clear the way that New Zealanders interact with electricity will be turned on its head in the next quarter of a century.

All this upheaval creates challenges and opportunities for the electricity distribution industry. The industry is already modernising how it manages the 150,000 km of cables and wires that power New Zealand's homes, services, businesses, and industries.

One of the major challenges is the way that distribution networks charge for their services. Due to regulatory requirements, about half of New Zealand consumers pay 15 cents a day as a fixed charge to fund the upkeep of electricity lines. This raises less than five percent of the actual cost of maintaining reliable network services. The remainder of the $1.2 billion needed annually by local distribution networks to keep the lights on comes through a charge based on consumers' consumption.

These charges are proportional to the amount of electricity they consume (regardless of the time of day they consume it). This favours some consumers and penalises others (ie. creates cross-subsidies) and leads to inefficient investment.

Reform is not about increasing revenues. It's about reducing the future need for costly network upgrades to meet growing peak demand and better aligning charging with true costs across all consumers.

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Improvements in technology, the falling cost of technology, and changing consumer behaviour are driving the need for change.

If networks do not adapt their pricing structures to these changes, the Electricity Authority has reported that consumers' bills could increase by 10% within 10 years – around $204 a year.

Much of distributors' costs relate to infrastructure, rather than the amount of energy consumed. For example, distributors build and maintain poles and wires, or underground trenches and ducts in every street – regardless of how much electricity they supply. These costs are fixed, irrespective of consumer numbers or electricity consumed.

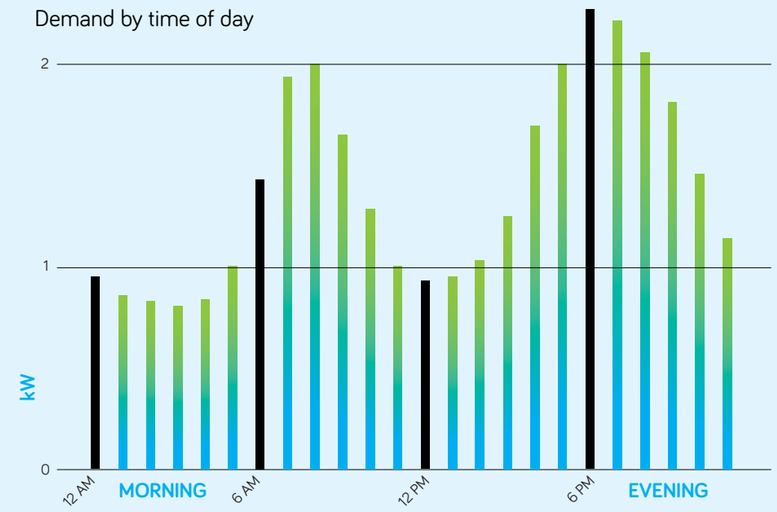
The way that distribution networks charge for their services has not significantly changed for many years.

Recent improvements in metering capabilities, together with new technologies that are changing how electricity is used, are driving distributors to reconsider how they price.

Emerging technologies changing the playing field

Electric vehicles are an example of new technologies to which the industry has to adapt. As these come on stream, there will be benefits in providing incentives for electric car owners to recharge them at non-peak times, rather than in the early evening when demand is at its highest.

Technology has great potential to be an enabler of a smarter grid. Home energy managements systems and batteries, for instance, can be configured to automatically respond to new pricing structures, easing the burden on existing electricity infrastructure and saving consumers money.



Building for peak demand

What determines the cost of providing an effective and reliable distribution network?

Residential electricity is not consumed evenly throughout the day – it typically has two daily peaks: early morning as people wake up, shower and have breakfast, and in the evening when people return from work, cook meals, and watch television. Both of these peaks increase in winter when it is colder and gets dark earlier.

Twin Peaks

It is largely these peaks in demand that determine the required capacity of the lines' network. Networks have to be built with the capability of reliably supplying consumers with the electricity they require for those few hours per day when demand is at its highest.

Similar to a roading system that has to be built to cope with peak rush hour traffic twice a day (with the roads often being 'under-used' at other times), it is this peak capacity requirement, rather than the amount of energy consumed, that largely governs the cost of building and maintaining the electricity distribution networks.

If growth in peak demand can be managed or limited, a distribution company may be able to avoid costly infrastructure upgrades, and the subsequent need to pass these costs on to consumers.