3 November 2021

Submissions
Electricity Authority
PO Box 10041
Wellington 6143

By E- Mail to distribution.pricing@ea.govt.nz

Re: Counties Energy Submission on "Supporting reform to efficient distribution pricing: a refreshed Distribution Pricing Practice Note"

Counties Energy Limited (CEL) supports the Electricity Authority's (Authority) initiative of developing a distribution pricing practice note and the Authority's openness in seeking feedback.

CEL notes that the paper talks about "The benefits of faster improvements in the efficiency of distribution pricing fall into two broad camps: benefits to consumers (lower costs over the long-term) and supporting a low emissions economy by enabling electrification." CEL agrees that with decarbonisation of transport and industrial processes, plus an end date for reticulated natural gas, all EDBs will experience significant peak demand growth and consequential network capacity investments. Minimising the resulting cost to customers will be critical because of the scale of change.

Consequently, CEL recommends that this should be the focus of EDB pricing rather than network congestion pricing. This is because to manage new technology such as home EV chargers there is a considerable amount of time needed to identify and trial solutions, implement nationwide standards, invest in the solution and implement the solution (e.g. there are a significant number of legacy meters still in the market after around 20 years from the first smart meter being installed). A further illustration of this is in the Practice Note where there is mention of the success of controlled hot water heating with a ripple control. This technology did not occur overnight and represents a long history of EDB investments, technology changes and learnings.

Below are CEL's answers to the discussion paper's submission questions.

Yours sincerely

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Pricing Practice Note Questions:

Q1. Do expectations laid out in the updated Practice Note on what 'good looks like' for efficient pricing provide a useful guide?

The Practice Note is helpful and CEL supports the development of more cost reflective pricing. We agree with the Authority that this will result in improved customer investment signals (e.g. high fixed costs will send the correct economic signals of removing variable line charge savings from home PV investments) and provide a platform for future load aggregators (e.g. battery or EV load aggregation that could be similar to existing hot water load control).

CEL would question the focus within the Practice Note on sending pricing signals to congested areas of the network. CEL believes that congestion pricing would result in a significant transaction cost increase for retailers with no evidence that pricing signals are effective at changing customer behaviour (especially as distribution charges representing only a proportion of the customer's final power bill). In CEL's experience of TOU pricing with manufacturing and industrial customers, who employ specialised electrical staff, is that they do not understand distribution prices and even when they do, they don't seek to alter power usage to reduce line charges. Where CEL is aware of EDB pricing that has been able to alter customers behaviour, this has required extreme pricing that has resulted in significant customer complaints, with the pricing ultimately being withdrawn.

Where price signals will likely work is where there are automated changes in customer demand in response to price signals (e.g. EV chargers being timed to operate during off-peak periods). Creating this level of automation requires significant research, investment, implementation, risk (i.e. investment returns) and time either by the EDB, retailer or a load aggregator. In this regard, CEL already looks at non-network solutions before committing to significant network capacity upgrades.

Q2. Do you consider any of the material to be incorrect, subjective or superfluous?

CEL agrees with the EA clause 22a point that "it may be more appropriate to send a price signal where no current congestion or network need is evident, but the distributor's network understanding and trend analysis suggests that it will be required in the coming years." This is compared to the focus within the paper on congesting charging, which is a pricing methodology particularly designed for pricing roading congestion. Unlike a road, it is not possible to operate a congested feeder because this would result in voltage degradation and the EDB would not be able to provide the regulated voltage (clause 53 of the Electricity Regulations 1997).

Optimising the network investment is difficult to balance so that capacity matches load for the following reasons:

- Forecasting peak customer demand is difficult because it occurs for a very small amount of time and is weather dependent;
- Distribution infrastructure involves long-term assets with a small incremental cost for additional capacity (e.g. the cost for a larger conductor is minor if you are replacing the conductor); and
- Failure to forecast correctly risks non-supply, which has a very high-cost impact on customers.

These factors means that it makes economic sense for EDBs to invest in step changes in network capacity rather balancing peak demand and network capacity.

Q6. Do you believe it is useful for the Practice Note to become a 'living document' that is refreshed regularly to update for the Authority and industry's understanding?

Note: Considerations include, the frequency of updates and the associated consultation with stakeholders being most useful; the level of detail that provides useful guidance, and what focus future iterations could have.

Yes, CEL supports a 'living document' because this will capture the learnings from both the industry and the Authority. This will also provide pricing guidance for new technologies such as EV chargers and future DSO services.

Q9. Engaged customers are more likely to respond and in a more predictable manner than disengaged customers. What role do you see the Authority has in supporting consumer engagement on pricing?

CEL would encourage the Authority to better understanding the customer perspective, which is complex because there are a range of customer responses to prices. To date the Authority has left it to the market and this has been reflected by retailers not even willing to offer CEL's TOU pricing in their pricing options to customers. Most likely this is because retailers have found little to no customer demand for TOU pricing. Consequently, retailers would not be able to justify the costs for them to amend their pricing offerings, billing systems and website (published prices) where there is no commercial gain.

Counterfactually, if there was customer demand for cost reflective pricing then retailers would be requesting this from EDBs. But retailers aren't making that request nor has the EA given any evidence to the contrary. In the telecommunication industry retailer pricing that has moved away from TOU and variable pricing to a fixed charge even though they purchase from infrastructure providers that face similar cost structures (e.g. Southern Cross international broadband).

Q10. Ensuring that targeted pricing signals impact decision makers is important in distribution pricing reform. What role do you see the Authority has in supporting an industry Consultation paper: a refreshed Distribution Pricing Practice Note Page | 15 discussion on ensuring price signals reach consumers, taking into account the need to comply with the Commerce Act 1986?

The Authority will need to regulate if they want retailers to pass through TOU line prices to consumers (retailers do pass through EDB fixed line prices). This is particularly true for localised congestion pricing, where the retailers will incur significant per customer transaction costs but obtain no financial gain. This said, CEL remains sceptical that customers will change their behaviour as a result of regional congestion pricing so overall the enforcement of congestion pricing could result in a negative economic return.

Q11. Complexity in pricing structures could slow reform efforts. How do you see the Authority working with the sector to strike the correct balance?

The Authority may have a role in creating pricing for demand side aggregators, with this market being created through EDB pricing. This would be particularly true for home, business and public EV chargers where the aggregator could obtain lower line prices for load that is able to be controlled by an EDB. For

this to occur the aggregators will need price certainty and time to undertake trials and implement a solution.

Q12. Can you provide feedback on how bill shock can be managed by industry and the Authority, to support ongoing reform of prices and not unduly impact on groups of customers?

CEL is managing bill shock through incrementally increasing its fixed line prices. We would request Authority patience and look for EDB to be best able to manage fixed charge bill shock overtime.

Q13. Are there aspects of LFC and its announced phase out that you see as an ongoing impediment to pricing reform?

Timing for the amendments to be made to the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 are an issue. If this doesn't occur before the deadline to notify retailers of CEL's prices in January 2022, then the first changes to LFCs won't occur until 1 April 2023.

Q15. Currently, installation of energy intensive devices such as EV fast chargers are not required to be notified to distributors. Do you see this this as an impediment to advancing pricing reform, and what role do you see the Authority having in this area, and how this could be done?

CEL is being approached by EV owners for additional capacity at their home for 7kW and 22kW EV charges. Managing the impact of EV chargers will be more difficult than home hot water cylinders because homeowners will be able to circumvent controls on their EV charger through such measures as installing 7kW EV chargers on both their controlled and uncontrolled home circuits (so they can switch charging to the other EV charger when it suits). EV charger regulations may be required to ensure that EDBs are able to load control 7kW and above EV chargers.

Q16. As we develop our thinking on further initiatives, tools or regulation, we will engage appropriately with the sector. We welcome any immediate suggestions you have regarding how we could better promote faster pricing reform.

Faster pricing reform could be achieved through the following:

- Showcasing of what the Authority considers best practice, with an emphasis on the financial savings that the Authority claims exist. If EDB pricing can reduce costs, and so reduce prices to customers, then CEL believes that the pricing would be adopted quickly by the industry;
- Greater consideration given to the practicality of the Authority's pricing proposals. For example, how would congestion pricing work in practice and how EDBs manage network capacity; and
- An industry workshop on the impact of decarbonisation to determine how EDB pricing can reduce the future peak demand from technology such as EV chargers and electricity substituting reticulated gas.

Q17. Do you consider that the Authority has not properly understood any of the constraints listed in this paper, or has missed other issues that constrain efficient pricing reform progress and how they could be addressed?

Note: Where you provide further issues, please provide as much detail as possible. Please also consider whether any additional issues are best addressed by industry, or if the Authority is best placed to address the issue solely.

EDBs are required to consult with retailers on their proposed new pricing structures, which requires EDBs to consider retailer feedback with an open mind. To date, retailer feedback is that more targeted pricing is not possible because of their billing systems being unable to pass on the pricing signal. In addition, retailers face billing costs to introduce new billing structures, and this would be difficult to justify based on the small numbers of customers that EDBs have on feeders that require upgrading because of peak demand increases (e.g. normally a feeder would have maximum of 600 customers and the largest retailers would have 30% of the market - this is 180 customers). Even if all the feeders requiring upgrades were grouped together the numbers would not be significant and CEL is the 10th largest EDB by ICP count.

Q18. Please do not limit your feedback to the above questions - we also welcome feedback on any other ways the Authority could work constructively with industry and consumers to support and drive accelerated pricing reform.

CEL would question the Practice Note focus on managing congested networks using EDBs existing ripple load control for the following reasons:

- The ripple signal that is generated can't target particular feeders because the equipment is housed in an EDB substation (or by Transpower) with the signal radiating out too all feeders on the substation rather than a particular feeder (in theory an EDB could program ever load control relay on the feeder to only respond to a certain signal, but CEL is not aware of this occurring);
- The amount of controlled load that is available varies during the day and by the day of week because it is dependent on hot water usage within the home (i.e. hot water usage varies during the day and if the cylinder is not heating then there is no load to drop); and
- For most EDBs it is difficult to determine the available load because of a lack of LV data.

CEL is going to investigate how it can use its smart meter communication network and the load control relay in the smart meter to delay future network investments on feeders that require a future upgrade to ensure service level to customers. The smart meter technology can target feeders through the smart meter headend and provide detailed half hour available controllable load (not instantaneously). Undertaking this work takes time and resources and the final outcome maybe unsuccessful (i.e. there is no delay on the upgrade of the feeder capacity from using the load control).

Q19. Please consider the role that you see appropriate for the Authority to be proactively involved in pricing evolution.

There is likely to be a role for Authority to create a market for load aggregators. This is required to give certainty to investors to come into the market, which is required given the future impact from decarbonisation.

Q20. How the Authority could engage more with industry, either individually or through structured channels, and in formal and informal ways.

CEL would welcome greater dialogue with the Authority and for the Authority's policy staff to discuss their views with CEL's wider staff including CEL's planning engineers, IT programmers, metering electricians and construction teams.