

19 February 2019

Electricity Authority  
2 Hunter Street  
Wellington

Dear Sir/Madam,

## **Consultation – More Efficient Distribution Prices: What do they look like?**

Thank you for the opportunity to make a submission on your consultation paper 'More Efficient Distribution Prices'. We support the submissions made by the Electricity Networks Association (ENA) and the submission by PwC on behalf of the Distribution Group (a group of small and medium sized distributors including Northpower).

Our comments are supplementary to those submissions.

### **Pricing reform generally**

Northpower supports the need to transition to pricing that is more reflective of the cost of the services being provided, and reflects the underlying network costs. However, the industry must take a considered approach to this change, in order to ensure not only efficient outcomes, but that the new framework is simple, provides clarity for consumers and retailers, is durable in the long run and ensures a just transition for those consumers that may be negatively impacted by the changes.

The industry, through the ENA, is well on the path to the design and implementation of pricing reform, and Northpower is taking into account the shared learnings as we develop our own pricing pathway.

Our assessment of options has looked at the efficiency, fairness, and commercial outcomes of the various pricing options, with an initial Time of Use trial for residential consumers commencing 1 April 2019. This option was selected on the basis that it balances consumer and efficiency outcomes – delivering price signals to nudge consumer behaviour, and is predictable and simple, enabling consumers to manage their bills.

### **Balancing economic efficiency against consumer outcomes**

Northpower is owned by its consumers, and plays an important role in the social and economic outcomes of its community. While we agree that pricing reform is necessary, it's important that we consult widely with our community, communicate the changes and the reasons why, and get stakeholders on board. This includes mitigating the impact of change through appropriate transitional arrangements, managing the impact on those in energy hardship, and building a case for how this benefits the community. Without taking these steps we run the risk that the changes are rejected by our community and enduring change is not achieved.

## **Practical implementation challenges**

There are a number of practical challenges facing the industry to implement the proposed changes, which the Electricity Authority (EA) could assist the industry in finding solutions to.

### *Low Fixed Cost regulations (LFC Regs)*

The ENA has outlined why the regulations hinder pricing reform, and we endorse those comments. For us, these regulations prevent achieving cost reflectively across a large portion of our consumer base. Due to Northpower's low average consumption per household, 55% of our consumers are eligible for the LFC Regs (and a further 21% would be eligible if they reduced their consumption below 8,000kWh per annum, e.g. by installing solar), limiting recovery of fixed prices to \$55 pa per consumer.

While these regulations remain in place it is not possible to achieve the EA's target outcome without breaching the intent of the LFC Regs.

### *Retailers on board*

Some of the key retailers have indicated to us that their systems are not yet able to provide time-sliced data to enable time based cost reflective pricing, and have no dates for when this will be available. As such, they are looking for traditional per kWh options to continue where their systems are not ready, where they have not completed smart meter rollouts, or the meter is non-communicating.

While we could retain legacy options this would increase billing complexity and transaction costs, and is unlikely to drive quick uptake of pricing reform. It also opens up opportunities for retailers to cherry-pick plans, putting consumers on the most cost efficient plan for their use and thereby defeating the intent of cost reflective pricing. The alternative is to force migrate consumers but as billing data is provided by retailers, we expect some could not comply.

### *Smart meters*

The smart meter rollout in the Northpower region has largely ceased, leaving at least 1 in 5 consumers unable to access new cost reflective pricing options. We understand that most retailers have no plans to complete their rollouts in Northland. Even where smart meters have been rolled out, lack of supporting mesh network extensions and cellular comms equipment mean many smart meters cannot communicate and are effectively legacy meters.

### *Setting appropriate prices and managing revenue risk*

Access to half hour data is essential to set pricing, and mitigate revenue risk from changing pricing structures, but we so far have not been able to secure appropriate agreements for this data.

Addressing this risk through increasing or decreasing network pricing the following year, will lead to pricing volatility, the likelihood of increased risk margins by retailers, and result in a cynical response from our consumers. Again, this is unlikely to lead to enduring and positive outcomes from pricing reform.

### **Star Rating**

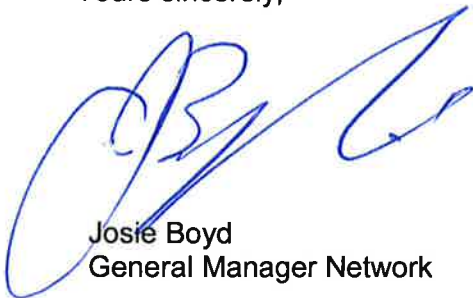
For the reasons discussed in the PwC submission, we agree that the star rating system doesn't adequately reflect the nuances of each EDB's situation in their respective geographical areas and the challenges of implementing the proposed changes, and is overly subjective. As such it is likely to result in unnecessary effort in defending, explaining, or rebutting ratings. To drive better outcomes and engagement, we would encourage the EA to instead regularly engage with EDBs on their progress, including working on solutions to the challenges faced.

### **Roadmap**

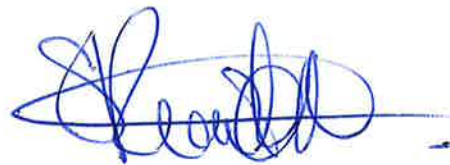
Pricing roadmaps will evolve as they respond to issues and feedback, for example from pricing trials, and therefore it is unrealistic to expect firm timeframes to be given by EDBs at this stage. The update in September 2019 would seem an appropriate time for the implementation of any new reporting requirements, allowing the industry to take on board further learnings from the ENA working groups.

If you have any queries please contact Shane Ruxton, Commercial & Regulatory Manager  
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Yours sincerely,



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**Q1: Do you agree that distributors need to reform their prices? What is the reason for your answer?**

**We agree that distribution pricing needs to be reformed.**

We agree that distribution pricing should reflect the cost structure and cost drivers of an EDB, and that by passing these pricing signals through to consumers they can make decisions around whether they want us to incur more cost to build capacity, or shift their load to times when the network is less congested. However, the implementation of pricing reform must be done in a measured way, to avoid unnecessary transaction costs, price shocks (particularly to the most vulnerable in our community) and damage to consumer goodwill and engagement.

**Northpower is reforming its distribution pricing**

Northpower has invested significant time and effort in developing and implementing cost reflective pricing since the EA published its consultation paper in late 2015. We have identified and studied the various pricing structure options, consulted with retailers, and assessed the pricing options against a balanced set of criteria which focuses both on consumer and efficiency outcomes.

We have introduced a Time of Use trial plan from 1 April 2019, which enables us to test consumer behaviour responses, retailer response and billing processes. The results of the trial, if successful, will be used to develop our implementation plans for a full roll out.

**Q2: How important and urgent are the issues identified by the Authority?**

**Pricing reform is important, and so it's important to get it right**

Our modelling suggests that in the medium to long term emerging technology such as solar, batteries, and EVs will scale to the extent that they may start to have an impact on our network. Network capacity is not forecast to be an issue on our network in the medium term (except for localised growth areas). Given this context and that pricing reform will have a material impact on our consumers, how much they pay, and how they use electricity, we have time to ensure a well-managed implementation. This is important to ensure changes are enduring, promote stability, so that consumers understand and support them, and that we achieve the behaviour change sought so consumers see reduced bills over time.

Engaging with stakeholders, taking them on the journey, implementing a structure which consumers can understand and respond to, and achieving consumer buy in are vital to achieving enduring change. We are committed to pricing reform, but in a well-managed and staged implementation.

**The impact of pricing reform on total cost is unlikely to be significant in the short to medium term**

The cost of increasing capacity in the asset is relatively minimal, provided it is done at the time of building or replacing the asset. It is therefore common practice to build capacity for future growth into network investments.

We are not forecasting congestion issues on our network in the short to medium term. The opportunity to therefore avoid cost in the short to medium term is likely to be minimal. However, in the longer term (10 to 40 years) we agree there is an opportunity to avoid investment costs and thereby reduce electricity prices compared to what they would otherwise be. However, the saving is likely to be small unless the pricing avoids a capacity increase which is out of sync with the asset replacement lifecycle.

**Q3 Do you agree with the proposed Distribution Pricing Principles?**

We are concerned that the overall outcome doesn't balance economic efficiency with consumer outcomes and whether the principles adequately allow for the practical realities of implementing this reform.

As a consumer owned organisation that plays an integral part in the social and economic outcomes of our community, it is important that we balance certain social, consumer, and fairness outcomes against economic efficiency, including:

- All consumers having access to affordable electricity, and not being unduly disadvantaged by where they choose to live or the history of how and when the infrastructure was acquired.
- Stable prices which don't oscillate from year to year, impacting affordability for vulnerable consumers. Stability is important when making investment decisions, such as whether to install gas or electric water heating, or a wood burner or heat pump.
- Consulting with our consumer owners to ensure that they are engaged, taken on the journey, and their views and genuinely incorporated into pricing outcomes.

In relation to the specific changes:

(a) Prices are to signal the economic costs of service provision by:	
(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;  [Deleted redundant phrase: "and/or other regulations"]	The phrase "and/or other regulations" should be retained – particularly given the LFC Regs continue to be a significant regulatory impediment to achieving a greater portion from fixed prices.  55% of our ICPs are eligible for the LFC Regs and a further 21% could be eligible if they lowered their consumption (e.g. through solar).
(ii) signalling the effect that network use has on costs including losses, opportunity costs of capacity constraints and other avoidable costs;  [Clarified version of principle a(iii)]	

<p>(iii) being time and location-specific;</p> <p>[New – additional guidance]</p>	<p>We disagree with adding “location specific”. We also support the comments in the ENA submission around “time” based prices.</p> <p>EDBs are location specific and so pricing will inherently reflect location and specific network characteristics, but further breaking this down within an EDBs area will drive unnecessary transaction costs and is unlikely to be supported by consumers.</p> <p>Any move to a location specific (e.g. area of benefit) charging should be a decision for the network and its consumers.</p>
<p>(iv) charging costs to a specific user or group of users where those costs can be attributed to that specific user or group of users.</p> <p>[New – additional guidance]</p>	<p>We support this principle and have already implemented this into our pricing, charging the costs of specific assets used by large industrial consumers to those consumers.</p> <p>However, there is a level at which the cost of attributing costs to a group of users outweighs the benefit from doing so. This should be a decision for individual EDBs and their communities.</p>
<p>(b) If prices satisfy (a) above, they should be responsive to the requirements and circumstances of users and potential users, including by reflecting services provided by users and to users:</p> <p>[Renumbered and expanded version of principle (c)]</p>	<p>The notes to this section state that it is more efficient for those who benefit most from an investment to pay more toward its cost than those who receive less or no benefit.</p> <p>It isn't clear how benefit is defined, and there is a risk that those who consume more could be viewed as benefiting more. We consider the benefit is the ability to draw electricity when you need to, as such everyone who is connected benefits equally (albeit potentially varied by the capacity of their connection and level of service received).</p>
<p>(c) The application of these principles should be transparent and predictable.</p> <p>[Clarified and contracted version of principle (d)]</p>	<p>We disagree with the proposal to remove price stability, certainty for stakeholders, and having regard to the impact on stakeholders.</p> <p>To achieve pricing reform which is enduring for the long term it is essential that stakeholders understand and support the direction of travel - which requires having regard to the impact on them.</p> <p>Previous EDB pricing decisions demonstrate that if you don't achieve consumer and owner buy in, pricing can be fraught and unpopular, and not achieve the desired outcomes.</p> <p>We understand our consumer owners seek price stability from year to year, and certainty so they can make investment decisions particularly relating to heating and cooking appliances, and choice of fuel for these.</p>

<p>(d) Prices should not place unreasonable costs and requirements, including transaction costs, on retailers or other consumer agents and should be economically equivalent across retailers and other consumer agents.</p> <p>[Clarified version of principle (e)]</p>	<p>We support this statement but consider it should be broadened to specifically include transaction costs of EDBs. This principle requires trade-offs with other pricing principles to implement, and EDBs need to be empowered to make this assessment.</p>
<p>(e) Consumers should be able to know or predict prices they will face when making decisions to connect to or use the network.</p> <p>[New – additional guidance]</p>	<p>We agree that predictability of prices is important for consumers, but this is driven primarily by retailers who repackage EDB prices. Predictability could only apply to EDBs if there was a requirement on retailers to pass lines charges through in a transparent manner.</p>

**Q4 What if any changes would you recommend are made to the proposed Distribution Pricing Principles, and why?**

We recommend that the above changes are made, incorporating our above feedback, as well as that of the ENA and PWC Distributor Submission.

**Q5 What if any changes would you propose to the star-ratings to better reflect the relative efficiency of distribution prices?**

We are not supportive of the star-rating proposal, as it is narrowly focused on theoretical economic efficiency elements, and does not adequately balance the consumer focused principles including transaction costs, transparency, and predictability. It also does not cover price stability, certainty and regard for impact on consumers, which should be retained within the pricing principles.

**Transaction Costs**

The pricing principles effectively require EDBs to weight the appropriate level to calculate cost reflective pricing to, judging that any further detail will not drive sufficient economic benefit to justify the extra cost. However, the pricing principles don't appear to adjust for this factor, effectively requiring an EDB to fully implement the theoretical economic principles to achieve a 5-star outcome. For example, transaction costs are noted as a negative for contracted capacity but it achieves 5 stars, whilst daily charges only receive 4 stars.

**Balancing the interests of consumers**

The star rating proposal does not appear to have adequate regard for consumer interests and expectations. For example, a dynamic critical peak demand charge would require consumers to check pricing on a daily or half hourly basis to check whether congestion is present or imminent. This is a significant intrusion for consumers into their daily life and inconsistent with consumer

feedback that values simplicity in pricing structures. Many of the promoted pricing structures utilise concepts which many consumers are not familiar with, are overly complicated, and may struggle to understand, such as peak demand and kVa charges.

We acknowledge the EA's view that consumers don't need to be able to understand and respond to the pricing signals, as retailers will repackage them into a more consumer friendly format. This happens now with spot market generation prices, in that most retailers repackage them into a flat 24/7 rate with sufficient margin built in to cover hedging costs and spot market fluctuations. Most consumers don't see when spot rates are high, and as a result they don't change their behaviour to shift usage to periods with lower demand and lower cost.

Pricing signals need to be passed through to all consumers in a way that they can understand and respond to, in order to achieve a behavioural response.

### **Final weightings**

There appears to be an oversight in the calculation of the single headline rate in Appendix D, which combines the star weighting of the top 3 tariffs and then adjusts for the extent to which the revenue collected by the prices reflects the fixed and variable split of the EDB's cost. The calculation does not adjust for the extent to which the LFC Regs prevent EDBs from reflecting their cost structure in their tariffs, making achieving full marks impossible. As noted above, for many networks (including Northpower) the low average consumption per consumer means that the majority of residential ICPs fall within the LFC Regs.

It's also not clear how the top 3 tariffs will be selected? Will it be by ICPs, energy consumed, or peak load? Our top 6 consumers on non-standard contracts consume 49% of the electricity on our network, so the methodology behind this selection will materially impact our star rating.

### **Time of Use**

Northpower has assessed a number of potential pricing structures against a balance scorecard of desired outcomes, including ability to:

- Manage peak loads
- Improve utilisation of network assets
- Signal the best time to charge your EV (to bed in behaviours from the outset)
- Ensure PV owners contribute fairly to fixed and peak costs
- Reduce incremental cost to consume electricity
- Reduce undesirable cross subsidies
- Give consumers the ability to manage their bills
- Simple for consumers to understand
- Minimise revenue risk
- Competitive cost of energy vs alternatives (e.g. gas, wood)

We think that our assessment is indicative of a balanced approach to adequately weight all of the pricing principles and incorporate consumer outcomes to ensure enduring and effective change. In particular, we note:



### *Broad signal of congestion is a strength, not a weakness of ToU*

The ability to broadly signal periods of congestion on a network is a strength of Time of Use. If a price signal is used to indicate a peak is in a single half hour, it is easy to move load to 30 minutes earlier or later, risking the creation of a new peak at a different time. ToU signals a congested *period*, incentivising consumers to move their load well outside of peak periods where able (for example hot water heating, electric vehicle charging, etc.) so there is no risk of creating a new peak.

In addition, price signals need to be consistent and predictable for consumers to respond to them, but the individual half hour peaks can be quite unpredictable. Consumers don't want to check the network load before they put the washing machine on, and technology to automate this isn't yet common place. Our view is that the consistency of ToU enables consumers to build up habits like putting the dishwasher on at 10pm or setting their EV to charge overnight. If peak periods are unpredictable they are likely to simply give up and pay the charge.

*The economic purity of seasonality needs to be weighed against the "hassle factor" for consumers.*

We considered seasonality in our ToU trial, but on balance our assessment was this contributed too much complexity into the pricing. Seasonal pricing could mean prices changing between 2 (summer/winter) and 4 (summer/autumn/winter/spring) times a year, and consumers would need to remember that pricing was switching over so that they could respond and avoid price shocks.

It would also sharpen price signals in the winter, which could lead to those in energy hardship going without heating, or unintended consequences such as substitution of electrical heating for wood-burners and gas, which would run contrary to the Government's zero carbon ambitions.

### *ToU is a proxy for congestion*

We think that peak/shoulder/off-peak is a good proxy for congestion on our network. While our peaks increase in winter, our network is quite consistent in the shape of its load curve with a morning spike, steady daytime load, and evening peaks, and this translates well into a peak/shoulder/off-peak pricing structure. The use of ripple control to manage hot water load means we avoid 'spikes' during high load periods.

### **Q6: How long do you think distributors would reasonably need to introduce the different price structures discussed above?**

We are introducing a residential Time of Use trial on 1 April 2019, and if successful expect to be in a position to roll out this pricing structure across all residential connections on our network from 1 April 2021, with full implementation by 2022. This allows for a 12-month trial, plus a further 12 months to assess the trial outcomes, address any issues identified, scale billing processes and resources, and set pricing. This transition also assumes that many of the data and billing issues raised in this submission are addressed in a timely manner.

**Q7 Can you illustrate how and to what extent the LFC regulation hinders price reform?**

55% of the ICPs on our network are classified as principal place of residence and use less than 8,000kWh per annum, therefore being eligible for the LFC Regs. A further 21% of ICPs would be eligible if they reduced their consumption to below 8,000kWh (e.g. by installing solar).

Residential principal place of residence ICPs pay on average \$750 in distribution charges each year, limiting revenue from fixed prices to only 7% (\$55 a year).

We already have a high degree of cost reflectiveness in our pricing for large industrials, commercial users and are working to improve this over time for small non-residential users. However, while the LFC Regs remain in place it is not possible to achieve the EA's target outcome without breaching the intent of the LFC Regs. For example, implementing a pricing structure such as capacity charging, is essentially still a fixed charge. It should not be incumbent on EDBs to attempt to circumvent the regulations, and we encourage the EA to support a reform of the regulations.

**Q8 How accurately has the Authority categorised distributor revenue and costs? How could this be done more accurately?**

We broadly agree with the Authority's categorisation, but note that asset replacements generally have a long life and therefore usually include a component of upgrading the capacity of the equipment to allow for future growth. As such asset replacement and renewal should be split between fixed and variable on the basis that it is partly driven by network usage over the long term.

We understand the EA has derived their proxy of costs relating to congestion from the ratio of capex spending on system growth to total capex. As the ratio is going to be applied to recover both opex and capex costs, it should also take opex into consideration in its calculation.

**Q9 What, if any, would be better indicators of the efficiency of distribution prices, or the ambition of and progress being made by distributors on their price reforms?**

We are supportive of transitioning network pricing to more fairly reflect the fixed and variable components of distribution services. However, the EA's proposals need to be amended to reflect what can legally be achieved within the LFC Regs, within the constraints imposed by retailers detailed in Q10, and balanced by pragmatism, commercial reality and consumer perspectives.

**Q10 What assistance could the Authority (or other stakeholders) offer distributors in order to speed up the reform process, or help to remove or reduce *barriers* to distribution pricing reform.**

There are a number of actions which the Authority or other stakeholders could take to reduce barriers to distribution pricing reform.

## **Repeal of LFC Regs**

As discussed earlier, we can and are implementing cost reflective pricing to the extent we can under the LFC Regs, but would encourage the EA to support the case for the removal of these regulations, as being in the long term interests of consumers.

## **Billing Data**

Our consultation to date indicates that many retailers are not yet in a position to provide billing data in a time-sliced format required to migrate to cost reflective pricing. They have not been able to indicate if they are preparing their systems to provide this data, and when it will be complete.

If we push ahead prior to retailers being ready to provide billing data to support cost reflective pricing, it is likely that pricing processes will break down and we will be forced to return to traditional billing structures. The EA could assist by achieving buy in from retailers to provide this data including a firm commitment to a deadline which aligns with the EA's expectations of EDBs.

## **Smart Meters**

The EA could also assist pricing reform by encouraging completion of the smart meter roll out and ensuring all smart meters actually communicate. At present 79% of our network has smart meters, and not all of these are communicating, meaning at least 1 in 5 consumers won't be able to participate in new pricing structures.

Our experience is that retailers have focused on completing the easiest meter replacements, with the more expensive meters to replace being left (e.g. asbestos board, boards requiring replacement, areas with lower population density, or areas requiring additional comms equipment). It appears that most retailers have now ceased their meter rollouts in our area.

## **Establish standardised commercial terms and formats for the provision of data**

We have been unable to reach reasonable commercial terms in order to obtain the data required to set pricing for our Time of Use trial. Pricing reform presents significant revenue risk and to mitigate this EDBs require access to HHR data from retailers to understand the consumption profiles of different consumer groups, and measure the responses to ToU pricing under our trial. EA support to provide this data on a timely basis, in a standardised format, and on a reasonable commercial terms (bearing in mind consumers have already paid for these meters in their electricity bills) would expedite pricing reform.

We note the EA has stated that any revenue reductions can be recouped in the following year by increasing prices under the revenue cap approach. This approach has no regard for the impact on consumers or the current principles of consistency and predictability of prices.