Supporting reform to efficient distribution pricing: a refreshed Distribution Pricing Practice Note

Submission on the Electricity Authority's Consultation Paper

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1. Introduction

1. We welcome the opportunity to submit our views in response to the Electricity Authority's (the **Authority's**) consultation – "Supporting reform to efficient distribution pricing: a refreshed Distribution Pricing Note" (**Consultation Paper**) and the Distribution Pricing: Practice Note, Second Edition, 2021 [DRAFT for SECTOR FEEDBACK) (**Draft Practice Note**)
2. No part of our submission is confidential.

2. General Comments

3. Aurora Energy supports the transition to cost-reflective pricing. We believe cost-reflective pricing is an essential step in ensuring distribution networks are designed efficiently to support New Zealand's electrification and decarbonisation goals. Efficiently designed networks will ultimately benefit our customers through lower prices in the longer term.
4. We commend the Authority on its efforts to create a more fulsome Draft Practice Note that sits alongside the 2019 Pricing Principles[1].
5. We have outlined our general comments in sections 2.1 to 2.7, below, and have provided specific feedback to the Authority's questions in Appendix A.

2.1. Timing of anticipated congestion is key to designing efficient prices

6. The proposed Practice Note provides good guidance on the different pricing structures that are appropriate for different network congestion scenarios. However, we think it is also useful to consider the time dimension of anticipated constraints, relative to:

   a) Distributors' ability to respond to with new network investment, considering the lead time required to design, procure and build new infrastructure; and

   b) The timing of consumer investment.

7. Understanding the timing of a) and b) creates a 'window of opportunity' where consumer response to price signals can be used to efficiently defer, or avoid network investment.
8. The strength of the price signal should reflect how far into the future the network constraint is expected. Sending a strong price signal too early may provide an inefficient incentive for consumers' investment in distributed energy resources (DER). Conversely, sending a signal too late may not leave

[1] Electricity Authority. (2019). Distribution pricing principles. Available from https://www.ea.govt.nz/operations/distribution/pricing/

enough time for consumers to respond before the network becomes constrained and the only practical option becomes network investment..

9. Applying the concept of a 'window of opportunity' leads to three potential pricing scenarios:

Scenario 1: Immediate Response Required

10. If demand is expected to create a network constraint before new infrastructure can be built, it is likely that flexibility services will be required to manage demand until such time as new infrastructure can be constructed. A strong price-signal will be required to support the deployment of flexibility services.

Scenario 2: Cost-reflective price signal required

11. In situations where the network is expected to become constrained within the 'window of opportunity', a cost-reflective price that signals the future cost of network investment enables consumers to make choices about their consumption behaviour and investment in DER.

Scenario 3: No price signal required

12. If demand is not expected to create a network constraint within the 'window of opportunity' then no immediate price signal is required.

2.2. Response to Price Signals

13. The Draft Practice Note tends to indicate that an effective price signal will result in a measurable consumer response. We can generally measure consumer consumption patterns in aggregate and observe how these change over time.

14. However, there are several reasons why a price signal may not result in a change in behaviour, including:

- the price signal could be too weak;
- the price signal may not be visible to consumers; or
- the price signal could be received too late for a consumers to change their behaviour.

15. An issue arises when a price-signal is cost-reflective, but too weak to change consumer behaviour. It would be helpful for the Authority to clarify its expectations in this scenario. We would like to understand whether the Authority has an expectation that distributors 'over-signal' costs to minimise network future investment, or should distributors interpret a lack of response as an indication that network investment is preferred and appropriate?

2.3. Retailer Pass-through

It is pleasing to see the Authority acknowledge potential constraints to implementing efficient pricing. For distribution pricing reform to be effective, distributors' price signals will need to be acted on. In the short-term, it may be useful for consumers to see a transparent price signal via their electricity bill. However, in the medium- to longer-term, we expect to see changes in market offerings, either from electricity retailers or flexibility traders, to assist customers manage their demand.

We are beginning to engage with residential customers about our new pricing strategy, and it is challenging to promote the benefits of cost-reflective pricing when many customers do not see distribution charges transparently identified on their bill. We understand and agree with the Authority's view that competitive forces will eventually result in the pass-through of price signals, or some form of response managed by electricity retailers or flexibility traders[2]; however, the nascent market for flexibility services makes this a difficult concept to articulate during engagement with consumers.

16. We recommend that the Authority considers whether some form of 'best-practice' guidelines for distribution pass-through is required in the short term.

2.4. Pricing as Part of the Asset Management Toolkit

17. We agree with the Authority's views that pricing and asset management will become more closely aligned. In practice, we see the Asset Management Plan (AMP) informing Long-Run Marginal Cost (LRMC) calculations, which will ultimately be used to calculate our proposed time-of-use prices. In particular, we anticipate performing LRMC analysis on network growth investments that fall within the 'window of opportunity' described in section 2.1.

18. However, setting prices based on LRMC is still largely an academic concept, with limited practical examples, across the industry, of LRMC being used to inform the derivation of distribution prices. There are practical challenges involved in calculating 'real world' LRMC values for price-setting.

19. We would like practical guidance from the Authority about how it sees marginal cost calculations being used in price setting, and some clarity from the Authority about its disclosure expectations in distributors' pricing methodologies.

2.5. Capital Contribution Policies need To Align

20. We support the need for capital contributions to be aligned to the pricing principles (where relevant); however, we would like some clarity about what the Authority's means in its statement 'within the scope of their pricing structures'[3].

21. It would also be helpful for the Authority to clarify how it sees a distributor's capital contribution policy sitting alongside the distributor's pricing methodology, or whether there is an expectation that the capital contributions policy is absorbed into the pricing methodology.

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2 Practice Note. Footnote 6.

3 Practice Note. Paragraph 42.

2.6. Locational Pricing Will Become More Granular Over Time

22. In principle, we agree with the Authority that over time pricing will become more granular. However, this will require distributors to have a much granular understanding of their low voltage networks than is (generally) currently available.

23. We set out our views on how advanced metering data could be leveraged to efficiently achieve low voltage network visibility in our submission on distributors' regulator settings.[4]

24. We are concerned by potential consumer perceptions in circumstances where different prices apply to consumers in similar geographic areas. For example, if one street is supplied from a constrained zone substation and an adjacent street is supplied from an unconstrained zone substation, and pricing is developed to elicit a response in the constrained zone, this could lead to the perception of arbitrary and inequitable pricing among neighbouring consumers. A practical issue may also arise when consumers are temporarily switched between substations, which can happen during outage management.

25. At this point in time, we see additional granularity only applying in exceptional circumstances. This could be where there is an immediate capacity constraint and a market response is required; for example, as occurs to support flexibility services in the upper Clutha area of our network.

2.7. Timing of Reform

26. The Authority's expectations for reform are generally achievable, but the lack of granular visibility of low voltage networks may impair distributors' detailed understanding of the locations, timing, and sources of congestion on their networks.

27. A gradual implementation of pricing changes will minimise bill shock and give consumers time to understand and adapt to new pricing signals. The phase-out of the LFC regulations provides a good indication of an appropriate timeline for implementation.

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4 Aurora Energy Ltd. (2021). Updating the Regulatory Settings for Distribution Networks: Submission on the Electricity Authority's Discussion Paper. 28 September 2021, p4-7.

Appendix A. Consultation Questions

Q.1 Do expectations laid out in the updated Practice Note on what 'good looks like' for efficient pricing provide a useful guide?

The Draft Practice Note is a useful starting point for future pricing structures. We agree with the approach that prices should first reflect future economic cost, and then seek to recover residual costs in a non-distortionary manner.

However, as outlined in our general comments, the Draft Practice Note could be clearer about when price signals are required, considering the timeframes available to both distributors and consumers to make respective investment decisions.

Q.2 Do you consider any of the material to be incorrect, subjective or superfluous?

In part 4, the Draft Practice Note differentiates between urban and rural networks. In practice, there are challenges in defining urban and rural areas, especially in areas with rapid urban development and expansion. Distributors often have high voltage feeders that traverse both urban and rural areas.

Q.3 Are there edits or further explanation that you'd suggest to improve clarity?

The Draft Practice Note and subsequent consultation workshop referred to 'price-signalling' tariffs and 'cost-reflective' tariffs. It would helpful to clarify whether the Authority sees these terms as synonymous, or whether there may be instances where distributors are expected to set prices that 'over-signal' costs in order to elicit a response.

Q.4 Is there material missing that would also be useful?

We agree with the Authority that pricing is part of the asset management toolkit and we see asset management and pricing functions becoming more aligned in the future.

The Draft Practice Note would benefit from some guidance and examples as to how the Authority expects to see distributors' Asset Management Plans reflected in price calculations. Using LRMC is an obvious place to start, but in our experience, we have seen limited examples of LRMC being implemented in practice.

It would also be helpful for the Authority to provide guidance on the level of disclosure the Authority expects distributors to make in their pricing methodologies to support the transparent calculation of cost-reflective prices.

Q.5 Are the expectations laid out in the updated Practice Note on timing for reform achievable?

In general, we agree that the timing expectations in the Draft Practice Note are achievable. Broadly, the Authority's expectations align with our own pricing roadmap.

However, we have concerns that:

- the generally limited visibility of distributors' s low voltage networks; and
- short-term transparency of transparency of distributors' charges on retailer invoices;

may present immediate challenges to implementing efficient distribution pricing, especially at a relatively granular level.

Q.6 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?

Yes, the Draft Practice Note should be a living document.

The expectations of pricing granularity and locational specificity outlined in Part 3 of the Draft Practice Note are aspirational and not practically implementable in the near future. We anticipate that as visibility of low voltage networks improves then this section should be adapted to reflect what is achievable.

Q.7 Where questions of data access or use do not fall into the Updating regulatory settings for distribution networks consultation, is there any specific pricing-relating data concerns that the Authority should know, or be involved in?

Our concerns regarding access to data have been covered in our response to the 'Updating regulatory settings for distribution networks' consultation.[5]

Q.8 Where questions of customer contact data access or use do not fall into the Updating regulatory settings for distribution networks consultation, is there any specific pricing relating data concerns that the Authority should know, or be involved in?

No comment.

5 Ibid. p4-7.

Q.9 *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?*

Consumers are facing a paradigm shift as the industry gears toward supporting electrification and decarbonisation. As distributors, we understand how long it took consumers to come to grips with the separation of the sector as a result of the 'Bradford' reforms 22 years ago (arguably, some consumers haven't yet).

There is a significant opportunity for the Authority, alongside distributors, to facilitate consumer education to improve understanding of the drivers underpinning the push for distribution pricing reform. The future of electricity distribution, including flexibility services and DER will be very unfamiliar concepts for many.

Q.10 *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 discussion on ensuring price signals reach consumers, taking into account the need to comply with the Commerce Act 1986?*

As stated above, we consider that there may be merit in the Authority developing some form of 'best-practice' guidelines for distribution pass-through, in the short term, while market offerings develop, either from electricity retailers or flexibility traders, to assist customers manage their demand.

Q.11 *Complexity in pricing structures could slow reform efforts. How do you see the Authority working with the sector to strike the correct balance?*

The trade-off between pure economic theory and simplicity is a key consideration in efficient pricing design. The Electricity Networks Association's (ENA) Distribution Pricing Working Group has undertaken work to simplify and standardise pricing structures and nomenclature.

We consider that there may be opportunities to further consolidate pricing structures as many distributors appear to be pursuing time-of-use pricing. We recommend that the Authority engages with both the ENA and the Electricity Retailers' Association of New Zealand on this issue.

Q.12 *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?*

The issue of bill shock and energy affordability are already an area of concern for most distributors. We feel that the gradual phase out of the LFC regulations will help minimise bill shock and set expectations about an appropriate transition period to cost-reflective pricing.

The distribution scorecards need to take into account that a transition to cost-reflective pricing is a process that will take time to implement, and there may be instances during the transition period where prices are deliberately less cost-reflective than they might otherwise be in order to minimise consumer bill shock.

Q.13 Are there aspects of LFC and its announced phase out that you see as an ongoing impediment to pricing reform?

As mentioned in our response to Q5, the timing of the LFC regulations phase-out is generally consistent with pricing roadmap.

Q.14 We are interested to better understand what ongoing limitations LV visibility issues might have that could constrain future pricing reform, how industry can respond to them and what, if any, role you see for the Authority in addressing this area?

We set out our views on how advanced metering data could be leveraged to efficiently achieve low voltage network visibility in our submission on distributors' regulator settings.

Q.15 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?

We set out our views on DER asset information requirements more broadly, including requirements for EV charging facilities and similar technology to be notified to distributors, in our submission on distributors' regulator settings.[6]

Q.16 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.

Covered in previous responses.

Q.17 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?

Covered in previous responses.

Q.18 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.

Covered in previous responses.

Q.19 Please consider the role that you see appropriate for the Authority to be proactively involved in pricing evolution.

Covered in previous responses.

6 Ibid. Q6.

Q.20 How the Authority could engage more with industry, either individually or through structured channels, and in formal and informal ways.

The distribution pricing scorecards provide a good opportunity for the Authority to provide feedback, however these would benefit from more granular and transparent scoring criteria.

For example, more detailed information about what attributes are required to achieve a rating of five in each of the scorecard's categories would give distributors more clarity about the Authority's expectations. An accompanying example of a 'model distributor' may help distributors understand what good looks like in the Authority's eyes.