TRANSPOWER

Keeping the energy flowing

Waikoukou
22 Boulcott Street
PO Box 1021
Wellington 6140
New Zealand
P 64 4 495 7000
F 64 4 495 6968
www.transpower.co.nz

Tim Sparks
Director
Network Pricing
Electricity Authority Te Mana Hiko

15 August 2023

By email distribution.pricing@ea.govt.nz

Targeted Reform of Distribution Pricing

1. Transpower welcomes the opportunity to respond to the Electricity Authority's (Authority's) Issues Paper, Targeted Reform of Distribution Pricing, published on 5 July 2023.
2. Although we are not directly impacted by reform of distribution pricing, we have a strong long-term interest in ensuring consumers receive efficient price signals. This should help promote efficient utilisation of transmission and distribution networks (and other supply chain elements) and improve the cost effectiveness and competitiveness of the services we collectively provide. In addition, the bulk of our own costs are recovered from distributors.
3. We welcome the week extension on the consultation. We consider that it would be beneficial to reinstate the Consultation Calendar. This would provide all submitters with more forward notice of upcoming consultations.

New section 15(2)-(3) of the Electricity Industry Act

4. We consider the new consumer protection provisions are relevant to distribution pricing.
5. A major focus of the consultation paper is on how distribution pricing impacts the price signals (and affordability) to end-consumers. We are not sure the Authority should only consider the efficiency impact of distribution pricing for end-consumers without considering issues around consumer welfare and protection.
6. We consider the test that the industry participant has "dealings … with domestic consumers and small consumers" is broad and includes both direct commercial arrangement with the end-consumer and indirect arrangements e.g. with retailers as the intermediary. A narrow direct commercial arrangement only interpretation would effectively mean the consumer protection provisions only apply to electricity retailers,

and for electricity customers rather than consumers, even though the operation of other parts of the supply chain can cause consumer harm.

Robust consumer and stakeholder engagement is critical

7. We consider it important potential consumer concerns about pricing changes are understood and addressed, including through strong stakeholder and consumer engagement. The reasons for the changes and what they can be expected to mean for consumers (including how they can expect to benefit) should be clearly explained.
8. For example, ENA has previously commented that cost-reflective pricing can result in lower prices in the long term.[1] This can happen where the future cost of investment is signalled and can be delayed or muted by consumer decisions. While we agree with this, as a general statement, it would be useful be able to back it up with credible evidence of the potential cost savings to support the case for reform.
9. The stronger the evidential basis provided for tariff reform the easier it will be to justify and get consumer buy-in. We see evidence-based decision-making as much broader than simply providing some form of Cost Benefit Analysis at the tail-end of the review.
10. We have seen with controversy over introduction of volumetric charges for water reticulation that there can be strong opposition if reform isn't properly managed, despite clear benefits (lower water usage and investment requirements/improved water leak detection and remedy) where it has been introduced.

The energy transition heightens the importance of network price reform

11. The importance of the Government's climate change goals, and the energy transition, in setting network pricing needs to be acknowledged.
12. The uplift expected in required infrastructure, makes it critical network pricing helps support the right investments being made in the right places and at the right time. This is reflected, appropriately, in the Authority's strong emphasis on cost-reflective peak-pricing which *"can signal the opportunity cost of future … investments to accommodate increasing demand"* i.e. dynamically-efficient/LRMC or LRMC-like pricing should be adopted.
13. Network pricing can not only impact efficiency but also the country's level of emissions and the success of the energy transition.

We support cost-reflective, dynamically efficient peak-usage pricing

14. Transpower continues to support *"cost-reflective prices … which send efficient signals of the cost consequences of network usage"*.
15. We continue to support LRMC or LRMC-like network utility pricing which "*can signal the opportunity cost of future necessary investments to accommodate increasing demand*".[2] We welcome the strong emphasis on LRMC pricing in the consultation paper, including the Authority being explicit that *"it can be relatively efficient to set peak signals with*

[1] ENA, New Pricing Options for Electricity Distributors, A discussion paper for industry feedback, November 2016, page 6.
[2] We consider the reference to "necessary" is superfluous as efficient dynamic pricing can both delay investment (which is ultimately "necessary") or avoid the need for the investment (e.g. in increased capacity) altogether (indicating the investment wasn't "necessary".

reference to the long-run marginal cost (LRMC)". We feel this is a clearer statement than in the existing Practice Note.[3]

16. We reiterate *"In our view, the principle that prices signal future investment costs is needed more than ever …."* and *"We support the Authority's previous … economically orthodox assessment of LRMC pricing in the LRMC Working Paper"*.[4] Essentially the elevated level of expected future investment as part of the energy transition means greater weight should be given to dynamic efficiency (e.g. LRMC pricing) relative to allocatively efficient pricing (fixed charges + volumetric charges that reflect SRMC).[5]
17. We previously commissioned Dr Batstone to look at how LRMC pricing could be implemented.[6] At the time we had expected the Guidelines would allow for peak-pricing signals in the form of LRMC charging and we wanted to better understand how LRMC pricing might work in practice. While the Batstone report was transmission-focused, the concepts are universally applicable to both distribution and transmission.[7]
18. The Batstone work could be used as a starting point for the Authority's suggestion *"we could provide demonstration methodologies or calculations for deriving LRMC estimates and converting them to tariffs, and for testing the coherence of price signals. We could also complement the practice note with demonstration workbooks"*.

Dynamic efficiency versus static efficiency

19. We remain of the view dynamic efficiency is more important than short-run and allocative efficiency. It is better to signal the long-run marginal cost of future network investment than the short-run costs of network congestion.
20. We would not support short-run locational marginal pricing beyond GXPs/within distribution networks even if it were practicable. We agree with the issues Dr Batstone previously raised on this matter.[8]

---

[3] The current Practice Note states prices should "reflect impacts of network use on economic costs" and that various "near-term … considerations may favour … focus on long-term investment costs" which implies LRMC is an option which could be considered.
The Practice Note makes only one explicit reference to LRMC and then only as an explanation of why cost-reflective prices may differ from targeted revenue allowance. The original decision paper made no reference to marginal cost or LRMC pricing at all. The original decision paper referred to prices signalling "economic costs … (ii) reflecting the impacts of network use on economic costs" but this can reasonably be interpreted as meaning either SRMC or LRMC.

[4] Transpower, More efficient distribution prices – What do they look like?, 19 February 2019.

[5] Axiom has made similar comments about dynamic versus static/allocative efficiency on behalf of Vector. While the Axiom report was written in response to the Commerce Commission's Input Methodologies review the commentary is universally applicable to electricity regulation e.g.: *"the profound changes sweeping through the energy sector should cause the [Authority] to give particular emphasis to long-term dynamic efficiency considerations as it reviews the [distribution pricing] – even more than it has previously"*. Hayden Green (Axiom Economics), Dynamic Efficiency and the Energy Transition: A report for Vector, September 2022.

[6] We commissioned Dr Stephen Batstone of Sapere Research Group to research and consider practical design aspects of an LRMC charge for New Zealand's TPM. The literature search analysis has been peer reviewed by Dr E Grant Read (Consultant and Adjunct Professor, University of Canterbury): Sapere, Issues to consider in designing an LRMC pricing regime, August 2017, available at: https://tpow-corp-production.s3.ap-southeast-2.amazonaws.com/public/plain-page/attachments/Sapere%20LRMC%20Final%20Feb%202018_1.pdf?VersionId=Ib00jcdR3LX82_kCe6qtSjmaxAnQWwz5.

[7] Transpower, Distribution Pricing: New Pricing Options for Electricity Distributors, 23 December 2016.

[8] https://srgexpert.com/publications/an-exploration-of-locational-marginal-pricing-at-the-distribution-level-in-the-new-zealand-context/

21. Existing nodal pricing is already more granular than retailer pricing i.e. retailers do not[9] differentiate their prices on the basis of different GXPs within a network so would not be expected to differentiate at a sub-GXP level.

22. Even if it was practicable, there would be substantial cost and complexity in operating nodal pricing at a sub-GXP level. Adopting sub-GXP nodal pricing would add undue complexity (granularity) for the sake of complexity (granularity). Transpower would not support development of potential locational marginal pricing at a sub-GXP level even if it became practicable to do so. We do not consider that the opportunity cost of putting considerable resources into pursing this would be warranted; particularly given the more urgent matters in front of us now.

Efficient pricing requires trade-offs to be made

23. We agree with the Authority that *"there are … likely to be advantages in terms of simplicity and practicality"*.

24. We similarly agree with ENA that there can be trade-offs *"between pricing that is cost-reflective but is still simple and understandable"*, and *"It is important to clearly identify and assess trade-offs of this type"*.[10]

25. We have previously submitted on the importance of pricing signals being 'useable and useful' with a preference for pragmatic pricing over interpretations of economic purity. The principles of simplicity and practicality are also relevant to the granularity of 'subsidy-free pricing' (at one extreme this could be taken down to a customer-by-customer level) and the number of different customer groups and tariff categories that are adopted.

26. One nuance to the matter of simplicity which has been detailed in some retailer submissions is that what might be a suitable pricing signal for distribution may not necessarily be suitable for retailers to pass-on to end-consumers. Retailers repackaging network charges is a positive feature of the system as long as they bear the financial consequences of doing so.

Different approaches have been taken for distribution and transmission pricing

27. The difference in approach the Authority has taken to distribution and transmission pricing goes much further and deeper than a *"targeted approach to distribution pricing"* versus *"the more comprehensive framework for transmission pricing"*.

28. The introduction of the 2020 TPM Guidelines brought about a paradigm shift from a TPM-based on peak-charging to a concept of beneficiaries-pay through fixed charges.

29. At their core, the approach taken to transmission pricing is based on pursuit of allocative efficiency (fixed charges (connection, residual[11] + benefit-based) with short-term nodal price signals[12]), whereas the approach the Authority is encouraging for

[9] Except where retail prices are based on nodal prices e.g. Flick Electric's wholesale product which is currently unavailable.
[10] ENA, New Pricing Options for Electricity Distributors, A discussion paper for industry feedback, November 2016, page 4.
[11] Strictly speaking the residual charge is a lagged variable charge but is intended to be fixed.
[12] The Authority's LRMC working paper detailed how nodal pricing sends efficient SRMC energy pricing signals and falls short of dynamically-efficient price signals for network investment.

distribution pricing is based on dynamic efficiency with LRMC price signals for peak-usage.

30. One of the implications of this difference, which we have raised before, is that while previously distribution peak-usage pricing could include both transmission (RCPD) and distribution network costs, the new arrangements will result in a distribution-only LRMC i.e. *"the optimal distribution peak-usage pricing signal would be higher if RCPD or some form or peak-usage price [was] retained in the TPM"*.[13]

Challenges with pass-through of transmission charges

31. We are mindful it could have been disruptive for EDBs to introduce major distribution pricing reform before the new TPM was in place. We previously commented to ENA that *"If the new distribution prices are introduced before changes to the TPM it could result in initially high peak distribution charges, which would then be lowered when the new TPM was put in place"*.[14]

32. We are also conscious pass-through of transmission charges is not necessarily a straightforward exercise for distributors.

33. The residual charge, for example, is based on historic AMD, with an Adjustment Factor based on lagged gross energy-use. The Authority has been clear that, while historic AMD is required for transmission pricing, *"The Authority's view is that distributors should not use customer AMD as a charging metric to recover residual charges"*. This effectively means electricity distributors need to consider and develop alternative ways to set 'fixed and unavoidable' charges to the approach Transpower is required to adopt.

Potential middle ground between high-level principles and prescription

34. We consider that the Authority has provided sound reason for adopting a principles-based approach to distribution pricing.

35. Where the Authority considers more guidance or direction would be desirable, it could be useful to develop more prescriptive Guidelines which could act as 'safe-harbours' i.e. electricity distributors could have surety the Authority would be comfortable with the approach they adopt if they choose to follow the Guidelines. It may be useful to engage ENA and other interested stakeholders to work up Guidelines on key elements of distribution reform.

Concluding remarks

36. Transpower supports cost-reflecting pricing, including prices that signal the long-run cost of peak-usage (LRMC or LRMC-like pricing).

37. We note and agree with ENA's previously expressed view that *"The peak demand, rather than the amount of energy consumed, largely dictates network configuration and cost for distributors. This is especially so in the transmission network and the high-voltage part of the distribution networks"*[15] and that *"If growth in peak demand can be managed or*

[13] Transpower, submission to ENA, Distribution Pricing: New Pricing Options for Electricity Distributors, 23 December 2016.
[14] Transpower, submission to ENA, Distribution Pricing: New Pricing Options for Electricity Distributors, 23 December 2016.
[15] ENA, New Pricing Options for Electricity Distributors, A discussion paper for industry feedback, November 2016, page 11.

limited, a distribution company may be able to avoid costly infrastructure upgrades, and the subsequent need to pass these costs on to consumers".[16]

38. The key question is how to best get there and do so in a way that is supported by consumers and other stakeholders and avoids undue price shocks. The aim should be to secure wide-spread support for change, including by reference to clear and complete cost-benefit analysis. This requires that consumers can understand what the reforms will mean for them and what tangible benefits they can expect.

Please contact me at joel.cook@transpower.co.nz.

Kind regards,

Joel Cook
Head of Regulation

[16] ENA, Charging Matters – Considering new ways to pay for electricity networks, undated, page 4.