11 January 2025

GM Economic Regulation and Pricing,
Vector
110 Carlton Gore Road
Newmarket, Auckland, 1023

You have asked us to consider whether any of the materials lodged in response to the Electricity Authority's (Authority's) *Distribution connection pricing proposed Code amendment, Consultation Paper*[1] cause us to revise the conclusions we set out in our initial report.[2] In short, they do not. They instead serve largely to reinforce our findings.

1. Recap of our key findings

Our report concentrated on the Authority's problem definition. We emphasised that effective regulatory policy reform must always start with a clear and well-substantiated articulation of the issue the regulator is seeking to address. We concluded that the Authority had not achieved this in its Consultation Paper. Our analysis instead highlighted several shortcomings in the problem statement. In particular, we observed that:

- The analysis is entirely theoretical, lacking empirical evidence to support the claim that connection rates are being constrained to inefficiently low levels. Additionally, we observed that many of the purported incentive problems fail to account for the practical realities of how connections are implemented, suggesting that these issues may largely be illusory in practice.
- Even if connection rates are being unduly constrained by the incentive properties of the Part 4 framework, it is unclear why radical pricing reforms would be the optimal solution. A more effective approach might involve the Commerce Commission (Commission) addressing any underlying issues within the price-quality path regime, provided these issues are genuinely pressing.
- Although the increased use of capital contributions will have raised prices for newly connected customers compared to earlier connectors, it is impossible to determine whether this has reduced overall welfare without first assessing the impacts on both static and dynamic efficiency. It cannot simply be assumed that prices are inefficient in theory – especially if they fall within the range of incremental and standalone costs.
- The proposal to base charges on net incremental cost fails to account for the critical distinction between revenue collected upfront through connection charges (with

1 Electricity Authority, *Distribution connection pricing proposed Code amendment, Consultation paper,* 25 October 2024 (hereafter: 'Consultation Paper').

2 Axiom Economics, *Economic review of problem definition, a report for Vector*, December 2024 (hereafter: 'Axiom report').

certainty) and revenue generated later through usage charges (which is uncertain). The full reform option would shift cost recovery risks from connection applicants to existing customers and increase usage charges beyond what they would otherwise have been.

- Even if one were to hypothetically accept that connection charges are inefficient and that the Authority's proposed pricing revisions would resolve this, the purpose of the proposed 'reliance limit' remains unclear. If capital contributions are efficiently determined, the resulting aggregate levels should also be efficient—or, at the very least, unproblematic. Moreover, the limits proposed by the Authority are arbitrary.
- While discrepancies in approaches across distributors and the so-called 'first mover' and 'last straw' dynamics could theoretically present significant issues, their practical significance is an empirical question. No quantitative analysis has been provided to demonstrate the extent to which these factors actually impact customers' connection decisions in practice, or why major pricing reform represents the optimal solution.

We consequently concluded that the Authority had failed to demonstrate the existence of significant issues within the current connection charging framework that would warrant its proposed reforms. Furthermore, we found no clear connection between the unsubstantiated problems it identified and the solutions it proposed. Even if such concerns were valid, it is unclear why the Authority would be the most appropriate entity to address them.

2. Criticisms of the problem definition

Many of the responses to the Consultation Paper addressed some aspect of the Authority's problem definition. A significant number concurred with our view that the Authority has not provided sufficient evidence of a significant problem and that its proposals are premature, carrying the risk of doing more harm than good. By and large, these observations fell into one of several broad categories, which we outline below.

2.1 No empirical evidence has been provided

Like us, many submitters were struck by the Authority's failure to provide any empirical evidence to substantiate the supposed problems with the existing pricing framework. For example, Network Waitaki stated that although it appreciated the Authority's objective to improve the efficiency of connection pricing, it was nonetheless:[3]

> *"…concerned about what we would characterise as a fast-paced and heavy-handed regulatory approach proposed for a "problem" that is* ***not quantified and not supported by evidence or through case studies*** *of problematic practices, or where access seekers were disadvantaged and if so, how widespread it is among distributors … We request that the Authority* ***provide case studies or evidence to support these inefficiencies that support the move to such a fast-paced costly regulatory regime****"* [emphasis added]

Waipa Networks echoed those concerns. It stated that it had expected to see data from a variety of customer segments – information that was notably absent:[4]

---

3 Network Waitaki, *Distribution Connection Charging Consultation*, 20 December 2024, pp.1 and 6 (hereafter: 'Network Waitaki submission').

4 Waipa Networks, *Waipa Networks Submission: Distribution Connection Pricing Consultation*, 20 December 2024, pp.3-4 (hereafter: 'Waipa Networks submission').

> *"The assumption that current settings have led to higher connection* ***charges lacks evidence and needs further research*** *– we would expect to see evidence from a range of residential, rural and commercial customers throughout different locations in New Zealand. The proposal assumes that variations in capital contribution approaches is not efficient but* ***does not provide evidence of that*** *… Waipa disagrees with the problem statement due to problematic assumptions and* ***a lack of evidence*** *… Waipa has* ***not seen any evidence*** *that capital contributions have led to deferral of connections on the network as we have experienced significant growth."* [emphasis added]

Wellington Electricity also did not view the problem statement as robust, citing again the absence of empirical support for the Authority's contentions:[5]

> *"High or increasing connection costs do not automatically mean that the costs are inefficient. We note there seems to be* ***very little evidence presented to support the problem definition****, nor is there any evidence regarding the magnitude of the transaction costs imposed, the degree of windfall gains made, nor the value or cost of the inefficiencies referred to … the paper does not set out the extent of the costs being imposed and as such benefits of the proposal have not been demonstrated."* [emphasis added]

Electricity Networks Aotearoa (ENA) was likewise troubled by the lack of evidence. It observed that although the Authority had expressed concerns about current pricing practices hindering electrification:[6]

> *"…* ***nowhere in the consultation paper is evidence provided*** *that the inconsistency in pricing outcomes is inefficient or that any of the varied prices are inefficient."* [emphasis added]

Aurora Energy also highlighted the strictly theoretical nature of the Authority's concerns:[7]

> *"…we urge the Authority to be clearer about the problems they are aiming to solve and ensure that these problems* ***exist in practice, rather than in theory****."* [emphasis added]

Waitaki Power Trust stated succinctly that there has been: "…no evidence that capital contributions have deterred investments."[8] Orion likewise observed simply that: "very little empirical evidence of problems leading to inefficiency is provided."[9]

HoustonKemp Economists (HoustonKemp)[10] cited multiple instances of the Authority failing to provide evidence to substantiate its claims. It observed that:[11]

> *"The identification of problems* ***at the level of principle – or in theory*** *– is a defining feature of the Authority's justification for regulatory intervention … However,* ***absent from every aspect of the Authority's problem definition is empirical evidence of any inefficiency****, i.e., that new connections are inefficiently high or low … the Authority has not identified – nor apparently sought*

---

5 Wellington Electricity, *Submission on Distribution connection pricing proposed Code amendment*, 20 December 2024, pp.3-4 (hereafter: 'Wellington Electricity submission').

6 Electricity Networks Aotearoa, *ENA submission on distribution connection pricing proposed Code amendment consultation paper, Submission to the Electricity Authority,* 20 December 2024, p.6 (Hereafter: 'ENA submission').

7 Aurora Energy, *Network connections project & Distribution connection pricing, Submission on the Electricity Authority's Consultation Papers,* 20 December 2024, p.12 (hereafter: 'Aurora Energy submission').

8 Waitaki Power Trust, *Distribution Connection Pricing Consultation*, 20 December 2024, p.2.

9 Orion, *Distribution Connection Pricing Consultation,* 20 December 2024, p.3.

10 HoustonKemp's report was also prepared on behalf of Vector (as well as Orion), but we were not privy to its contents, analyses or conclusions prior to submission, i.e., it was drafted independently.

11 HoustonKemp Economists, *Review of the Electricity Authority's proposed distribution pricing Code amendment*, 20 December 2024, p10-11.

from distributors – any evidence of connections that may have been efficient, but that did not proceed." [emphasis added]

Frontier Economics (Frontier) also highlighted the lack of evidence supporting the claimed inefficiency of current connection prices in its report prepared for the ENA:[12]

> *"…**no evidence has been presented that demonstrates that capital contributions are indeed set above efficient costs, it has merely asserted that this is the case.** Specifically, it has not identified connection charges that are outside the boundaries of the subsidy-free range."* [emphasis added]

We therefore continue to believe that the lack of evidence is a significant issue. The Authority is proposing substantial changes with far-reaching implications. Good regulatory practice dictates that such interventions should be grounded in robust empirical data, rather than theoretical concerns and unsubstantiated claims.

2.2 Disconnect between supposed problem and proposed solution

Several parties identified the same disconnect as Axiom between the theoretical concerns outlined in the Consultation Paper and the proposed solution of sweeping pricing reforms. Contact Energy aknowledged that the IRIS mechanism may incentivise distributors to de-risk cost overruns by taking larger capital contributions, but concluded that:[13]

> *"Truly solving this problem **would likely require tweaks to the IRIS regime**, so we encourage the Authority and Commerce Commission to work on this project together"* [emphasis added]

Incenta Economic Consulting (Incenta) also agreed with us that many of the supposed incentive problems would be better addressed by the Commission via the Part 4 regime:[14]

> *"…whist* [sic] *we agree that it is desirable for the EDBs to have a financial incentive to process connection requests and connect customers in a timely manner, **a better mechanism to achieve this is to refine the DPP regime**. The two options for aligning the EDBs incentives in this manner would be to have the capital expenditure allowances that are used in the IRIS adjusting with the level of connection activity, or to apply a revenue-driver (i.e., an adjustment to the revenue cap) that again relates to the level of connection activity."* [emphasis added]

HoustonKemp also echoed our conclusions regarding the superiority of solutions potentially available under the Commission's Part 4 framework:[15]

> *"…the potential concerns raised by the Authority about distributors' incentives to fund capital expenditure through connection charges can most directly be resolved through modest amendments by the Commerce Commission that ensure net capital expenditure is unaffected by increases in connection charges, rather than through the Authority changing an entirely different element of the regulatory framework and thereby creating additional concerns."*

---

12 Frontier Economics, *Efficient pricing of distribution network connections, Electricity Networks Aotearoa,* 18 December 2024, p.26 (hereafter: 'Frontier Economics report').

13 Contact Energy, *Response to 'Distribution connection pricing proposed Code amendment*, 20 December 2024, p.6.

14 Incenta Economic Consulting, *Electricity Authority's consultation on price and non-price aspects of customer connection, Report for Powerco and Unison*, December 2024, p.9. (hereafter: 'Incenta report').

15 HoustonKemp report, p.ii. HoustonKemp also propose a number of other – and seemingly preferrable – solutions to the various theoretical issues raised by the Authority in its Consultation Paper (see in particular chapter 7 of its report).

Aurora Energy likewise favoured this approach:[16]

> *"We believe that the most likely reason for increasing capital contributions is a result of the Commission's price-quality regime* ***and is best addressed through changes to the price-quality regime****, such as a removal of consumer connections from the IRIS mechanism."* [emphasis added]

Entrust also felt the Authority's proposals risked encroaching upon jurisdictional boundaries:[17]

> *"Entrust considers that the Authority should be cautious about setting regulated pricing methodologies in a way that impacts both cost allocation (the role of pricing methodologies administered by the Authority) and the required revenue allowance (administered by the Commerce Commission). At best,* ***the Authority's proposals highlight there are jurisdictional boundary issues which need to be addressed****."* [emphasis added]

Electra Trust[18], Scanpower Customer Trust[19], Trust Horizon[20]and West Coast Electric Power Trust[21] highlighted the complexity of the Authority's proposals and urged it to slow down and consider simpler solutions:

> *"The level of change proposed is* ***overly complex****. We acknowledge connection processes, including pricing practices, could be improved and we support initiatives that result in fast, more efficient and cheaper processes. We believe* ***there are simpler solutions than what is proposed*** *and we would be happy to work alongside the EA to achieve this objective if the changes benefit all customer and there is a clear and realistic process to implement the change."* [emphasis added]

Network Waitaki likewise highlighted the disconnect between the alleged problems and the heavy-handed solutions the Authority had proposed:[22]

> *"We are nonetheless concerned about what we would characterise as* ***a fast-paced and heavy-handed regulatory approach proposed for a "problem" that is not quantified and not supported by evidence or through case studies*** *of problematic practices, or where access seekers were disadvantaged and if so, how widespread it is among distributors."* [emphasis added]

The Northern Energy Group (NEG) was also of the view that the problems with the existing framework had been overstated and the proposed solutions were disproportionate:[23]

> *"We believe that the proposed changes are* ***heavy-handed*** *and are tackling an issue that is perceived as* ***much greater than that which currently exists****."* [emphasis added]

---

16 Aurora Energy submission, p.12.

17 Entrust, *Submission to Electricity Authority Regarding Distribution Connection Pricing*, 18 December 2024, p.5 (hereafter: 'Entrust submission').

18 Electra Trust submission, 12 December 2024, p.2.

19 Scanpower Customer Trust submission, 9 December 2024, p.2.

20 Trust Horizon submission, 16 December 2024, p.2.

21 West Coast Electric Power Trust submission, 18 December 2024, p.2.

22 Network Waitaki submission, p.1.

23 Northern Energy Group, *Northern Energy Group submission to the Electricity Authority*, 19 December 2024, p.7 (hereafter: "NEG submission").

Even Meridian, which supported many aspects of the Authority's proposal, expressed scepticism about its overall merits, noting:[24]

> *"…we found the consultation paper relatively complex and confusing, it's unclear whether the proposed Code changes will deliver the outcomes envisaged by the Authority's proposals … We have also observed that the proposals in the consultation paper caused considerable confusion in discussions amongst industry experts, indicating a likelihood of different interpretations by distributors and connection applicants and creating further questions around whether the Authority's intended outcomes will be achieved"*

Accordingly, we remain of the view that addressing various alleged issues with the incentive properties of the revenue cap through a drastic overhaul of pricing is counterintuitive. Even if the problem definition is sound (which, for the reasons set out in our report, it is not), the prescribed 'cure' (substantial pricing reforms) and the party proposed to administer it (the Authority) seem far from optimal.

2.3 Problems with pricing at net incremental cost

Numerous submitters highlighted the same issues we identified with the Authority's proposal to base connection charges on net incremental costs. They, like us, recognised that this approach would require existing customers to foot the bill for any unrecovered amounts if connecting parties exit before the upfront costs are fully recouped. Entrust highlighted this problem in its submission:[25]

> *"…instead of requiring the new connection customer to fund all the cost of connecting to the network upfront, the Authority is relying on the new customer contributing to these costs over time. The problem this creates is that households and* ***other consumers will have to bear this cost if the new customer closes before the cost of the asset is repaid*** *… Entrust does not consider it would be efficient or desirable for existing consumers to be exposed to network investment risk because of new connections."* [emphasis added]

Counties Energy Trust also recognised that the Authority had mistakenly assumed that newly connecting customers would continue to operate over extended periods, generating ongoing incremental revenues:[26]

> *"This ignores the risk that: (i) if new connections do not fully fund the capital costs required for their connection through capital contributions, and (ii) scale back their business activity/network capacity requirements; and/or (iii) don't stay in operation for an extended period of time (15 years),* ***existing consumers will end-up subsidising the new connections.****"* [emphasis added]

The NEG highlighted that these stranding risks and resulting adverse impacts on existing customers were particularly pronounced in the case of charging point operators (CPOs) – a concern we also emphasised in our report:[27]

> *"We are concerned that the proposed approach to agreeing a pricing structure with CPOs will not account for potential market failure and ultimately result in stranded assets that then come at a cost to*

---

24 Meridian Energy, *Network connection pricing*, 20 December 2024, p.1 (hereafter: 'Meridian submission').

25 Entrust submission, p.3.

26 Counties Energy Trust, *Distribution connection pricing and stage one connections,* 17 December 2024, p.5.

27 NEG submission, p.5.

existing network users. While we appreciate that this may not be a regular outcome of EV charger installation, it is important the pricing structure is designed in a way that can provide protection to existing network users in the case of any market failure."

Electra Trust[28], Scanpower Customer Trust[29], Trust Horizon[30] and West Coast Electric Power Trust[31] all set out multiple ways in which setting prices below the incremental costs of connection could adversely impact existing customers:

"The proposed changes are likely to impact negatively on existing customers in three ways:

1. *They are unlikely to have new customers pay a fair charge to join the network meaning existing customers will pay the shortfall.*
2. *Existing customers will be forced to take on stranding risk on new speculative connections that historically networks would have ring fenced to the investment. A real example is Pike River mine. West power made Pike River pay for this connection in full and upfront. Had they not done so the people of the West Coast would still be paying for it.*
3. *The increased compliance load to administer the raft of proposed changes will result in increased costs. The EA openly acknowledges this in the consultation documents. While it would be logical to reflect these to new customers it is unlikely that these costs will be able to be fully recovered, leaving existing customers to pick up the shortfall."*

ENA also highlighted the fundamental problem with assuming that customers will be around for the full durations of the terms set out in the full reforms:[32]

"Requiring fixed expected revenue lives of 30 years for residential connections and 15 years for other connections does not consider the variability of risks associated with different customers. ENA recommends the reconciliation allows an EDB to provide for a shorter assumed revenue life where there is potential for the revenue life to be shorter than the currently proposed fixed expected revenue lives."

The Lines Company (TLC) expressed analogous concerns about shifting financial burdens onto existing customers to cover costs brought on by newly connecting customers:[33]

"TLC has serious concerns about the proposed standardisation of connection pricing. The Authority's proposed 'one size fits all', prescriptive approach will result in a high likelihood of cross-subsidisation between existing and new customers, ***burdening existing customers with costs for which they receive no real added benefit****."* [emphasis added]

Westpower was another submitter to observe that reducing connection charges below the full incremental cost of connection would mean higher ongoing usage charges:[34]

"…unless new connectors fund 100% of the cost to connect, then EDBs will be required to part fund this and ***those costs will be passed onto consumers through higher distribution charges*** *… if a new connector goes out of business before the balance of connection costs are recovered, the EDB will*

28 Electra Trust submission, 12 December 2024, p.2.

29 Scanpower Customer Trust submission, 9 December 2024, p.2.

30 Trust Horizon submission, 16 December 2024, pp.2-3.

31 West Coast Electric Power Trust submission, 18 December 2024, p.2.

32 ENA submission, pp.17-18.

33 The Lines Company, *'Network connections project – stage one' consultation; and 'Distribution connection pricing proposed Code amendment' consultation*, 20 December 2024, p.1.

34 Westpower submission, pp.1 and 3.

end up wearing the loss which again will be passed onto consumers. The only one [sic] *that will benefit is to those who are connecting, which in some cases could be viewed as corporate welfare paid for by consumers"* [emphasis added]

HoustonKemp highlighted the novelty of two of the Authority's pricing benchmarks: the 'neutral' and 'balance' points. It rightly observed that these are "entirely of the Authority's own innovation".[35] It then provided a comprehensive account of the dangers of using these as reference points for pricing.[36] It summarised these downsides as follows:[37]

*"The **neutral point**, which represents the lower bound of the Authority's preferred range of connection charges, reflects pricing below the incremental cost of connection services, which in turn can be expected to:*

- ***inefficiently transfer risks away from connection applicants** by deferring the recovery of connection costs by up to thirty years and providing for outstanding costs to be recovered from other customers if the connecting party disconnects earlier than was assumed; and*
- ***deter competition for connection services** by allowing connection charges to fall below levels that could be sustained in a competitive market, such that alternative service providers would be unable to match these charges …*

*... the **balance point** – contains no information about economic efficiency. Although the Authority's consideration of this 'balance point' references efficiency, the key principle motivating the role of the balance point in the Authority's framework for connection charges is **not efficiency and appears to be equity**. This central consideration is difficult to reconcile with the Authority's statutory objective, which refers to economic concepts of efficiency and competition."*

HoustonKemp suggested that these shortcomings may partly stem from the Authority basing its recommendations on Australia's connection charging framework, but seemingly without fully understanding the nuances of those arrangements:[38]

"These shortcomings reflect that key elements of the Authority's proposal draw inspiration from the framework for connection charges in Australia, but that framework differs in material respects from how the Authority represents them, as well as how they are reflected in its proposal."

Consequently, we remain of the view that the Authority has not demonstrated that the existing connection charging framework is causing inefficiencies significant enough to justify major reforms. Moreover, applying the 'neutral' and 'balance' points would result in upfront charges falling below the full incremental costs of connection, which would harm existing customers and undermine competition in downstream markets (see **Appendix A**).

2.4 Arbitrary, unprincipled reliance limits

The proposed 'reliance limits' encountered strong opposition in the responses to the Consultation Paper. Most submitters shared our confusion and were unable to identify a

35 HoustonKemp report, p.14.

36 HoustonKemp suggests that these crucial shortcomings in the proposals might be partly attributable to the fact that the Authority's has drawn inspiration from the framework for connection charges in Australia, but seemingly without fully understanding those arrangements.

37 HoustonKemp report, p.i. The second bullet point in the quote regarding diminished competition for connection services was not considered in our report. We agree that this is an important additional reason why the pricing below full incremental costs is problematic. We explore this matter in **Appendix A**.

38 *Ibid.*

coherent rationale for the proposal. For instance, Counties Energy pointed out the arbitrary nature of limits and stated that the Authority:[39]

> *"…has not provided evidence that either 47% (the average sector capital contribution reliance over the last four disclosure years) or a distributor's actual capital contribution reliance for disclosure year 2024* ***is an efficient upper bound on capital contribution reliance for load****. That is****, it is an arbitrary limit based on an average of past costs*** *rather than true future costs."* [emphasis added]

The Major Electricity Users' Group (MEUG) was particularly critical of the proposal and, like many others, found it difficult to identify any coherent underlying justification:[40]

> *"MEUG does not support the proposed introduction of a reliance limit methodology, that seeks to put restrictions on distributors' ability to amend methodologies to increase capital contributions. From our reading of the consultation paper,* ***we are not clear on the exact underlying problem that the Authority is trying to address*** *– specifically, what examples of inefficient increases in connection charges the Authority has identified* ***and why an average across EDBs is an efficient solution*** *… MEUG also has concerns about how this reliance limit may impact the balance of connection costs paid by new customers versus those costs covered by existing customers."* [emphasis added]

Wellington Electricity also characterised the limits as arbitrary and warned of the potential for unintended and undesirable consequences:[41]

> *"The reliance limits appear to be* ***arbitrary rather than based on sound economic principles****. As such it is* ***likely to lead to unintended outcomes*** *over time and may need reversing in the future."* [emphasis added]

Aurora Energy was another to emphasise the lack of any principled foundation for the proposed thresholds:[42]

> *"The proposed reliance limits need to be entirely removed from the fast-track reforms because* ***they have no economic basis****, and the Authority* ***has not demonstrated the changes will provide a collective benefit to consumers****."* [emphasis added]

ENA expressed doubts about the use of historical averages in determining reliance limits and pointed out the problematic omission of vested assets from the thresholds:[43]

> *"The reliance limits proposed are based on historical capital contribution levels.* ***There is no support or justification that these reflect efficient connection pricing levels****. An EDB may in fact have been receiving past capital contributions at a level that is not efficient, or changes in circumstances may dictate that capital contribution levels should increase over time to remain efficient.* ***The proposed reliance limit also excludes the impact of vested assets*** *and charges to connecting parties that are not classified as capital contributions."* [emphasis added]

---

39 Counties Energy, *Submission on Targeted Information Disclosure Review (2024) – Electricity Distribution Businesses,* 20 December 2024, p.7.

40 Major Electricity Users' Group, *Distribution connection pricing*, 20 December 2024, pp.3-4.

41 Wellington Electricity submission, p.2.

42 Aurora Energy, *Network connections project & Distribution connection pricing, Submission on the Electricity Authority's Consultation Papers,* 20 December 2024, p.15.

43 ENA submission, p.21.

Frontier was similarly unpersuaded by the proposal to cap capital contributions, citing again the lack of evidence supplied to support the initiative:[44]

> *"It is our view that the Authority's proposal to introduce a reliance limit, caping* [sic] *the amount recoverable through upfront capital contributions, is* ***not supported by the evidence provided and is not aligned with sound economic principles."***

Waipa Networks also had significant concerns about the proposed methodology, including the use of historical averages:[45]

> *"The reliance limit methodology does not support high-growth networks or changes in network design. The restrictions on capital contributions are expected to result in higher lines charges for existing customers, at least in the short term.* ***We are also concerned that the reliance limits are based on historical industry averages****. For a distributor like Waipa who is forecasting a significant lift in growth capex as per our published Asset Management Plan (AMP),* ***basing such a limit on historical averages fails to factor this in****."* [emphasis added]

Transpower was another submitter to express concerns about the arbitrariness of the limits and the adverse incentives they might create:[46]

> *"…we* ***do not support introducing contribution caps arbitrarily as it will create other perverse incentives****. Distributors face difference cost pressures depending on the areas in which they operate. Such caps could result in prospective new connections being discouraged to connect in certain areas or to specific distributors."* [emphasis added]

Incenta also disagreed with the proposal and explained why measured reliance is not synonymous with changes in efficiency and/or equity:[47]

> *"We disagree with the proposal to place limits on the extent to which EDBs may rely on capital contributions to fund connections and system growth capital expenditure. This is because this* ***measured reliance is a poor proxy for whether the efficiency and/or equity of connection prices have changed****."* [emphasis added]

Waitaki Power Trust questioned whether the limits were genuinely aimed at improving efficiency, or if they were primarily focused on reducing prices for new connections:[48]

> *"…we do not consider that the "reliance limit" will improve connection pricing efficiency****. It seems to be more a drive to reduce prices with no reference to efficiency****."* [emphasis added]

Our review of the submissions has consequently reinforced our view that there is no clear connection between the stated problem definition and the proposed reliance limits. The limits are arbitrary, unprincipled, poorly targeted and inconsistent with other elements of the Authority's proposals. Like nearly all parties that analysed these limits, we believe they should not be implemented.

---

44 Frontier Economics report, p.26.

45 Waipa Networks submission, pp.1-2.

46 Transpower, *Consultation on Distribution connection pricing proposed Code amendment*, 20 December 2024, p.1.

47 Incenta report, p.3.

48 Waitaki Power Trust, *Distribution Connection Pricing Consultation*, 20 December 2024, p.3.

3. Qualified support for some aspects of the problem definition

Some parties offered qualified support for certain specific aspects of the Authority's problem definition. For instance, many submitters agreed that there could be greater alignment among distributors regarding connection processes.[49] Additionally, there were some more general endorsements of various elements of the Authority's analysis.

3.1 Partial acceptance of the 'neutral point'

A handful of respondents at least partially accepted the Authority's novel pricing benchmarks. For example, Incenta agreed that the 'neutral point' represents the efficient lower bound for connection charging:[50]

> *"…the **efficient lower-bound for connection charges** is achieved where the sum of the connection charge and the revenue from (expected) ongoing network charges equates to the incremental cost of connecting and serving the customer, which implies a connection charge that is set equal to the difference between the incremental cost of connecting and serving the customer, and the revenue from (expected) ongoing network charges."* [emphasis added]

Frontier concluded the same:[51]

> *"…a connection price that signals the net incremental cost of connection – which is the Authority's neutral point – **can be expected to encourage the economically efficient volume of network connections**."* [emphasis added]

We are not persuaded that the above statements are accurate. First, the conclusions appear to deviate from established economic principles of efficient pricing or, at a minimum, overstate what can reasonably be inferred from theory alone, because:

- The 'neutral point' is not a recognised concept in authoritative economic literature on efficient regulatory pricing; to the best of knowledge, it is a benchmark entirely of the Authority's own creation. We are not aware of any basis in economic theory to suggest that setting upfront connection charges at this level will maximise efficiency (in the manner Frontier implies in the extract above).
- If connection prices fall between incremental costs and standalone costs (the 'bypass point'), it is impossible to determine whether shifting them to another point (e.g., the 'neutral point') would improve overall welfare without thoroughly evaluating the impacts on both dynamic and static efficiency. To date, no such assessment has been conducted – by the Authority, CEPA or any other party.

Second, neither Incenta nor Frontier consider several of the more significant adverse consequences of setting upfront prices at the neutral point (and thereby at a level below the full incremental cost of connecting a customer); namely:

---

49 Those observations may well be correct. However, addressing those issues does not require a radical reworking of the connection charging framework and all it would entail.

50 Incenta report, pp.7-8. Note that the Authority's so-called neutral point is where the sum of the connection charge and the revenue from (expected) ongoing network charges is equal to the incremental cost of connecting and serving the customer.

51 Frontier Economics report, p.16.

- Deferring the recovery of a significant portion of upfront connection costs – potentially for up to thirty years – would lead to higher ongoing usage prices for existing customers. Those customers would also be left to shoulder the burden of any unrecovered costs if connecting parties disconnected earlier than expected. This would inefficiently – and arguably unfairly – shift risk from new connection applicants to existing customers.
- It risks undermining competition in the downstream market for connection services. If upfront connection prices were set below incremental costs, only distributors – or contractors directly engaged by them – would be able to undertake such works. Independent or unaffiliated providers[52] would be unable to match those artificially low charges (we explore this in more detail in **Appendix A**).

For these reasons, Incenta's and Frontier's partial endorsement of the Authority's 'neutral point' has not prompted us to revisit our initial conclusions. Their support seems to rely on an imperfect interpretation of the relevant economic principles and overlooks the significant adverse consequences of setting prices below the incremental cost of connection.

3.2 Reported discrepancies in connection charges

BP Oil New Zealand Limited (BP)[53] and Meridian Energy (Meridian)[54] provided data highlighting the significant variation in prices quoted by distributors for new connections. The large gap between the highest and lowest prices was cited as evidence of an inherent issue with the current charging framework. However, presenting these figures without any accompanying context or explanation is neither helpful nor illuminating. There may be good reasons for the wide range of charges, for example:

- It is unclear whether these figures account for vested assets. If they do not, the comparisons are likely to be meaningless, since they would fail to capture all the costs involved in establishing the connections in question.[55]
- Even if the comparisons do indeed account for all relevant costs, it is not immediately clear why the resulting disparities would be problematic if they reflected genuine differences in the incremental costs of connecting in each case.

Consequently, these data are unconvincing. They also appear to be among the very few pieces of quantitative evidence provided by connecting parties to substantiate the existence of a problem. Notably absent were any data on, for example, the number of connections initiated but subsequently abandoned, or anything comparable to the detailed empirical

52 These are suppliers that are neither distributors nor businesses being paid directly distributors. They are suppliers contracted directly by the connecting customer to perform the connection works – or aspects of them (e.g., civil works, trenching) – in *competition* with distributors (and distributors' affiliated contractors).

53 BP Oil New Zealand Limited, *Distribution Connection Pricing Proposed Code & Network Connections Project – Stage One*, p.2.

54 Meridian submission, p.2.

55 If Meridian paid a distributor $127 for a new connection, but also self-supplied, for the sake of argument, $20,000 worth of assets (vested assets), then including $127 as the bottom figure in its reported range would be misleading, i.e., it would not be 'comparing apples with apples'.

analysis performed by Ofgem in the UK.[56] In short, the Consultation Paper offered no compelling evidence of a problem, and the submissions have not filled that gap.

4. Summary

Our review of the materials lodged in response to the Consultation Paper has not caused us to revise any of the conclusions that we set out in our report. Rather, those submissions and reports that touched upon at least some aspect of the Authority's problem definition serve largely to bolster our core findings.

Yours sincerely

Director

[56] As we explained on pages 11 and 12 of our report, when Ofgem sought to determine whether there were issues with the UK's distribution connection charging arrangements, it explicitly called for empirical evidence. Respondents were asked to provide examples where the connection charging arrangements had caused problems, detailing what happened in each case (e.g., whether the connection proceeded) and the factors driving each outcome (*see:* Ofgem, *Distribution connection boundary – discussion note*, pp.10-12).

Appendix A Adverse effects on competition for connection services

In this appendix, we revisit and expand on our previous observations regarding the implications of setting upfront connection prices at the 'neutral point'. In particular, we highlight and endorse HoustonKemp's analysis of the potential negative impacts on downstream competition in connection services. Although not covered in our initial report, this issue is highly relevant to the Authority's problem definition and proposed solutions.

A.1 Transfer of risk from connectors to existing customers

In our initial report, we highlighted that the Authority endorsed its so-called 'neutral point' without adequately considering the critical distinction between revenue received upfront through connection charges (which is certain) and revenue generated later through usage charges (which is uncertain). For example, if connecting a new customer would require a distributor to incur incremental connection costs of $100 (using a simple number), it would not be indifferent between:

- recovering 100% of those incremental costs upfront via a capital contribution, and
- recovering a small fraction of that cost upfront, then recouping the balance through usage charges over, say, 30 years.

This is because deferring cost recovery would impose additional funding requirements and financing costs that the distributor would then need to pass on to existing customers. Furthermore, if the new customer disconnected before the 30 years had passed, the remaining customers would then be forced to bear the burden of covering any shortfall, i.e., any remaining share of the upfront connection costs yet to be recouped. Applying the Authority's neutral point would consequently transfer risk from new connections to distributors and, in turn, to existing customers.

Our report explained that this would not happen in a competitive market. We acknowledged that, in such markets, the price of an upfront connection service is *sometimes* discounted below incremental costs if the seller expects to recover those costs through ongoing usage revenue. However, we stressed that this always comes with conditions. The customer is invariably required to commit to using the service for a sufficient period to allow the recovery of those initial costs. If the customer disconnects early, there are consequences:

- the supplier may charge an exit fee to recover any unrecovered costs; or
- the supplier may repossess the connection assets and potentially redeploy them for other customers (e.g., a pay TV provider may reclaim a satellite dish or set-top unit).

We pointed out that in the context of electricity distribution exit fees are often ineffective when a customer disconnects before the incremental connection costs have been fully recovered. This is because customers often disconnect because their businesses have failed, leaving them unable to pay such fees. Additionally, redeploying assets will not always be feasible, e.g., if an EV charging station proves unviable in a particular location, it is unlikely that another operator will connect at that same spot, leaving the assets stranded.

We noted that the Authority had overlooked these practical considerations in its Consultation Paper. We concluded that, if the Authority persisted with reforming the pricing

framework, it would need to modify its proposal to prevent the inefficient – and potentially unfair – transfer of risk from new connection applicants to existing customers. Specifically, we recommended removing the requirement to net off incremental revenues in certain instances and enabling distributors to require bank guarantees.[57]

A.2 Reduction in competition for connection services

HoustonKemp highlighted another significant drawback of applying the Authority's neutral point, which, while not discussed in our initial report, is nonetheless highly relevant. It pointed out that competition can – and does – take place for the provision of electricity connection services in the downstream market.[58] Third-party service providers often compete with distributors and their affiliated contractors to install connection assets. For instance, when a customer applies to connect to Vector's network:

- Vector will customarily provide the customer with three quotes from its 'affiliated suppliers', i.e., connection services providers with whom it has existing contractual arrangements (that it pays to perform connection works); but
- Vector also offers the connection applicant the option of arranging its own trenching works, civil works, reinstatement and laying of duct if the customer feels it can get a better deal by hiring an 'unaffiliated supplier', i.e., a third-party provider.

This rivalry between 'affiliated' and 'unaffiliated' suppliers is possible when upfront connection charges are at least equal to the incremental cost of performing the relevant works. Returning to our earlier simple example, suppose all of Vector's affiliated contractors would incur $100 in incremental costs connecting an applicant and they all proposed to charge Vector accordingly. And suppose Vector reflected that cost in its quotes to the connection applicant and sought an up-front capital contribution equal to that sum.

In this scenario, an independent provider could feasibly compete with Vector's affiliated providers. If another supplier believed it would incur *less* than $100 in incremental costs connecting the applicant and/or if it was willing to accept a lower margin to perform the works, it could undercut the affiliated providers and contract directly with the customer. That additional rivalry is undoubtedly virtuous. However, if the full reform option were implemented, this scenario would change significantly.

Under the pricing framework contained in the 'full reform' option, Vector's affiliated contractors would still incur $100 in incremental costs and charge it accordingly. However, whilst Vector would have no choice but to pay its suppliers for these costs upfront (or else they would not perform the works), it would *not* be able to pass on the full amount to the customer – at least not right away. It would instead need to offset the expected incremental revenues from usage over the mandated timeframe (15 or 30 years).

This would create a disparity between what Vector pays its affiliated contractors upfront and what it charged the connecting customer. Specifically, while Vector would pay at least the incremental cost to its affiliated suppliers, the connecting party itself would pay less, with the difference being covered by Vector and, ultimately, its existing customers. This would

[57] See pages 16-17 of our initial report for more detail.

[58] HoustonKemp report, pp.20-21.

extinguish any prospect of competition from independent (i.e., unaffiliated) suppliers. That is because, from the connection applicant's perspective:

- If it opted to have the works performed by one of the distributor's affiliated providers, it would pay a discounted 'upfront' sum via a capital contribution, with the remainder being recouped over the ensuing 15-30 years via usage charges; and
- If it chose to employ the services of an 'unaffiliated' contractor without the distributor serving as an intermediary, it would inevitably have to pay 100% of the incremental connection costs upfront.

Even if third-party suppliers could offer lower prices, they would be unable to match the attractiveness of the offers distributors would be required to provide. No unaffiliated provider would agree to defer cost recovery for decades,[59] and no rational customer would reject the opportunity to pay only a fraction of the true upfront cost to connect to the distribution network. Competition for new connections would, therefore, be confined to suppliers with existing contractual relationships with the relevant distributor – namely, affiliated contractors.

We agree with HoustonKemp that this approach would substantially limit the potential for competition in connection services to emerge in New Zealand. Furthermore, modifying the Authority's full reform option to permit distributors to require bank guarantees – an option we recommended in our report (and summarised above) – would not resolve that competition problem. While such guarantees might mitigate the asset stranding risks that would otherwise be borne by existing customers, they would not enable unaffiliated contractors to compete on a level playing field.

The Authority has suggested the possibility of maintaining some degree of contestability – albeit in a limited context[60] – by requiring distributors to make payments to connecting parties or unaffiliated contractors.[61] The concept of distributors providing upfront payments to reflect the present value of future distribution revenues is both novel and untested. Moreover, this aspect of the Authority's proposal is entirely undeveloped, with only a single sentence devoted to it in the Consultation Paper.

We consequently share HoustonKemp's scepticism about this proposal's merits. It seems to us that the Authority has given insufficient consideration to the potentially significant adverse effects that its full reform option would have on downstream competition for connection services. We also concur with HoustonKemp that there is likely to be more effective ways of preserving contestability without resorting to such an unprecedented and, as of now, entirely unformulated methodology.

---

59 Furthermore, unlike in many workably competitive markets, a supplier of connection services cannot replicate a distributor's business model due to the natural monopoly characteristics of electricity distribution services. Specifically, a downstream connection service provider cannot feasibly vertically integrate into electricity distribution to offer a comparable pricing structure and compete on equal terms.

60 The Authority suggested this as a way of dealing with a scenario in which connection works that include vested assets result in a negative connection charge, i.e., where the incremental revenue exceeds the incremental cost and contribution to network costs. However, this more specific scenario could potentially have more general application.

61 Consultation Paper, p.69.