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4 February 2026

Electricity Authority

By email: connection.feedback@ea.govt.nz

# Reducing barriers for new connections: up-front charges and distributor obligations

1. This is Vector's submission on Parts A & B of the Electricity Authority's (the Authority) consultation paper "Reducing barriers for new connections: up-front charges and distributor obligations" (Consultation Paper).[1]

2. No part of this submission is confidential; it can be shared publicly.

3. Vector has also submitted expert reports from HoustonKemp and Oxera in response to the Consultation Paper.

4. We are happy to discuss any part of this submission with the Authority if required, we can also make available the experts we have engaged to discuss their reports if that would be of use to the Authority.

[1] Electricity Authority, *Reducing barriers for new connections: up-front charges and distributor obligations,* https://www.ea.govt.nz/documents/8620/Reducing_barriers_for_new_connections_-_Consultation_paper.pdf

## Executive Summary

5. Vector is concerned with the Authority's proposals set out in its Consultation Paper. The Authority will see from the expert reports we have submitted, that the proposals are not well supported by economic and pricing theory as well as international precedent or regulatory practice.

6. At a more detailed level we are concerned with the following:

   A. **Problem Definition & Evidence**: The Authority should do more to define the problem it is trying to address. More evidence, in our view is required by the Authority to support its hypothesis that connection prices are too high and / or electricity distribution businesses (EDBs) are setting connection prices that are inefficient.

   B. **Correlation with Economic and Pricing Theory**: Our expert economists have struggled to understand what economic framework the Authority has used to determine that prices are too high or inefficient. Similarly, our experts raise serious concerns that the key proposals in the paper do not appear supported by sound economic or pricing theory but instead define novel concepts such as an arbitrary 'balance point' that has little basis in economics.

   C. **Out-of-Step with Other Jurisdictions and Inconsistent with NZ Government and Regulators**: Our international experts consider that the Authority's approach to regulating connection charges differs markedly from how regulators in other countries typically carry out similar reforms. Although the stated aim is to improve efficiency and reduce barriers to new connections, the process used to define the problem, test evidence, and design remedies does not follow standard regulatory practice. The Authority's proposals would also appear to be at odds with the Government and Commission's view that "growth should pay for growth".

   D. **Need for Improved Connection Charge Analysis**: The Authority's approach to comparing capital contributions with connection and growth capital expenditure could benefit from further refinement, as some aspects may oversimplify the complexities involved. Additionally, there may be opportunities to provide a more comprehensive assessment of individual EDBs by considering the influence of vested assets within the analysis. The reasoning presented in the paper regarding forecasted increases in connection prices and the potential for a hold-up problem may also warrant additional examination to ensure the conclusions drawn are robust and well-supported.

   E. **Consideration of Existing Customers**: It is difficult to determine how the Authority is balancing the interest of all customers in its proposal. Overall, there would appear to be very little customer "voice" in the consultation material.

F. **Authority Acting Outside Jurisdiction**: We continue to have concerns about the jurisdictional interface between the Authority and the Commission. The Authority's proposals would appear to encroach into the Commission's remit, thereby undermining certainty in economic regulation which governs EDBs.

G. **Misalignment with TPM**: The pricing approach the Authority is advocating for EDB connection pricing, plainly does not align with the pricing approaches set out by the Authority in the Transmission Pricing Methodology (TPM). The Authority does not appear to have provided an explanation for its change in position, particularly concerning the manner in which connection charges are applied to parties connecting with Transpower as opposed to EDBs.

H. **Alignment with Statutory Objective**: The Authority's statutory objective directs it to promote economic efficiency and competition. We cannot see any reasoned framework for defining what economic efficiency means with respect to connection pricing in the Consultation Paper. The Authority, in proposing to require distributors to set connection charges, may also have underestimated how such a proposal may actually harm real and prospective competition for the provision of connection services seemingly in conflict with one of its core statutory objectives.

I. **Unintended Consequences**: The Authority appears to have over-looked a discussion in its paper on any unintended consequences of the proposed interim restraints on charges through targeted intervention.

J. **Statutory Power to Impose an Obligation to Connect**: Vector is committed to ensuring that those that require connection to our networks can do so. In the last decade we have made over 124k new connections[2] and are not aware of any connection being refused. We are however concerned whether the Authority has correctly interpreted its statutory power regarding imposing an obligation to connect.

[2] Sourced from Vector's information disclosures. Measured as number of ICPs connected during year.

## PART A – Connection charges

## A: Problem Definition & Evidence

7. The Authority has not established any significant problems that would be best addressed by the proposed reforms. The problem contended by the Authority is that greater reliance on connection charges may delay or prevent new connections that should be encouraged because they are 'efficient' in the sense that they both cover their own costs and contribute to shared costs. This is a weak definition of the problem as it frames the problem primarily as rising reliance levels rather than assessing whether current connection pricing exceeds economically efficient levels. The Authority should do more to define what an efficient connection charge should be and the level of that charge where the charge becomes inefficient.

8. While the Authority considers the level of the charge as the problem, there is not enough direct evidence provided in the Consultation Paper of connections that have been delayed or even prevented by connection charges. The Authority acknowledges the challenges associated with gathering such evidence. Consequently, the problem under consideration is primarily substantiated by a limited number of examples provided in submissions from connection applicants who expressed concerns regarding connection charges. The Authority's consultation does not demonstrate that current connection charges exceed customers' willingness to pay or incremental cost of connection and does not show the reasons why customers do not proceed with connections.

9. The Authority could further clarify the specific market failure it aims to address. It has not presented evidence of monopoly connection pricing exceeding costs, consistent misuse of market power, or limited competition in contestable connection services. Additionally, while the Consultation Paper touches on equity and intergenerational fairness alongside efficiency concerns, we note equity is not part of the Authority's statutory mandate.

10. Furthermore, if the problem the Authority is trying to address is market power by natural monopoly EDBs in relation to connection pricing, then the Authority should be explicit in saying that. We however consider that market power issues would be best addressed by the Commission and the Authority's paper would set out the engagement they have had with the Commission on this matter. The Commission has released guidelines regarding market power[3] and these do not appear to be referred to by the Authority in its assessment of EDB market power in relation to connection pricing. We are also not aware that the Commission has raised any concerns of EDB market power publicly in relation to connection pricing.

[3] Commerce Commission, *Misuse of Market Power Guidelines* (March 2023), https://www.comcom.govt.nz/assets/pdf_file/0014/311360/Misuse-of-Market-Power-Guidelines-March-2023.pdf

11. The Authority has observed an upward trend in connection prices and capital contributions, which has influenced its consideration of measures to constrain up-front charges. Although there is clear data showing increases in prices for some distributors, further analysis could be valuable to determine whether current levels are optimal from an efficiency perspective i.e. whether they are too low, too high, or appropriate. It is important to note that an increase in prices does not automatically indicate inefficiency or a problem.

12. The Authority states there is no clear test for what makes up-front charges "excessive," yet aims to control high connection costs, calling excessive charges a problem in some regions. Without a clear definition of excessiveness, it's hard to justify claims that prices are too high or that regulation is necessary.

13. The Authority notes in the Consultation Paper that *"Efficient pricing is cost-reflective and subsidy-free and supports investment and usage coordination"*.[4] The Authority's 2019 distribution pricing principles[5] state subsidy free prices are equal to greater than avoidable (incremental) costs, and less than standalone costs. This means that prices within this range can be considered efficient rather than solely those at the arbitrary balance point. There is no proof that connection pricing fails cost-reflective principles or falls outside the subsidy free range. There would be a problem to fix if connection prices were outside of that range as then prices would be considered inefficient. However, the Authority has not shown that connection prices are indeed outside of that range.

14. The problems articulated in the consultation paper are in Vector's view not well supported and that more evidence is required to justify imposing regulation to enable the Authority to undertake targeted intervention of select EDBs connection charges.

## B: Correlation with Economic and Pricing Theory

15. The Authority's proposed reforms for distribution connection pricing are not, in our view, well aligned with established economic and pricing theory. The proposals should adhere to sound principles that support efficient pricing, competitive outcomes, and good regulatory design. The Authority's proposals do not do this and could therefore result in regulation that's not in the long-term interests of consumers.

16. Vector considers that an important area for further refinement relates to the treatment of connection and network services as a single bundled service. There is a clear distinction between these services: connection services involve upfront, customer-specific costs that are directly linked to a customer's decision to connect and are at least partially

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[4] Consultation Paper, Electricity Authority, *Reducing barriers for new connections: up-front charges and distributor obligations, s*3.5, pg. 10

[5] Electricity Authority, Distribution Pricing: Practice Note, https://www.ea.govt.nz/industry/distribution/distribution-pricing/

contestable. Network services, on the other hand, involve largely sunk and shared costs, typically recovered through ongoing tariffs. For a particular connection, such as developments, there can be different customers for the connection services and the network services. HoustonKemp, note *"[t]here are two important reasons, linked to the Authority's statutory objective, to draw a clear distinction between the connection service and the network service, ie: the cost structures of the connection service and the network service are very different, with implications for economically efficient pricing and use; and there are observed transactions for the connection service that occur separately from the network service, because the connection service is subject to some degree of competition."*[6] By conflating these two, the Authority moves away from established pricing theory, which requires that prices reflect the incremental cost of each distinct service.

17. The bundling of those two distinct services by the Authority leads it to use of the "neutral point," where future network line charge revenues are used to offset the upfront cost of a connection. This is inconsistent with incremental cost principles. Incremental cost should be applied per service to ensure customers face the cost of what they consume for each service. Setting connection charges at net incremental cost, rather than the actual incremental cost of the connection service, results in prices below the efficient price. This weakens the efficiency signal and encourages connections that would not occur if the connecting party had to pay the full cost.

18. *"Despite the Authority's substantial focus on allocative efficiency, the neutral point does not promote allocative efficiency. By consequence of its focus on allocative efficiency, the Authority has not considered how the promotion of competition may improve productive and dynamic efficiency."*[7] As Houston Kemp highlight the Authority's analysis adopts a narrow view of economic efficiency, focusing almost solely on increasing the number of connections (allocative efficiency). This neglects productive and dynamic efficiency, which are essential for long-term consumer benefit. Competition is the main driver of productive efficiency, innovation, and cost reduction. However, the Authority places little emphasis on competition, instead favouring administrative price controls i.e. a preference for lower prices rather than lower costs, which could not be in the long-term interests of consumers.

19. Furthermore, the proposals conflict with fundamental principles of competition and contestability. In competitive markets, prices cannot be sustained below incremental cost. By requiring distributors to charge less than the incremental cost for connection services, the Authority would necessitate cross-subsidisation from natural monopoly network services. As HoustonKemp conclude *"that if the Authority proposes to require distributors to set connection charges below incremental connection costs, this is likely to harm competition for the provision of connection services by rendering the connection service*

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[6] HoustonKemp, Review of the Electricity Authority's proposed distribution connection pricing framework, 3 February 2026, s3.1.1 pg. 10

[7] HoustonKemp, s3.1.2 pg. 11

*incontestable."*[8] This disadvantages accredited or third-party providers, who cannot access natural monopoly revenues to fund below-cost pricing, ultimately eroding contestability, weakening competitive pressure, and increasing long-term costs, contrary to the Authority's statutory objective to promote competition.

20. HoustonKemp highlights the importance of *"charges that are based on incremental cost reflect 'exacerbators pay' charges and have properties that are preferable (in terms of their contribution to economic efficiency) to charges that are below incremental cost and that are motivated by broader equity concerns."*[9] Current connection charges should reflect today's incremental cost of connection, not historical percentages, because the historical under-recovery of shared network costs is a sunk cost to be managed through residual line charges, not through lowering the connection charges of current customers.

*21.* The 'balance point principle' is framed in comparative terms rather than cost-based terms, which makes it hard to translate into an implementable metric. As HoustonKemp observe, *"[i]t is unclear how the Authority will determine when connection charges are deemed to be inefficiently high as to warrant targeted intervention. In the event of targeted intervention, it is unclear as to how distributors will be expected to calculate the balance point, given the practical challenges of deriving an estimate of the balance point."*[10]

22. As the balance point concept is not well-defined and little guidance is provided in the Consultation Paper, judgement calls need to be made on how to measure 'shared network cost', 'commensurate', 'similar existing connections', and 'timeframes'. This makes it very difficult for distributors, whose connection charges have changed over the last decade because of a change in connection pricing methodology, to know whether they are compliant with the proposed Code amendment. Oxera note "*some details surrounding its practical enforcement, as proposed under the targeted intervention framework, remain unclear—specifically how exactly the EA would determine whether the balance-point principle has been breached or met."*[11]

23. Oxera[12] highlight after reviewing the Consultation Paper, previous decisions and supporting material, that they *"remain unsure about how the EA plans to operationalise aspects of the balance-point principle, especially in the context of demand uncertainty."* This is due to ambiguity around the terms *"'commensurate' [and] … 'similar contributions over the lifetime of the customer', within the definition of the balance-point*". Oxera provide an illustrative model to assess the 'balance point principle' using a static (ex ante) and dynamic (ex post) approach.[13] Oxera conclude that, *"irrespective of this detail regarding*

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8 HoustonKemp, s4.1 pg. 23

9 HoustonKemp, s5.3 pg. 33

10 HoustonKemp, s5.4 pg. 34

11 Oxera, New Zealand electricity distributors' upfront connection charges, 2 February 2026, s4.1, para 4.6, pg. 46

12 Oxera, executive summary, pg. 7

13 Oxera, s4.1, pg. 48

*the implementation approach, we find that the principle would be ineffective at achieving the EA's objectives of each user contributing similarly to the shared cost if it is applied in a static way, and would be impractical if it is applied in a dynamic way."* [14]

## C: Out-of-Step with Other Jurisdictions and Inconsistent with NZ Government & Regulators

24. The Authority's approach to regulating connection charges differs markedly from how regulators in other countries typically carry out similar reforms. Although the stated aim is to improve efficiency and reduce barriers to new connections, the process used to define the problem, test evidence, and design remedies does not follow standard regulatory practice. As Oxera conclude *"… the Consultation differs from good regulatory practice… with respect to aspects of its timeframe, clarity of the theory of harm and policy objectives, and assessment of the proposed remedy."*[15]

25. As Oxera highlight in their report[16] in most jurisdictions, significant pricing changes follow a clear, staged approach. Regulators first define the problem, gather and test evidence, consult widely on the causes of any harm, and only then consider possible solutions. The Authority, however, has merged all these steps into a single, highly compressed consultation, with little opportunity for affected parties or consumers to engage or challenge the findings. This makes it difficult to test whether a genuine problem exists before remedies are proposed.

26. We would expect regulators to place great weight on robust empirical evidence before intervening in pricing. Complaints about high prices or rising capital contribution measures are not proof that intervention is needed. By treating such indicators as justification for immediate regulatory action, the Authority departs from the more evidence driven approach. The Authority's analysis remains almost entirely qualitative and does not demonstrate that the benefits of intervention outweigh its costs. As Oxera observe "… *the EA Consultation has features of a market investigation, yet, based on our review, falls short of the procedural standard relative to similar exercises conducted by other authorities.*"[17]

27. A related concern is proportionality. Good regulatory practice requires that any remedy be necessary, targeted, and the least intrusive option available. Regulators normally assess costs, risks, and unintended consequences in detail before deciding on a preferred approach. The Authority has not carried out this type of analysis, offering instead a high-level assessment that does not consider alternatives or quantify impacts. Oxera

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[14] Oxera, s5, pg. 74

[15] Oxera, s5, pg. 74

[16] Oxera,, s3.1, pg. 22

[17] Oxera, s3.1, para. 3.7, pg. 23.

conclude *"the EA undertakes limited assessment of the proportionality and effectiveness of the proposed remedy."*[18]

28. The Authority's proposal to apply selective, distributor specific intervention is also unusual. Other regulators typically impose remedies consistently across an entire sector unless there is clear evidence that only certain firms are responsible for a problem. Intervening on a case-by-case basis without establishing a sector wide issue risks uneven regulatory treatment and adds uncertainty for distributors. As Oxera observe, *"the targeted intervention approach, is selective by design [and] … the targeted market participants may be affected disproportionately."*[19]

29. The introduction of new pricing concepts not grounded in standard cost allocation methods further amplifies the uncertainty. Regulators elsewhere rely on established concepts—such as long run incremental cost or fully allocated cost—supported by clear guidance. The Authority's bespoke terminology such as the balance point does not map to these frameworks, making compliance harder to understand and increasing regulatory risk. As Oxera note *"The EA plans to intervene ex post when it identifies concerns that its balance-point principle may not have been met, without giving clear ex ante regulatory guidance on how costs should be allocated. This does not provide sufficient clarity to distributors about how to mitigate the risk and costs of the EA's targeted interventions."*[20]

30. International experience also shows that there is no single correct model for connection charging: shallow, deep, and hybrid approaches are all used.[21] Preserving flexibility to move between these models as circumstances change is important. The Authority's proposal would restrict this flexibility by effectively locking distributors into their existing charging approach, even if it becomes inappropriate over time.

31. Taken together, these features place the Authority's proposals out of step with accepted regulatory practice internationally. The process lacks the usual safeguards, the evidence base is limited, the proposed remedy is not well tested, and flexibility is reduced. This increases the risk of unintended consequences for consumers, investment decisions, and the long-term development of the energy system.

32. The Authority should also consider the direction of other New Zealand policy settings. Government reforms to development contributions emphasise the principle that "*growth pays for growth*,"[22] ensuring infrastructure costs created by new development are not

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[18] Oxera, executive summary, pg. 5

[19] Oxera, s3.2, para 3.23, pg. 29

[20] Oxera, s3.5, pg. 46

[21] Oxera, s4.2, para. 4.39. pg. 60

[22] Going for Housing Growth: New and improved infrastructure funding and financing tools, Government Ministers' press release 28 February 2025, Hon Chris Bishop and Hon Simon Watts, available: https://www.beehive.govt.nz/release/going-housing-growth-new-and-improved-infrastructure-funding-and-financing-tools

shifted onto existing users. This precedent has been articulated as the Government undertakes reforms to the Development Levies System.[23] There is a clear focus on enabling councils to appropriately recover the infrastructure costs associated with growth through development contributions, thereby ensuring these expenses are not transferred to existing ratepayers.

33. The Authority should also take into account the Commission's commentary regarding the 2026 gas price reset. The Commission has noted, "*We expect GPBs to increasingly focus on ensuring new connections pay their way and do not impose costs on the existing consumer base.*"[24] Additionally, the Commission highlighted that while new customers can benefit all pipeline users by spreading shared costs across a wider group, this benefit often depends on the upfront contribution paid at the time of connection. Currently, Powerco and GasNet require relatively low initial capital contributions, whereas Firstgas Distribution is demonstrating an upward trend in such contributions. Vector has implemented a comprehensive capital contributions policy requiring connecting parties to pay all capital costs of their connection upfront.

34. This was reflected in submissions to the Commission's 2026 gas price reset. Rewiring Aotearoa submitted that "*New customers should be charged upfront for the full cost of their connection*."[25] Fonterra similarly commented "*All new customer connections should be priced to recover the full capital and future disconnection cost up-front, so that existing are not required to underwrite either today's or tomorrow's costs of connecting customers.*"[26]

35. In the water sector, the Commission noted economic regulation was being applied to Watercare to address a number of concerns, including: "*ensuring that "growth pays for growth*"[27] The Commission observed, "*IGCs [Infrastructure Growth Charges] are intended to recover a share of the costs of treatment and bulk transmission that is attributable to*

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[23] Department of Internal Affairs, Going for Housing Growth: Supporting Growth Through a Development Levies System, 26 November 2025, available: https://www.dia.govt.nz/diawebsite.nsf/Files/Local-Government-2025/$file/Development-levies-consultation-document-26-Nov-2025.pdf

[24] Gas DPP4 reset 2026 – Default price-quality paths for gas pipeline businesses from 1 October 2026 – Draft decision (reasons paper), 27 November 2025, paragraph X7 page 4, available: Gas-DPP4-Draft-decision-reasons-paper-27-November-2025.pdf

[25] Rewiring Aotearoa, Submission on Gas DPP4 Issues paper, 24 July 2025, available: https://www.comcom.govt.nz/__data/assets/pdf_file/0034/367792/Rewiring-Aotearoa-Submission-on-Gas-DPP4-Issues-paper-and-draft-decision-24-July-2025.pdf

[26] Fonterra, Submission on Gas DPP4 Issues paper, 24 July 2025, available: https://www.comcom.govt.nz/__data/assets/pdf_file/0033/367782/Fonterra-Submission-on-Gas-DPP4-Issues-paper-24-July-2024.pdf

[27] Commerce Commission, Watercare's performance in 2025: Report prepared by the Commerce Commission as Crown monitor to Watercare (November 2025) at 1.6, available at https://www.comcom.govt.nz/assets/Documents/crown-monitor/Watercares-performance-in-2025-28-November-2025.pdf

*growth. The Charter identifies that IGCs have not kept pace with increases in these costs.*"[28]

36. Stakeholders have echoed this view. For example, some industry participants have argued that new customers should pay the full upfront cost of their connection so existing users are not required to subsidise new demand.

37. Overall, the Authority's proposals lack alignment with both international regulatory norms and domestic policy trends that emphasise cost-reflectivity and the principle that new growth should not impose undue costs on existing consumers.

## D: Need for Improved Connection Charge Analysis

38. The Authority's case for intervention appears to be based on observing increasing reliance levels from some distributors, with Vector being singled out for separate analysis. The Authority's analysis of comparing capital contributions to connection and growth capital expenditure could be improved in our view.

39. Vector has explained in its published capital contribution policies and directly to the Authority the changes and the reasons for those changes in its connections methodology. Auckland housing growth was the catalyst over the last decade for a significant uplift in new electricity connections on Vector's networks, so adjustments were implemented to ensure new customers contribute to common costs, receive a price signal on future investment costs and effectively minimise cross-subsidisation between existing and new customers.

40. The Authority's use of capital contributions as a share of growth capital expenditure to infer trends in connection charges is misleading because it ignores timing differences between when contributions are received and when growth investment occurs. While these mismatches may cancel out across all distributors, making the aggregate trend look reasonable, the approach breaks down when applied to an individual distributor like Vector. In Vector's case, timing effects have been mistaken for a forecast rising trend.

41. The Authority has also combined two fundamentally different capex categories; consumer connection capex and system growth capex and only used the first half of the recent AMP period in its analysis which only shows half the picture. Disaggregating the capex categories and showing them over the full AMP period would provide greater clarity into the trends of connection charges.

[28] Ibid, at 7.5

42. The figures below illustrate the forecast contribution from consumer connection expenditure, system growth expenditure and total growth expenditure (combined consumer connection and system growth). These are the RY25-RY35 constant price amounts used to prepare Schedule 11a from AMP2025.[29]

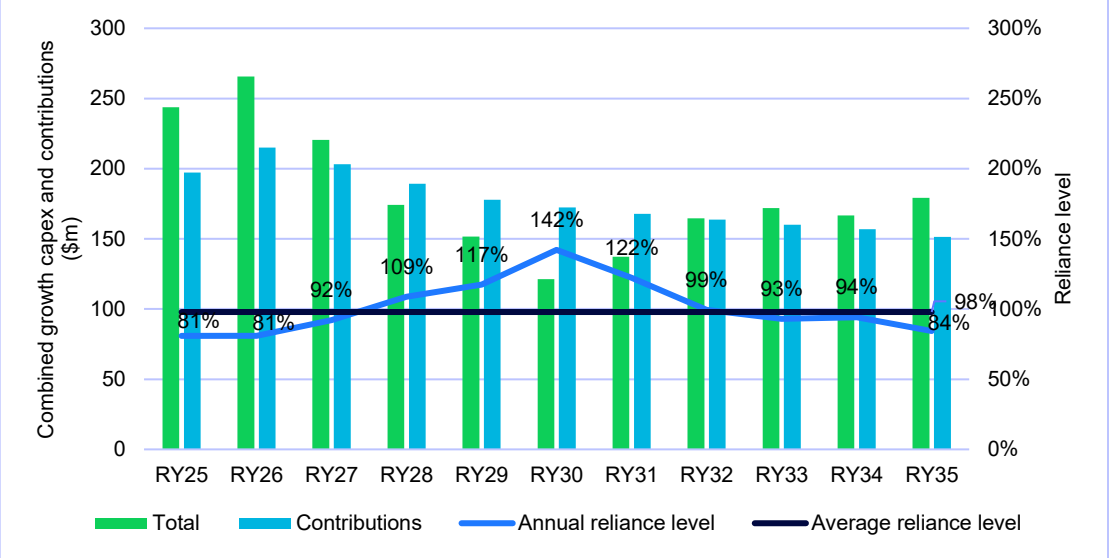


*Figure 1: Combined growth capex, contributions and reliance levels*

43. The combined reliance level from consumer connection and system growth gives the 81% to 142% from RY25 to RY30 as illustrated in the Authority's consultation paper. However, by including the RY31 to RY35, it reveals that the initial increase in reliance level is only a short-term trend and is offset by the decrease in the later years. The average reliance level over the period is 98%. As Vector has articulated in its capital contributions policy, Vector charges connecting parties their full incremental cost of connection to avoid connecting parties being subsidised by existing customers. Figure 1 also illustrates the growth capex is following a reverse trend to the reliance levels and contributions are forecast to decrease over the next decade.

[29] Vector's 2025 Asset Management Plan, available at https://blob-static.vector.co.nz/blob/vector/media/vector-2025/vec264-2025-electricity-asset-management-plan-amp-update_final.pdf

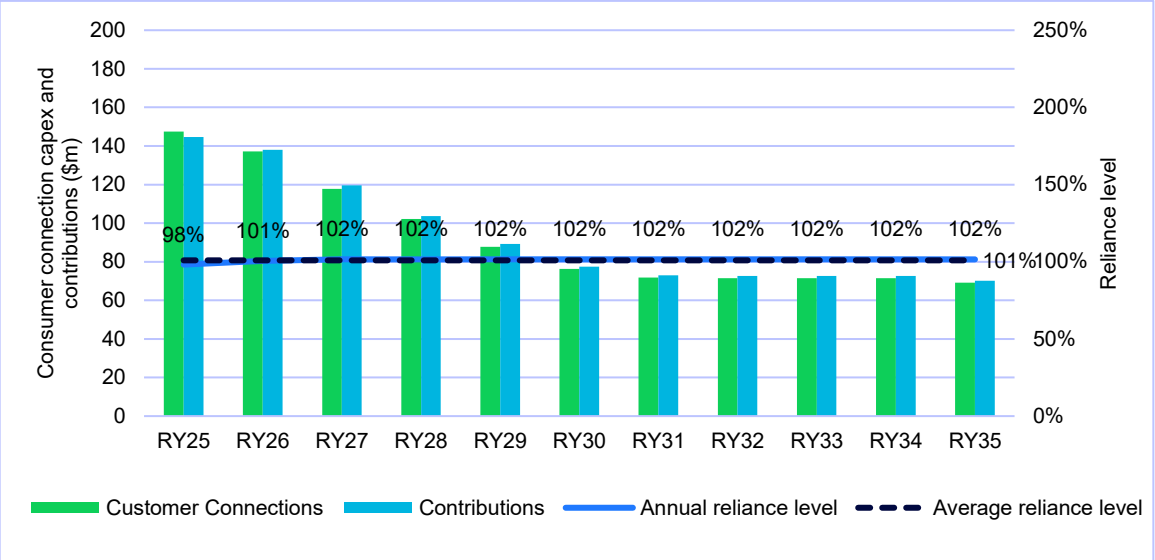


*Figure 2: Consumer connection capex, contributions and reliance levels*

44. The reliance level from consumer connection capex is forecast to remain stable at approximately 100% over the next ten-year period.[30] This illustrates that it is not driving an increase in Vector's perceived increase in reliance levels.

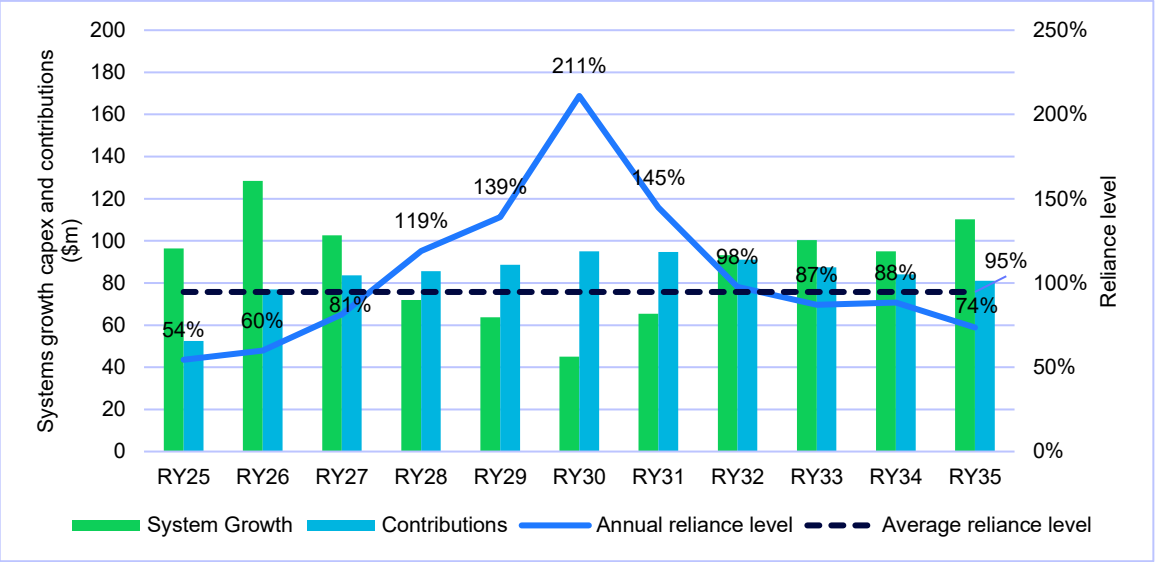


*Figure 3: System growth capex, contributions and reliance levels*

45. In contrast, the reliance level from system growth capex between RY25 and RY30 is forecast to trend upwards, however from RY30 to RY35, this trend is forecast to reverse. Overall, the average reliance level from system growth capex over this period is 95%. The years of high reliance levels, RY28 to RY31, correspond to the when the system growth capex is forecast to be lowest. In fact, RY30 system growth capex is forecast to be only 35% of that in RY26.

[30] The cost of financing is included in forecast contributions however it is excluded from the capex and reliance level calculation resulting in the consumer connection average and annual reliance level being slightly higher than 100%.

46. The additional information from disaggregating the growth capex into consumer connection and system growth and having the full AMP period, illustrates that the apparent forecast increase in reliance levels is due to the lumpy nature of system growth capex.

47. As outlined in Vector's recent Capital Contribution Policies, connection applicants are charged for the full incremental cost (100%) of their connection works, for the extension cost (consumer connection capex) and a network capacity cost allocation or development contribution (system growth capex), this ensures the right price signals are sent to connection applicants and connection works are as efficient as possible.

48. The last material change in Vector's connection policy was in December 2021, so any increasing reliance levels are not the result of any recent Vector policy change.

49. Vector's development contribution is calculated, using historic and forecast system growth expenditure, and is set to recover 100% of this expenditure over the full AMP period. This averaging smooths the development contribution but also results in some years under recovering (less than 100%) and some years over recovering (more than 100%) as shown in the figure above. This smoothing approach also limits the "saw-toothing" of price changes that would occur if prices were set using only annual data.

50. The Consultation Paper[31], outlines consumer impacts of the targeted intervention proposal focussing on Vector. The Authority has used indicative reduction scenarios, reducing Vector's connection charges by 25% in RY2029 and 35% in RY2030, to broadly align them with the RY2027 connection charges. However, the Authority appears to be conflating reliance levels and connection charges. The reliance levels in RY2029 and RY2030 are forecast to increase due to the lumpy system growth capex which is low in these years however Vector's connection charges in constant prices are forecast to be smoothed across the AMP period. The Authority's indicative scenarios would result in "saw-toothing" of connection charges, which is not in the interests of consumers.

51. The Authority's use of capital contributions as a portion of growth capital expenditure, has underestimated the current and recent years, overestimated years RY2029 and RY2030, and not reported the final years of the 10-year AMP period.

52. Vector also has concerns that the Authority would appear to have not been even-handed in its assessment of individual EDBs. It has called out Vector based on its analysis that the reliance levels on capital contributions for Vector are increasing. While the Authority collected information on in-kind/vested contributions and noted tracking limitations across distributors, the current dataset still cannot reveal the true scale or trend of vested contributions by connection applicants. Vested assets are typically connection works assets that are vested to an EDB post the connection works being constructed by a

[31] Consultation Paper, s8, pg. 44

related party of the EDB or a third party. It is possible that connection applicants are paying the full cost of their connection to those related or third parties. Which is no different to what is Vector's current practice i.e. the connection applicant pays 100% of the cost of the connection assets. Further analysis of vested assets could show there to be many connection applicants on other EDB networks paying connection contributions at the same level as connection applicants are paying to connect to Vector's network. Vector is concerned that it has been targeted in the Authority's Consultation Paper while on other networks connection applicants may be paying a similar level of connection costs.

53. Vector's assessment differs from the Authority's view of the hold-up issue. The Authority is of the view that increasing reliance limits results in a hold up problem resulting in some connections not going ahead. This is not correct in our view, as if connection charges are expected to increase over time, then connection applicants have an incentive to connect sooner and not delay. This is because connecting now avoids facing higher costs later. Therefore, the Authority describing increasing reliance levels as a hold up problem is in our view not correct.

54. It is possible that in fact the Authority's proposals are more than likely to unintentionally create hold-up-like behaviour. If applicants believe the Authority will force distributors to lower prices later, they may delay connecting now to benefit from future reductions.

## E: Consideration of Existing Customers

55. Vector has always been very conscious of the interplay between network connection pricing and the impact on distribution lines charges. We have undertaken customer research into who should pay for EV charging stations. We found:
    - Only 4% of New Zealanders aged 18+ believe New Zealanders should fund the building of public EV charging stations by paying higher electricity bills; and
    - That 92% of New Zealanders aged 18+ consider a combination of private companies making a profit from EV charging, the NZ government and/or EV owners/drivers should fund these.

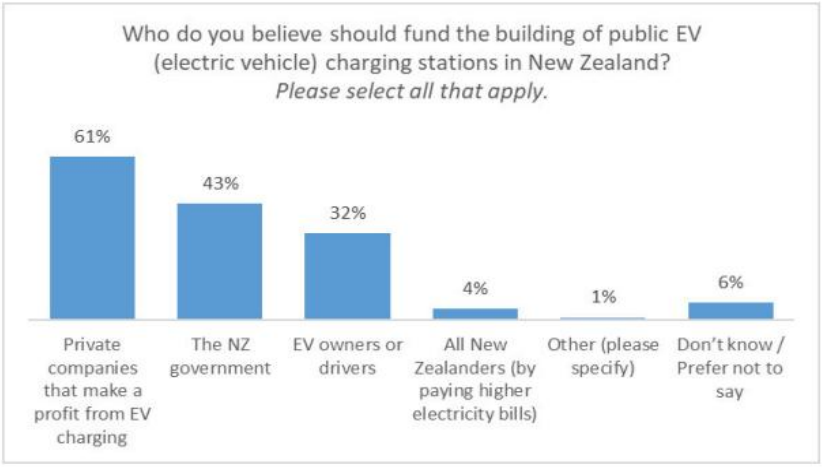


*Figure 4: Customer research into who should pay for EV charging stations*

56. The Authority has indicated that it does not plan to subsidise business network connections at the expense of residential consumers. The proposed Code outlines a "balance point" intended to ensure that costs associated with new connections are not borne by existing customers. Nonetheless, we are concerned that the current language of the Code may still permit the creation of subsidies under the Authority's proposals, potentially resulting in increased costs for existing connections.

57. Neither the "neutral point" nor the "balance point" guarantees that both upfront and ongoing revenue from new connections will fully cover the incremental costs associated with those connections. Furthermore, the Consultation Paper does not address the risk that connection costs may not be entirely recovered from new connection customers, despite this being a significant adverse consequence highlighted by stakeholders during the earlier consultation process.

58. Since many, including economic experts, warn that capping connection charges or capital contributions could expose current customers to asset stranding and cross-subsidy risks contradicting the Authority's draft Code amendment the Authority should clarify how its proposals will prevent this.

## F: Authority Acting Outside Jurisdiction

59. The Authority's targeted intervention approach is outside the permitted scope of Code changes:
    - The Authority's ability to implement Code changes is limited by its empowering legislation, the Electricity Industry Act 2010 (EIA).
    - The Consultation Paper (at [3.9] to [3.13]) expresses the Authority's view that the proposed reforms impact on "pricing methodologies" and are therefore permissible under s 32 of the EIA and Part 4 of the Commerce Act. For the reasons set out in this section, Vector disagrees.

*The EIA prohibits the Code from controlling "prices"*

60. Section 32 of the EIA sets out what the Code may and may not contain. Section 32(2)(b) says that the Code may not "purport to do or regulate anything that the Commerce Commission is authorised or required to do or regulate under Part 4 of the Commerce Act 1986 (other than in accordance with subsection (4))". Relevantly, the Commission regulates "price-quality paths" under Part 4 of the Commerce Act 1986. This involves the regulation of "prices" as that term is defined in the Commerce Act. Section 32(4)(b) authorises the Code to "set pricing methodologies for Transpower or 1 or more distributors".

61. We understand the effect of these provisions to be correctly summarised by the Commerce Commission in its correspondence with the Authority:[32]

> *We note that if one of the above exceptions does not apply, then s 32(2)(b) precludes any Code requirement that purports to do or regulate anything we are authorised to do or regulate under Part 4 – namely, regulating 'prices' (as defined in s 52C of the Commerce Act) or revenues from regulated services under Part 4. As you are aware, it is important therefore that any Code requirement can be characterised as a 'pricing methodology' (as defined in s 32(4) of the Electricity Industry Act), as opposed to regulating 'price', so that the exception under s 32(4)(b) will apply.*

62. 'Price' and 'pricing methodologies' are both defined in s 52C of the Commerce Act:
    - 'price' means *"any 1 or more of the individual prices, aggregate prices, or revenues"*; and
    - 'pricing methodologies' means *"methodologies for setting the prices of individual goods or services, or classes of goods or services, and includes methodologies for setting different prices for different consumer groups"*.

63. As the Supreme Court has clarified, in the context of s 52C "'*prices' do not refer to the revenue which suppliers are entitled to derive. Rather, they are the prices which suppliers charge customers so as to recover that revenue"*.[33]

64. To put it another way, a pricing methodology may determine how revenue is collected from different customer groups, but it does not set the total amount of revenue an EDB such as Vector is entitled to earn from its customers as a whole.

65. As delegated legislation, the Code should also be certain and reasonably capable of application. Delegated legislation that is too uncertain can be struck down as being ultra vires.[34] As currently drafted, the provisions imposing the 'balance point principle' appear to lack the necessary clarity to be readily understood and applied by EDBs. These concerns have been noted elsewhere in this paper (Part A: Section B: Correlation with Economic and Pricing Theory) from a practical perspective, but it is important to note that these issues also go to the Authority's jurisdiction to impose the proposed Code changes.

*The 'balance point principle' seeks to control 'prices'*

66. Following extensive consultation, the Commerce Commission's DPP4 price controls have recently come into effect on 1 April 2025. This sets the revenue limits and quality standards for the five-year regulatory period from 1 April 2025 to 31 March 2030.

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[32] Letter from Commerce Commission to Authority dated 11 November 2024 (link).

[33] *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [50].

[34] See for example *The Laws of New Zealand*, Administrative Law at [186]; *Transport Ministry v Alexander* [1978] 1 NZLR 306 (CA) at 311 per Cooke J.

67. Vector considers that the proposed 'balance point principle' cuts across DPP4 in a number of important ways. Most fundamentally, the 'balance point principle' and associated 'targeted intervention approach' seeks to control 'individual prices', 'aggregate prices' and/or 'revenues' derived by Vector and other EDBs.

68. This is clear from the Consultation Paper itself, which repeatedly refers to what the Authority considers *"inefficiently high"* up-front connection charges.[35] Vector does not accept that cost-reflective pricing is necessarily *"inefficiently high"*, but the key point is that the Consultation Paper's focus is clearly on the prices imposed, and revenues derived, by certain non-exempt EDBs and in particular by Vector.

69. Although described as a pricing methodology, the Authority is in fact proposing a cap on the capital contributions non-exempt EDBs are permitted to obtain from connection charges.

70. The intended effect of the proposed 'balance point principle' is apparently to require commensurate contributions to shared network costs between new and existing connections.[36] The Authority appears to interpret this as preventing an increased reliance on capital contributions. It is not clear how this is distinguishable from the Authority's prior proposal to introduce "reliance limits" that is no longer being pursued, and it appears to suffer from the same jurisdictional issues.

71. The imposition of limits on the capital contributions that Vector or other non-exempt EDBs may recover from connecting customers – either via the 'balance point principle' or 'reliance limits' – will require Vector to spend more capital within the RAB in order to meet the capital expenditure requirements of the network. This will in turn require a greater capital allowance and therefore a higher revenue limit (i.e. the revenue Vector is permitted to earn in order to generate an appropriate return on capital). Whether directly or indirectly, this amounts to regulating revenue, which is the regulatory responsibility of the Commerce Commission.

72. For these reasons, Vector considers that the proposed 'balance point principle' and related 'targeted intervention' powers are ultra vires under s 32 of the EIA.

73. Stepping back from the definitions, it is also clear that the Authority's proposal creates exactly the situation s 32 of the EIA seeks to avoid: two regulators pulling in opposite directions. In setting DPP4, the Commission considered and approved Vector's proposed level of reliance on capital contributions; the proposed Code amendments would undermine some key assumptions upon which DPP4 was based.

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[35] See for example Consultation Paper at [1.8], [2.1], [2.3], [5.2], [6.3], [6.34], [6.36], [6.38], [7.6], [9.16], [9.27]-[9.29] and [9.34].

[36] See the definition of "connection charge balance point principle" in draft Code amendments.

## G: Misalignment with TPM

74. The Authority's proposed approach to distribution connection pricing does differ from its existing approach to transmission pricing under the TPM, as the Authority is applying very different principles to similar types of connection assets, without clearly explaining why those differences are justified.

75. Under the transmission pricing framework, connection charges are built on a clear and well-established principle: customers connecting to the transmission grid are generally required to pay the full upfront cost of the assets needed to connect them. This approach is explicitly described by the Authority as market-like, service-based, cost reflective, and efficient.[37] It ensures that customers face the true cost of their connection decisions, helps avoid cross subsidies between users, and provides strong signals about where and how new connections should occur.

76. By contrast, the new proposals for distribution connections move in the opposite direction. Instead of requiring new customers to pay the full cost of the assets needed to connect them, the Authority is proposing to restrict or unwind upfront charges and shift a larger share of costs into ongoing network charges paid by all consumers over time. This creates a fundamental inconsistency: the same Authority that requires full cost recovery upfront for transmission connections is proposing to limit upfront cost recovery for distribution connections.

77. This inconsistency matters because the underlying economics of transmission and distribution connections are not very different. In both cases, connection assets are long-lived, capital-intensive, built to serve specific users or groups of users and investment is likely to present economies of scale. In both cases, charging upfront for connection assets protects existing consumers from funding new growth and aligns payment with cost causation. As HoustonKemp note *"the Authority has previously stated that connection pricing at incremental cost is efficient in the context of electricity network connections."*[38] Without a clear explanation for why these principles should apply to transmission but not distribution, the Authority's approach appears contradictory.

78. The misalignment is heightened by the Authority's treatment of efficiency. In the transmission context, efficiency is understood to mean cost-reflective pricing, where those who cause costs pay for them. In the distribution context, however, efficiency is redefined largely in terms of keeping upfront charges low, even if this means shifting risk and cost recovery to the future. This risks undermining the Authority's own long-standing position that prices should reflect underlying costs to promote efficient investment and network use.

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[37] Electricity Authority, Transmission pricing methodology: issues and proposal, Second issues paper, 17 May 2016, para 5.34.

[38] HoustonKemp, s5.3, pg. 32

79. There is also a disconnect in how risk and uncertainty are handled. Transmission pricing deliberately limits revenue deferral because deferring cost recovery increases risk, bill volatility, and financing pressures. The distribution proposals, by contrast, would increase revenue deferral by design, pushing more costs into future charges. This creates greater exposure to demand uncertainty and forecast error, which ultimately must be managed through higher future prices or adjustments under Commission price controls. The Authority has not reconciled this shift with the rationale it has previously used to support the TPM.

80. The proposed distribution approach also weakens locational and investment signals relative to the TPM. Transmission connection charges send clear signals about the cost of connecting in different locations and the network reinforcement required. Suppressing upfront distribution charges blunts those signals, encouraging connections that may be more expensive for the network to serve but appear cheaper to the individual customer. This runs counter to the Authority's own emphasis in the TPM on using pricing to guide efficient network development.

81. Finally, the misalignment creates practical and regulatory complexity. Distributors operate within a system where transmission pricing, distribution pricing, and regulated revenue allowances interact. Applying fundamentally different pricing philosophies across transmission and distribution makes the overall framework harder to understand, harder to implement, and harder for investors and consumers to predict. The absence of a explanation for these differences increases regulatory risk and undermines confidence in the stability and consistency of the pricing regime.

82. Overall, the Authority's proposals for distribution connection pricing represent a clear departure from the principles embedded in the Transmission Pricing Methodology. Without a rationale for treating transmission and distribution connections so differently, the approach appears inconsistent and risks weakening the efficiency, cost-reflectivity, and stability that the TPM was designed to deliver. This is also reflected in HoustonKemp conclusion, *"The rationale for this difference in approach is unclear since, despite the distinction between transmission and distribution services, the underlying economic principles are reasonably similar for connection to the transmission and distribution networks."*[39]

## H: Alignment with Statutory Objective

83. The Authority's proposals in the Consultation Paper are not well aligned with its statutory objective because they do not promote economic efficiency or competition. A core issue is that the proposals would require distributors to set connection charges below the incremental cost of providing a connection. This approach undermines allocative

[39] HoustonKemp, s5.3, pg. 33

efficiency by encouraging connections that cost more to serve than the revenue they generate.

84. In a well-functioning market, competitive pressure or clear price signals incentivise firms to innovate, reduce costs, improve processes, and invest in ways that better serve customers. By focusing narrowly on lowering upfront charges rather than the cost of providing the service, the proposals miss these broader efficiency considerations. They do not create incentives for distributors or third-party providers to compete on cost, design connections efficiently, or innovate over time. Instead, they place more costs into the regulated revenue base, which could dull incentives for cost discipline.

85. Competition would be particularly harmed because parts of the connection process can be contestable. Independent contractors can compete to deliver certain connection works, such as civil components, but they cannot cross-subsidise below-cost pricing by drawing on distribution lines revenue. EDBs, by contrast, would be required to set connection charges below incremental cost and recover the difference from their regulated network revenues. This would make it impossible for third parties to compete on equal terms. Less competition over time is likely to increase costs, decrease innovation, and reduce service quality for customers.

86. The proposed intervention also creates conditions that encourage inefficient investment. By pushing connection prices below incremental cost, the framework encourages parties to connect even where the economic benefits do not outweigh the costs. It also transfers risk, particularly demand and stranding risk, from new connections onto the existing customer base. Customers who do not create new demand may be required to carry the cost of investment that benefits a specific individual or business. This is the opposite of efficient, cost-reflective pricing and is not in the long-term interests of consumers. The proposals also rely on non-standard and ambiguous pricing concepts, such as the “neutral point” and “balance point,” which do not map cleanly onto well-established economic principles. This lack of clarity increases regulatory uncertainty, raises compliance risk, and makes it more difficult for EDBs to plan investment or set efficient prices. Increased regulatory uncertainty raises financing costs and ultimately harms long-term consumer interests.

87. In addition, the Authority’s proposal for selective intervention is inconsistent with promoting competitive neutrality. Pricing interventions are usually applied consistently across an entire market, unless there is compelling evidence that the problem is confined to a particular firm. In this case, selective intervention appears to rely on partial information and does not set out transparent, objective criteria for when intervention will occur.

88. Finally, the proposals restrict distributors’ ability to adopt different charging approaches based on changing conditions. By effectively locking distributors into a specific cost-allocation method, the Authority removes the ability for distributors to respond to

shifts in demand, technology, and policy objectives. This undermines both economic efficiency and competition in the long run.

89. Across the efficiency dimensions the proposals do not promote, and in several respects weaken, the statutory objective the Authority is required to uphold.

## I: Unintended Consequences

90. The Authority's proposals risk creating significant harm for both consumers and distributors by forcing connection charges below the true cost of connecting new customers. When the upfront price no longer reflects the real incremental cost of a connection, the shortfall must be recovered from all existing customers through higher ongoing charges. This creates cross-subsidies, encourages uneconomic connections, and shifts risk onto households and businesses that may receive no benefit from the new connection. Such cost-shifting is highlighted as a direct consequence of pricing below incremental cost, with the result that inefficient connections are more likely to occur while existing customers bear the financial burden. As HoustonKemp note, *"the Authority's proposed intervention would likely create new cross-subsidies or entrench existing cross-subsidies, because the Authority proposes to intervene to cap connection charges to a level below the incremental cost of providing the connection service."*[40]

91. At the same time, the proposals increase the financial risk faced by distributors. Moving costs away from upfront payments and into future revenue streams exposes networks to greater uncertainty around demand, customer churn, and long-term consumption patterns. If a new customer disconnects, reduces usage, or fails to remain on the network for long enough to repay the implicit subsidy created by below-cost pricing, the distributor is left under-recovering its costs. This risk transfer from connecting parties to distributors is inefficient and leads to distributors and their consumer base absorbing risks they are not best placed to manage.

92. These additional risks directly weaken distributors' financeability. Recovering more costs through future network charges, rather than upfront contributions, requires distributors to finance a larger portion of connection-driven investment. Deferring recovery in this way increases exposure to forecast error, demand risk, and volatility in ongoing charges, placing pressure on key financial metrics such as debt-to-EBITDA and cash-flow-to-debt ratios. The impact of reduced upfront contributions can push specific credit metrics outside thresholds associated with maintaining an investment-grade credit rating, signalling heightened financeability concerns. *Oxera "find that a shallow regime would be associated with greater forecast risk and bills volatility, potential financeability challenges and higher risks of revenue deferrals."*[41]

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[40] HoustonKemp, s3.1.3, pg. 13

[41] Oxera, s5, pg.74

93. Higher financing risk ultimately increases the cost of capital. Investors will require higher returns to compensate for the uncertainty created by a regime where cost recovery depends heavily on long-term cost recovery. If these risks are not explicitly recognised by the broader regulatory framework, distributors may struggle to access capital at competitive rates, slowing investment and driving up long-term prices for consumers.

94. In addition, removing flexibility for distributors to adjust connection-charging methodologies over time can further compromise financial resilience. The proposals effectively lock distributors into a particular charging structure, regardless of changing network needs and growth patterns. This lack of flexibility prevents networks from responding to shifts in cost drivers and forces them to shoulder greater exposure to cost recovery. As Oxera *"highlight that there are pros and cons of deep and shallow regimes… As a result, the EA's proposed constraints on distributors changing between shallow and deep regimes may not be optimal in the current circumstances."*[42]

95. Finally, by imposing a selective intervention that targets only certain distributors, the proposals risk creating uneven financial impacts across the sector. Selective intervention increases regulatory uncertainty, undermines investor confidence, and makes it more difficult for affected distributors to plan and fund long-term network development. This uncertainty alone is a material harm, as stable and predictable regulatory settings are essential for maintaining strong balance sheets and ensuring that networks can continue investing in capacity, resilience, and decarbonisation-related upgrades.

96. Overall, the proposals risk harming consumers through higher long-term charges, harming the sector through weakened financeability, and harming efficiency by encouraging uneconomic connections and shifting risk to the wrong parties.

[42] Oxera, s5, pg.74

## PART B – Distributor supply obligations

### *Introduction*

97. The Authority's preferred direction is to develop Code amendment proposals around distributor supply obligations that would –
    - Create an explicit requirement for distributors to offer connections;
    - Specify five access standards that distributors would be required to publish, including a continuance of supply policy; and
    - Prohibit distributors from decommissioning connections other than in accordance with their continuance of supply policies.
98. Essentially, the Authority proposes to impose an obligation for distributors to connect (and continue to supply) customers through the Code.

99. We are concerned that the Authority would be acting ultra vires in imposing an obligation to connect. A number of submitters (including Vector) raised this concern in the prior consultation on network connections.

100. Vector does not necessarily oppose a statutory obligation to connect, provided that this is done with sufficient safeguards for EDBs so that existing customers are not obliged to effectively cross-subsidise new access seekers. This is despite the lack of any evidence that Vector or other EDBs are declining to connect access seekers.

101. However, any such amendment to the Code would require express Parliamentary authority because it is currently outside of the Authority's powers under the EIA.

102. Although the Authority deprecates the prior statutory regimes as "historic", the legislation in force *"applies to circumstances as they arise"*.[43] The statutory provisions that empower the Authority cannot be disregarded simply because the Authority considers the terms of its empowering legislation to be "historic" or otherwise "out-of-date".

### *The Authority's proposed obligation to connect requires statutory authority*

103. The Consultation Paper (at [11.30] to [11.34]) sets out the Authority's view that it has jurisdiction to introduce rules into the Code to require EDBs to grant new load connections. The Authority relies in particular on:
    a) Its "*broad power under section 32 of the Act to introduce rules in the Code where this is necessary or desirable to promote the Authority's objectives"*;
    b) The Code already includes longstanding requirements that impose obligations on distributors to connect distributed generation (DG); and

[43] Legislation Act 2019, s 11

c) While the Authority recognises that Parliament passed legislative amendments in the 1990s deliberately intended to remove any obligation to connect,[44] the Authority does not consider its powers *"are constrained by these historic amendments in the way* suggested, noting the different context*"* and *"significant changes that have occurred"* since then.

104. Vector remains of the view that – absent clear statutory authority – the Authority may not amend the Code to introduce a new "obligation to connect new load".

### *New Zealand law previously imposed an obligation to connect*

105. At one point, New Zealand law obliged electricity suppliers to connect access seekers. There were two sources of this obligation.

106. First, electricity suppliers were primarily obliged to provide access seekers with electricity under the "doctrine of prime necessity". The doctrine required monopolies – including utilities such as electricity – to provide services for no more than a fair and reasonable price. However, in *Vector v Transpower* (1999), the Court of Appeal held that there was no room for the operation of the common law doctrine in relation to electricity transmission under modern legislation, especially the Commerce Act 1986.[45] As a result, the common law obligation had been displaced by the statutory regime by no later than 1986.

107. Second, as recognised in the CEPA Report,[46] for a time the common law obligation to supply electricity was reflected in ss 62 and 72 (now repealed) of the Electricity Act 1992 and certain predecessor legislation.[47] Parliament appears to have made a deliberate decision in 1992 to remove any obligation to supply electricity or connection services.

108. While the Electricity Act removed any obligation to supply or continue to supply new connections, it expressly recognised an obligation to continue to supply certain pre-1993

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[44] But retained protections for the continuance of supply only in certain circumstances, as discussed below.

[45] *Vector Ltd v Transpower NZ Ltd* [1999] 3 NZLR 646 (CA).

[46] CEPA Report at [101] to [107]. The reference at [102] of the CEPA Report appears to be to s 72 (now repealed) of the Electricity Act 1992.

[47] Express statutory authorisation would not necessarily have been required where, as the Court of Appeal recognised in *Vector v Transpower*, there had originally been a common law obligation to supply electricity. Under the common law position, *"apt, if not coercive, language is required to confer upon the water-supply authority [or other monopoly supplier] the right to refuse water, or stop the supply…."*: *State Advances Superintendent v Auckland City Corporation* [1932] NZLR 1709 (CA), 1709 per Myers CJ, as quoted in *Vector v Transpower* at [29] by reference to the judgment under appeal.

connections.[48] This makes clear that, except for protected connections, there was no ongoing obligation on EDBs to supply line function services under the Electricity Act.

109. While subsequent statutes – in particular the EIA – have introduced significant reforms, at no point has primary legislation re-enacted an obligation on EDBs to connect new customers, or authorised regulations to that effect.

*Parliament has authorised regulations requiring the connection of DG but not load*

110. As the Consultation Paper correctly notes (at [11.32]), the Code already includes *"enduring and longstanding requirements that impose obligations on distributors to connect distributed generation"* or DG.

111. However, it is wrong for the Consultation Paper to imply that these are authorised by s 32, or some form of implied statutory authorisation. A review of the history of the relevant provisions shows that the obligation to connect DG was:
    a) expressly authorised by primary legislation, specifically the Electricity Act;
    b) enacted by delegated legislation under the authority of Parliament; and
    c) carried over into the Code by primary legislation, specifically the EIA.

112. These three points are explained below. It is important to note that at no point did the Electricity Act, Parliamentary authority and/or regulations discussed below encompass an obligation to connect new access seekers, being solely focused on generators/DG.

113. The first point is that the obligation to connect DG was expressly authorised by primary legislation
    a) Section 172F of the Electricity Act 1992 was introduced by the Electricity Amendment Act 2001. It expressly permitted Orders in Council to be made "prescribing reasonable terms and conditions on which line owners and electricity distributors *must* enable generators to be connected to distribution lines other than the national grid" (s 172F(2)(f), emphasis added).
    b) These powers were subsequently replaced by the Electricity Amendment Act 2004. The new s 172D(1) of the Electricity Act 1992 permitted Orders in Council for purposes including "providing for terms and conditions on which line owners and electricity distributors *must* enable generators to be connected to distribution lines" (emphasis added).

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[48] *"…[W]here, on 1 April 1993, an existing electricity distributor was supplying line function services to any place, the person that, in relation to that place, is for the time being the designated electricity distributor must not ceased to supply line function services to that place without the prior consent of the Ministry or of every consumer would be affected by the cessation of those services":* Electricity Act 1992, s 62(2) (as at 20 September 2007), subsequently replaced by s 105 of the EIA.

114. The second point is that delegated legislation was made under the authority of the Electricity Act (as described above). It was pursuant to this statutory authority that the Government by Order in Council enacted the Electricity Governance (Connection of Distributed Generation) Regulations 2007 (DG Regulations). Regulation 7 provided that distributors "*must* grant approval to connect distributed generation if and as required to do so by Schedule 1" (emphasis added). Schedule 1 introduced a range of required steps regarding a distributor's decision on a connection application, effectively requiring connection applications to be granted in certain circumstances. The structure of Schedule 1, and many of its requirements, appear to have been carried over into Part 6 of the Code.

115. The third point is that the DG Regulations were carried over into the Code by s 34(1)(a)(v) of the EIA (as enacted). Section 34(1)(a) provided that the Code must comprise a consolidation of a number of enactments, including the DG Regulations.

116. It follows that the Electricity Act provided clear statutory authority for the requirement to connect DG contained in the DG Regulations, and that the requirement to connect DG was carried over into the Code by statute under s 34(1) of the EIA.

*There is no express or implied statutory authorisation to impose an obligation to connect*

117. By contrast with the clear statutory authority for Code requirements to connect DG, Vector is not aware of any express statutory authority to connect new load and the Authority has not identified any such statutory authorisation

118. On the contrary, various amendments to the statutory regime in the 1990s and 2000s make clear Parliament's intention to *remove* any obligation to connect new customers (as summarised in the CEPA Report), while authorising obligations to connect DG.

119. As a result, the ability of the Authority to impose Code changes remains as stated by the Court of Appeal in *Vector v Electricity Authority* (2018) in the context of the DDA litigation:[49]

> "*[A]ny asserted constraint upon freedom of action or association, including the freedom to contract, must be justifiable by reference to a lawful power. Where the source of the power is said to lie in statute, the statute must authorise the constraining power, either expressly or by necessary implication. Plainly that principle applies where the right constrained is a fundamental one, such as the right of citizens to contract with one another.*"

120. The broad wording of s 32 of the EIA cannot, by itself, permit the Authority to impose Code changes that would obligate EDBs to connect customers.

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[49] *Vector Ltd v Electricity Authority* [2018] NZCA 543, [2019] 3 NZLR 1 at [53].

121. It necessarily follows that any attempt by the Authority to amend the Code to introduce new connection applicants will be ultra vires and liable to be struck down.

### *No evidence of need to create an obligation to connect*

122. Notwithstanding questions over the Authority's jurisdiction, having a suite of different connection obligations across different instruments (i.e. the statutory obligation for pre 1993 connections, along with those proposed through delegated legislation) is not desirable from a regulatory design perspective and will add complexity in the regime.

123. We do not consider the Consultation Paper has justified why it is necessary to impose an additional obligation to connect. The Authority has not presented any evidence of distributors unreasonably refusing connections or withdrawing supply.

124. The Authority appears to consider imposing an obligation to supply is necessary because its proposed pricing interventions could otherwise result in distributors refusing connections. However, distributors have a natural incentive to grow connections and the Commission's Part 4 regulation is designed to incentivise efficient investment. An obligation to supply would likely only be needed if the Authority's proposed pricing interventions would not result in efficient prices.

### *Access standards*

125. If the Authority pursues this option, the design of the access standards will be crucial.

126. The Consultation Paper states the Authority will guide the content of the access standards *"through some mix of principles, requirements, and mandatory considerations."*[50]

127. As noted in the Consultation Paper[51], there are already several ongoing workstreams related to network access. This includes the ENA and EEA's 'streamlining connection' work intended to deliver greater consistency in network standards.

128. In relation to a continuance of supply policy, the Consultation Paper states, *"The Authority could establish principles or provide more prescriptive requirements on features of the withdrawal process."*[52]

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[50] Consultation Paper, para. 11.1(c)

[51] Ibid, para. 11.24(b)

[52] Ibid, para. 11.25(c)

129. Distributors would be prohibited from withdrawing supply other than in accordance with the continuance of supply policy. However, the Consultation Paper has provided little information around how the Authority will approach the continuance of supply policy.

*130.* The sole details on what may be required in a continuation of supply policy are that it "*may:*

*a) set out steps a distributor must take to engage with affected customers before withdrawing supply;*

*b) provide principles on when withdrawal may be considered, for example,*

*i) a cross-subsidy of operating costs is significant and cannot practically be addressed through consumer group design (ie, by setting higher tariffs for the high-cost connections;*

*ii) prior to significant reinvestment in a high-cost connection, where affected customers have rejected an option of contributing to renewal costs directly;*

*iii) not within, say, 30 years of establishing the connection, unless the original connection applicant explicitly opted for a reduced-life connection (or the new connection is to an existing uneconomic line);*

iv) *only with sufficient advance notice (to landowners and current customers) and opportunities to secure self-supply or avert withdrawal*."[53]

131. If this proposal is progressed, we strongly encourage the Authority to avoid a prescriptive approach. Network operating environments are varied and dynamic. The access standards will need to provide sufficient flexibility for distributors to respond to unique or unforeseen circumstances. Prescriptive requirements may not capture all the circumstances a distributor may need to withdraw supply to protect the overall interests of consumers or the efficient operation of the network. This could result significant consumer harm over time.

### *Impact on financeability and investment incentives for distributors*

132. As submitters in the last consultation highlighted, imposing an obligation to connect essentially imposes an obligation for distributors to invest.

133. Our submission in the Network Connection Project – Stage One consultation highlighted:

- "*When combined with the reliance limit (as proposed in the connections pricing submission), which effectively limits the proportion of up-front capital expenditure EDBs can recover from connecting load, the proposed obligation to connect load ultimately imposes on obligation for distributors to invest their own capital, and effectively increase the size of their regulated asset base.*

- *Importantly, the Authority does not appear to appreciate that this is not consistent with the approach to DG in Part 6 of the Code. For DG, while there is an*

[53] Ibid, para. 11.28, pg. 70

*obligation on EDBs to connect, there is no limit on cost recovery for the incremental costs of that DG connection. This means there is no obligation for the EDB to invest its own capital and to socialise the residual costs among its consumer base. This appears to us to be highly unusual. We are not aware of any other business entity in New Zealand that is obliged by law or regulation to invest capital and/or enter into commercial arrangements. This would appear to have far-reaching consequences that go well beyond the limited considerations the Authority has attempted to identify in this paper*."[54]

134. While the Authority no longer prefers imposing a reliance limit, the proposed targeted intervention approach combined with an obligation to connect raises similar issues. This is a significant concern given uncertainty around the balance point framework and whether the Authority's approach would, in practice, allow EDBs to recover their incremental costs.

135. Accordingly, the proposed approach is likely to undermine the investment incentives set out in the Commission's Part 4 regulatory framework.

136. In addition, we note the Consultation Paper states that, "*Continuance of supply policies would not override the statutory protections in place for connections that were in place on 1 April 1993.*"[55]

137. Under the Electricity Industry Act, a distributor can fulfil its continuance of supply obligations to pre 1993 connections by supplying electricity from an alternative source and the Commission must treat these costs as regulated expenditure.

138. We encourage the Authority to consider whether supply from an alternative source will also apply to the proposed obligations and how these costs would be treated under the Part 4 regulatory framework.

### *Impact on areas with competition for connections*

139. The Consultation Paper does not appear to have addressed the potential impact on, and practicalities of, creating an obligation to supply in areas where competition exists or in border areas between networks.

140. We recommend the Authority gives further consideration to the implications of an obligation to supply in these areas. For example, network efficiency and overall competition could be undermined where a network must connect all uneconomic connections while a competitor only pursues only efficient connections.

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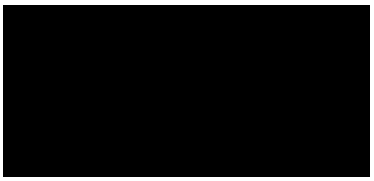
[54] Vector, Network Connections Project – Stage One, para. 18 &19, pg. 3

[55] Consultation paper, 11.29

Yours sincerely



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| Submitter | Vector |
|---|---|

| Background and context |
|---|
| Q1. Do you agree with the assessment of the current situation and context for connection pricing described in section 4? Why, why not? What, if any, other significant factors should the Authority be considering? |
| Vector only partially agrees with the Authority's high-level assessment in section 4 of the background and context for connection pricing. The reasons why and why not and the other significant factors the Authority should consider are covered in the main body of Vector's submission above and supported by the expert reports that accompanied Vector's submission. |

| PART A – Connection charges |
|---|
| Q2. Do you agree with the rationale for considering interim restraint on connection charges described in section 5? Why, why not? |
| Our comments on the rationale for considering interim restraint on connection charges are primarily covered in Vector's above sections "A: Problem Definition & Evidence" and "D: Need for Improved Connection Charge Analysis" and also covered in the expert reports that accompanied Vector's submission. |
| Q3. Have you observed or experienced signs of connection stress where current connection charging arrangements caused problems when seeking to connect to the network (eg. projects delayed or deterred as a result of price-related barriers)? If so, please describe. |
| This question would appear to mainly be relevant to access seekers given the statement "*when seeking to connect to the network*". As we note above in the main body of our submission Vector has connected over 124,000 connections in the last decade. It is likely though some connections may have not gone ahead for a variety of reasons and many of the reasons those developments to which the electricity connection relates did not proceed would have nothing to do with the electricity connection. The reality is that most potential access seekers do not share why they did not proceed with their development. |
| Q4. Do you agree with the Authority's evaluation of the options? Why, why not? Do you have any feedback on the expected impact if the status quo remains? |
| Our comments on the Authority's evaluation framework for intervention is primarily covered in Vector's Part A section above "C: Out-of-Step with Other Jurisdictions and Inconsistent with NZ Government & Regulators" and is also covered in the expert reports that accompanied Vector's submission. |
| Q5. Do you have any comments on the proposed Code amendment and approach to implementation? |
| Our comments on the proposed Code amendment and implementation are primarily covered in Vector's Part A sections above, "B: Correlation with Economic and Pricing Theory", "C: Out-of-Step with Other Jurisdictions and Inconsistent with NZ Government & Regulators", "F: Authority |

| |
|---|
| Acting Outside Jurisdiction" and "G: Misalignment with TPM" and is also covered in the expert reports that accompanied Vector's submission. |
| Q6. Are there other alternative means of achieving the objective you think the Authority should consider? If so, please describe |
| What else the Authority should consider when trying to achieve its objective we primarily cover in Vector's Part A sections above, "A: Problem Definition & Evidence", "C: Out-of-Step with Other Jurisdictions and Inconsistent with NZ Government & Regulators" and "D: Need for Improved Connection Charge Analysis" and is also covered in the expert reports that accompanied Vector's submission. |

| **PART B – Distributor supply obligations** |
|---|
| Q7. Do you have any comments on the Authority's rationale for clarifying distributor obligations to connect and supply? |
| Our comments on the rationale for obligations to connect and supply are primarily covered in Vector's Part B sections above, "Introduction" and "No evidence of need to create an obligation to connect". |
| Q8. Do you have any comment on the Authority's preferred direction for clarifying distributors' supply obligations? |
| Our comments on preferred direction of supply obligations are primarily covered in Vector's Part B sections above, "Access standards", "Impact on financeability and investment incentives for distributors" and "Impact on areas with competition for connections". |

HOUSTONKEMP
Economists

# Review of the Electricity Authority's proposed distribution connection pricing framework

A report for Vector

3 February 2026

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## Disclaimer

# Contents

# Executive summary

This report has been commissioned by Vector to review and comment on the Electricity Authority's (the Authority's) consultation paper, which proposes changes to the regulatory arrangements for electricity distribution connection pricing.

## The Authority's proposed intervention

The Authority's proposal can be summarised as two main recommendations, ie:

- targeted intervention where connection charges are too high; and
- an obligation for electricity distributors to offer and maintain connections for all customers.

The Authority contends that greater reliance by distributors on connection charges may delay or prevent new connections that should be encouraged because they are 'efficient' in the sense that they would be capable of both covering their own costs and contributing to shared costs. Further, the Authority is concerned that the increasing trend in connection charges over time may result in an increase in the overall lifetime costs allocated to new connections.

To describe the efficiency concerns related to distribution network connection pricing, the Authority uses two concepts, ie:

- the neutral point – at which the up-front connection charge and ongoing revenue from a new connection covers the incremental cost of the connection with no contribution to shared and sunk costs; and
- the balance point – at which new connections contribute to sunk and shared costs at a level that is commensurate with similar existing connections.

The Authority presents pricing at the balance point as the preferrable option on the basis of the efficiency improvements associated with the removal of inter-temporal price discrimination. The Authority also proposes to clarify distributor obligations to connect customers by establishing an obligation to connect.

## The Authority's intervention does not promote efficiency

The central concept with regards to the Authority's framework for economic efficiency, being the neutral point, is not consistent with the principles of economic efficiency. Further, the Authority does not have a solid principled basis as to how its proposed intervention in connection pricing to set prices at the balance point will improve economic efficiency.

### The neutral point does not promote economic efficiency

The Authority's reliance on the neutral point, ie, net incremental cost, as a relevant concept draws from its assumption that the cost recovery of connection services and network services should be assessed as a combined service, rather than as economically distinct services. However, this approach

- does not reflect the differences in the cost structures of these economically distinct services, which give rise to implications for the efficiency of the Authority's proposals; and
- is not consistent with how the Australian Economic Regulator applies similar cost principles, in largely similar circumstances, in the pursuit of similar objectives.

Connection pricing at incremental connection costs promotes allocative efficiency. However, by considering connection and distribution services together, the Authority proposes connection charges that fall below the incremental cost of the connection service, ie, at the neutral point.

Connection pricing below incremental cost imposes a cross-subsidy that transfers connection cost-recovery risk from the connecting customer to the distributor and its other customers. This risk transfer is the driving force of inefficiency within the Authority's approach, with the proposed obligation to connect likely to compound the incidence of inefficient over-connection, particularly in areas of the network where demand is growing the fastest.

There are well-established risk mitigation mechanisms available to distributors to address this connection cost-recovery risk. However, the Authority does not consider the inclusion of any of these mechanisms in its proposed interventions.

### The balance point does not promote economic efficiency

The Authority is unable to substantiate the problem it contends, being the inefficient delay of connections through high connection charges, and does not present a solid economic rationale as to how its proposed balance point approach represents an efficiency improvement relative to the status quo. Put simply, the Authority does not have a strong theory as to the efficient level of connection prices.

A new argument advanced by the Authority, that increases in the connection charges above the balance point could cause 'hold-up', thereby contributing to inefficiency, is without foundation and reverses economic orthodoxy.

Rather, the balance point is an approach to recovering connection costs that seeks to target a type of inter-generational equity. This objective is rare among economic regulators. There is recent evidence from Australia in which a departure from the principles of efficiency did not achieve its objectives and had other unintended consequences in the market.

## The Authority's intervention does not promote competition

The Authority does not consider the potential effects on competition of its proposed interventions on markets for the provision of contestable connection services.

Prices below incremental costs are not consistent with outcomes that would be achieved through the process of competition. Further, prices below incremental costs would in fact be expected to harm, or stifle, competition since these charges are outside the subsidy-free range and can only be sustained when the shortfall is funded by higher lines charges. Where the connection service is subject to competition, or could be subject to competition in the future, the prospects for such competition developing or succeeding are remote when distributors are required to set connection charges that are below the incremental cost of providing connection services.

We have previously commented on the Authority's proposed approach to competition concerns, as have other economic experts. The Authority's consultation paper does not take these comments into account or explain why it takes a different view of these issues.

The Authority discusses market power as part of the economic framing for its proposed intervention. However, in our opinion there does not appear to be any evidence that market power is giving rise to any problems in respect of the pricing of connection services. In any case, our assessment of the Authority's proposed intervention is that that it is neither designed to address, nor is it apparently motivated by, market power concerns.

## The Authority's economic framework for assessment

In our opinion, the disconnect between the Authority's proposed intervention and its statutory requirements can be traced to the lack of clear economic framework applied by the Authority.

The Authority's proposed intervention is an outworking of an assumption that increasing levels of reliance levels of connection charges is a policy problem that requires a solution, as opposed to being developed on a foundation of the economic principles consistent with its statutory objectives.

The absence in the consultation paper of a well-reasoned framework for defining what economic efficiency means with respect to connection pricing is demonstrated in several ways, ie:

- the Authority's proposed intervention is principally driven by concerns around intergenerational equity, which stands in contrast to the decision-making framework based around economic efficiency that the Authority has previously applied to pricing issues arising in the electricity transmission sector;
- the Authority has not explained or addressed how it will determine whether charges are inefficiently high so as to warrant intervention because it has not explained how the balance point concept will be implemented and how the various equity considerations embedded into its calculation will be resolved and
- the Authority has not clearly articulated how it would propose to assess the costs and benefits of proposed options, which is consistent with the absence of an economic framework connecting its proposal with the promotion of its statutory objectives of efficiency and competition.

# 1. Introduction

On 17 November 2025 the New Zealand Electricity Authority Te Mana Hiko (the Authority) released a consultation paper proposing changes to the regulatory arrangements for electricity distribution connection pricing by amending the Electricity Industry Participation Code (the Code).[1]

This consultation paper is part of the Authority's targeted reform of distribution pricing, which commenced in July 2023, and is the second significant phase of the Authority's program to change the regulatory arrangements applying to electricity distribution connections. In October 2024, the Authority published a consultation paper in which it set out its thinking about connection pricing and consulted on five 'fast-track' measures to address its most immediate concerns.[2] The Authority subsequently released a decision in July 2025 in which it proceeded with most of these measures but did not proceed with its proposal to introduce 'reliance limits' on up-front connection charges.[3]

This latest consultation paper proposes further action towards the Authority's long-term vision for connection pricing and includes a renewed proposal for direct action to address distributors' reliance on connection charges for funding connection costs. The Authority also sought and published a report from CEPA Australia (CEPA) in support of its proposed changes.[4]

The changes proposed by the Authority would, among other things:[5]

- establish a framework to intervene to reduce connection charges in certain circumstances in which the Authority finds that connection charges are too high; and
- introduce obligations on distributors to offer and maintain connections and connection upgrades, ie, an 'obligation to connect' for distributors.

We have been engaged by Vector to review and comment on the Authority's latest consultation paper. The focus of this report is the economic framework used by the Authority in the development of its proposed approach. In particular, we comment on the application of economic reasoning by the Authority to develop proposed interventions consistent with its statutory objectives.

## 1.1 The Authority's statutory objectives

The Authority's statutory framework is set out in the *Electricity Industry Act 2010*, with its main objective described in section 15(1), ie:[6]

> … to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

[1] Electricity Authority, *Reducing barriers for new connections: up-front charges and distributor obligations*, Consultation paper, 17 November 2025 (hereafter, 'Consultation paper').

[2] Electricity Authority, *Distribution connection pricing proposed Code amendment*, Consultation paper, 25 October 2024 (hereafter, 'October 2024 consultation paper').

[3] Electricity Authority, *Distribution connection pricing Code amendment*, Decision paper, 18 July 2025.

[4] CEPA, *Connection obligations and interim restraints on connection charges*, 13 November 2025 (hereafter 'CEPA report').

[5] Consultation paper, pp 2-3.

[6] *Electricity Industry Act 2010*, s 15(1).

Of relevance to electricity connections are the objectives of economic efficiency (ie, relating to the prices charged to customers to connect) and competition (ie, connection services are contestable[7]), with reliability of supply not directly relevant for electricity distribution network connections.[8]

Economic efficiency is commonly understood to have three dimensions, comprising:[9]

- allocative efficiency – whereby resources are allocated to their highest value use;
- productive efficiency – whereby goods and services are produced at the least possible cost; and
- dynamic efficiency – whereby innovation and investment take place in response to changing customer preferences and technologies.

Competition is a dynamic process of rivalry, whereby firms seek to maximise their profits by offering price-product-service packages to customers that are more attractive than their rivals, whilst minimising their costs. Competition is not an end in itself but it is the means by which economic efficiency is enhanced and overall welfare increased. For example, competition allows firms with lower costs or higher quality to displace firms with higher costs or lower quality, leading to better outcomes for consumers over the long run.

With regards to economic efficiency, the Authority describes efficient connection pricing as:[10]

> …cost-reflective and subsidy-free and supports investment and usage coordination.

Moreover, the Authority describes efficient connection pricing as supporting:[11]

- the deterrence of inefficient connections, due to the lack of subsidies between connections;
- efficient connections, due to connection charges that are not excessively high and the obligation of a distributor to connect all customers;
- optimised connections, due to the cost-reflectivity of connection charges; and
- the reduction in per consumer contribution to shared network costs over time, through increased connections.

Conversely, the Authority does not discuss the relevance of promoting competition within the context of its statutory objectives and states that:[12]

> The proposed amendments do not directly impact competition in the electricity industry because they deal with network pricing for end consumers.

The Authority may amend the Code to include provisions consistent with the Authority's main or additional objectives and promote any or all of the matters set out in section 32(1) of the *Electricity Industry Act 2010*.[13]

In light of the close relationship between the Authority's objectives and the Authority's ability to amend the Code, this report focuses on the consistency of the Authority's proposed approach with its statutory objectives.

[7] October 2024 consultation paper, para 7.156.

[8] Consultation paper, table 9.3, p 56.

[9] Australian government, *National competition policy review (The Hilmer report)*, August 1993, pp 3-4.

[10] Consultation paper, para 3.5.

[11] Consultation paper, para 3.5.

[12] Consultation paper, table 9.3, p 56.

[13] Consultation paper, para 3.3.

## 1.2 Structure of this report

The remainder of this report is structured as follows:

- in section 2, we describe the Authority's proposed approach to amending the regulatory arrangements applying to connections to the electricity distribution network;
- in section 3, we demonstrate how the Authority's proposed approach does not promote its statutory objective of economic efficiency;
- in section 4, we demonstrate how the Authority's proposed approach does not promote its statutory objective of promoting competition; and
- in section 5, we explain how the Authority's conceptual economic framework has led to a proposed approach that is not consistent with its statutory objectives.

# 2. The Authority's proposed intervention

In this section we describe the Authority's proposed changes to the regulatory arrangements applying to electricity distribution connection pricing. The Authority's proposal can be summarised as two main recommendations, ie:

- targeted intervention where connection charges are too high; and
- an obligation for electricity distributors to offer and maintain connections for all customers.

There are a number of components underpinning these recommendations, namely:

- the Authority's case for intervention and proposed approach to intervention with respect to connection charges; and
- the Authority's case for intervention and proposed approach for the obligation to connect.

Each of the components contributing to the Authority's recommendations are explained in turn below.

## 2.1 The Authority's proposal for connection charges

In this section, we describe the Authority's:

- identified case for change;
- proposed intervention options; and
- process to select the preferred intervention option to address the identified case for change.

### 2.1.1 The Authority's identified need for intervention

The problem contended by the Authority is that greater reliance on connection charges may delay or prevent new connections that should be encouraged because they are 'efficient' in the sense that they would be capable of both covering their own costs and contributing to shared costs.[14]

Further, the Authority is concerned that the increasing trend in connection charges over time may result in an increase in the overall lifetime costs allocated to new connections.[15]

To describe the efficiency concerns related to distribution network connection pricing, the Authority uses two concepts, ie:[16]

- the neutral point – at which the up-front connection charge and ongoing revenue from a new connection covers the incremental cost of the connection with no contribution to shared and sunk costs; and
- the balance point – at which new connections contribute to sunk and shared costs at a level that is commensurate with similar existing connections.

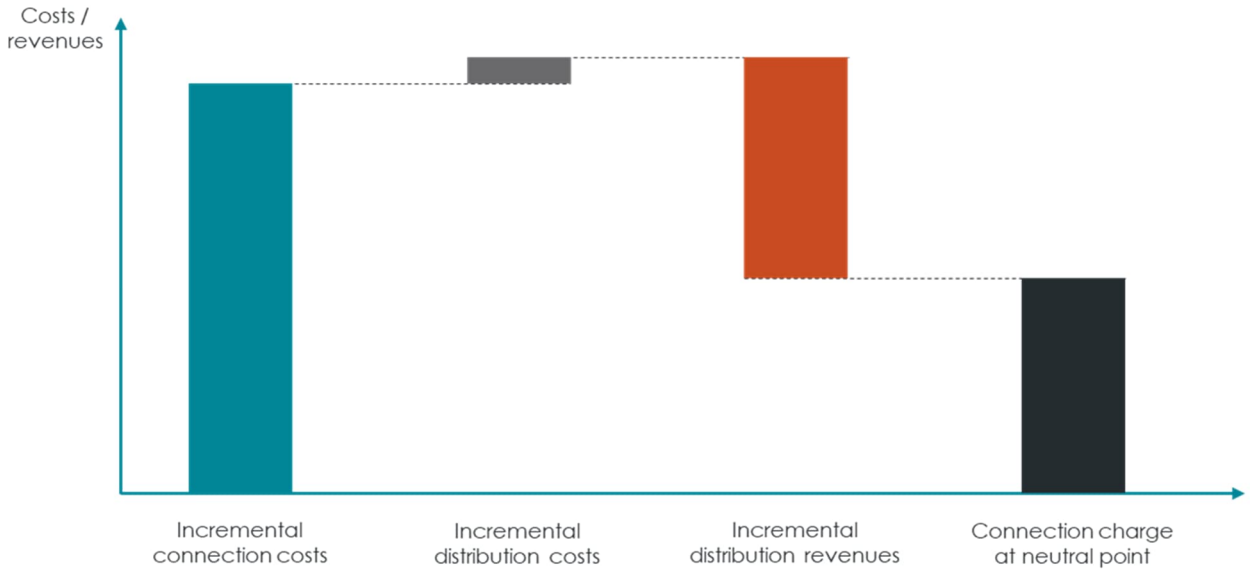
Figure 2.1 demonstrates the elements factoring into the calculation of the neutral point, which includes the up-front (connection) and ongoing (distribution) incremental revenue and costs of the connection.

[14] Consultation paper, para 5.2.

[15] Consultation paper, para 5.2(a).

[16] Consultation paper, para 5.6.

Figure 2.1: Demonstration of calculation of the neutral point




*Note: The bars on this chart represent an indicative example of the neutral point.*

In the indicative example from figure 2.1, we draw the incremental connection costs as being larger than the present value of incremental distribution revenues. However, there may be a range of potential scenarios of the relative magnitude of these costs and revenues. The neutral point approach will typically involve connection charges that are far below the incremental cost of connection, because net incremental cost (or the neutral point) deducts the present value of future lines charges from the connecting customer.

With respect to the neutral point, the Authority states that:[17]

> (a) pricing below the neutral point increases the risk of enabling inefficient connections (ie, connections that would not have gone ahead with neutral point pricing) while shifting costs to existing users
>
> (b) pricing above the neutral point will deter some efficient connection demand (ie, connections that would have gone ahead with neutral point pricing) and may raise the cost of financing connection investment

In light of these efficiency concerns, the Authority states that connections charges should be set no higher than the neutral point, with the neutral point most likely to promote efficient investment and network usage where:[18]

- the connection rate is more price sensitive than the disconnection rate;
- electricity distributors have a relatively lower cost of capital than consumers financing a connection to the distribution network;
- the costs and disruption of transitioning from the current pricing level to the neutral point do not outweigh the gains; and
- the neutral point is durable over time.

[17] Consultation paper, para 5.8(a)-(b).

[18] Consultation paper, para 5.9.

With respect to the balance point, the Authority states that:[19]

> …pricing above the balance point increases the lifetime cost of a new connection (compared to similar existing connections) which will further deter some efficient connection demand. Preventing pricing above balance point also supports investment confidence for prospective connection applicants by safeguarding against hold up.

Moreover, the Authority also states that pricing above the balance point is discriminatory since this would require new connections to contribute relatively more than historical connections to the combined costs of connection and network services.[20]

As such, the Authority – supported by CEPA – presents pricing at the balance point as the preferrable option on the basis of the efficiency improvements associated with the removal of inter-temporal price discrimination.[21]

### 2.1.2 The Authority's proposed intervention options

The Authority evaluates five intervention options to address the identified problem of increased reliance on connection charges by distributors, namely:[22]

- no specific intervention – involving no direct action on connection pricing, but rather relying on broader reform processes to limit the share of costs allocated to connection charges and fees;
- improved reliance limits – involving a number of additional restrictions intended to limit reliance on connection charges over time and eliminate options for distributors to 'bypass' these limits;
- methodology locks – involving restricting changes to connection pricing methodologies to prevent further changes that would increase reliance on connection charges;
- targeted intervention – involving the screening of distributors for potential efficiency problems and conducting an in-depth analysis where the screen identifies concerns, potentially resulting in a requirement for the distributor to amend the connection charges; and
- allocation limits – involving capping connection charges at some proportion of incremental connection costs.

The Authority assesses these proposed intervention options against evaluation criteria of effectiveness, cost and risk.[23] The Authority concludes that the targeted intervention is its preferred option.

Against these three criteria, the preferred targeted intervention option was assessed as:[24]

- the equal most effective option (alongside the improved reliance limits option) at deterring and reducing inefficiently high connection charges;
- the equal most effective option (alongside the do nothing option) at mitigating risks, and does so through distributor-specific intervention and engagement; and
- similar to other options overall in terms of costs and resourcing.

CEPA supported the Authority's position, stating that:[25]

[19] Consultation paper, para 5.8(c).
[20] Consultation paper, para 5.8(c).
[21] Consultation paper, para 5.14 and pp 22-23.
[22] Consultation paper, para 6.1.
[23] Consultation paper, para 6.2.
[24] Consultation paper, para 6.36 and figure 6.1, p 37.
[25] CEPA report, para 13.

> The risk of adverse incentives is mitigated with the combination of a targeted intervention and the requirement to offer to connect.

## 2.2 The Authority's proposed approach for the obligation to connect

In addition to reforms regarding connection pricing, the Authority proposes to clarify distributor obligations to connect customers.[26] The Authority states that the current connection settings within the regulatory framework are inadequate, because the current wording of the distributor's obligation to connect:[27]

- is not clearly expressed or bounded; and
- does not extend to non-injecting connections.

Further, the Authority contends that this ambiguity presents risks of dispute between injecting connection applicants and distributors, and allows distributors to reject applications for non-injecting connections.[28]

Accordingly, the Authority proposes to:[29]

> …complement its reforms to connection pricing and network access arrangements with reform to establish:
>
> (a) an explicit obligation to supply and maintain connections
>
> (b) mechanisms for greater oversight of the suite of access standards that could undermine these obligations.

The Authority also contends that these amendments to the obligation to connect will promote:[30]

- efficient connection growth;
- efficient use of, and investment in, network capacity; and
- efficient continuance of supply.

[26] Consultation paper, para 10.1.

[27] Consultation paper, paras 10.9-10.10.

[28] Consultation paper, para 10.11.

[29] Consultation paper, para 10.15.

[30] Consultation paper, para 10.16.

# 3. The Authority's intervention does not promote efficiency

In this section we explain that the Authority's proposed intervention draws upon a framework that assumes connection services and network services are not economically distinct.

This assumption is not consistent with known facts about these services and their economic characteristics. In light of these characteristics, the proposed intervention will not promote economic efficiency, as required by the Authority's statutory objective. Even if one were to set aside these concerns and proceed on the assumption that the connection and network services are provided as a single bundled service, the Authority's framework offers no reliable basis for concluding that its proposed intervention would promote economic efficiency.

Most of the economic analysis and core propositions put forward by the Authority are based upon its concept of the neutral point and this is reflected in the weight of analysis in this section. Notwithstanding, the Authority's proposed intervention is based on the separate concept of the balance point and we also address the economic fundamentals of the balance point this in the latter part of this section.

## 3.1 The Authority's framework is not consistent with economic principles

In this section, we explain that the central concept with regards to the Authority's framework for economic efficiency, being the neutral point, is not consistent with the principles of economic efficiency.

### 3.1.1 Connection and network services are economically distinct

- The Authority's reliance on the neutral point, ie, net incremental cost, as a relevant concept draws from its assumption that the cost recovery of connection services and network services should be assessed as a combined service, rather than as economically distinct services.
- We provide an example of a practical application of conventional economic principles by the Australian Energy Regulator demonstrating that these services should be treated as distinct.
- The Authority has not considered the differences in the cost structures of these economically distinct services, which give rise to implications for the efficiency of the Authority's proposals.

#### The Authority treats connection and network services as a single service

A key assumption that underpins the Authority's approach – supported by CEPA – is that the connection service and the network service are not economically distinct and should be deemed a single service for the purpose of considering efficient connection charges.

For example, CEPA suggests that, in principle, if distributors increase up-front charges for newly connecting customers then they should reduce ongoing charges for those customers.[31] This statement appears to be founded upon a view that these distinct charges are simply two means of recovering the costs of a single service.

This assumption is fundamental to the Authority's propositions that:

[31] CEPA report, para 5.

- the incremental cost of providing a connection service to a customer should be calculated so as to deduct the expected future lines charges of that customer, ie, at net incremental cost, which the Authority refers to as the 'neutral point';[32] and
- any increase in connection charges above net incremental cost may give rise to economic harm by delaying or preventing connection activity, and therefore increasing connection charges would be expected to increase this harm.[33]

Consistent with this observation, as compared to its October 2024 consultation paper, there is an increased focus in the Authority's current consultation paper on the allocation of total charges as between connection charges and lines charges, rather than the economic efficiency of the connection charge and, separately, the economic efficiency of lines charges.

Indeed, the Authority appears to assume that connection charges might be completely disconnected from the costs of providing connection services, ie:[34]

> Distributors determine the portion of costs they allocate as up-front connection charges versus recovering over time through monthly lines charges.

### The Authority's position does not accord with other regulatory authorities

In contrast to the Authority's approach, the Australian Energy Regulator (AER) provides an '*Electricity distribution service classification guideline*' to provide clarity, transparency and predictability as to the type of economic regulation, if any, applied to the services provided by distributors.[35] Although both connection and network services are categorised as 'direct control services' the AER clearly distinguishes between:[36]

- common distribution services, which is the bundle of distribution activities used by customers, relating to their use of the shared network; and
- connection services, being the activities relating to the electrical or physical connection of a customer to the network.

The AER explains that its approach aligns with the concept that customers should pay their dedicated costs and that:[37]

> This approach separates the price for the connection service to the premises from the DUOS charges attributable to standard control services.

However, the AER also explains the relevance of net incremental cost, ie, the cost revenue test, in setting connection charges, ie:[38]

> …with the cost revenue test applying where the benefits of an extension or augmentation to the network are shared with other users of the network.

We have previously commented on this diversity in distributor connection pricing in the Australian context.[39] We have noted that connection charges in Australia reflect the classification of the service in a regulatory

[32] Consultation paper, para 5.6(a).

[33] Consultation paper, para 5.8(b).

[34] Consultation paper, para 5.3.

[35] AER, *Electricity distribution service classification guideline*, August 2022, p 1.

[36] AER, *Electricity distribution service classification guideline*, August 2022, pp 5-6, 10-16.

[37] AER, *Electricity distribution service classification guideline*, August 2022, pp 16-17.

[38] AER, *Electricity distribution service classification guideline*, August 2022, p 17.

[39] HoustonKemp, *Review of the Electricity Authority's proposed distribution pricing Code amendment – a report for Vector*, 20 December 2024, pp 30-33 (hereafter 'our December 2024 report').

determination, which in turn determines the form of regulatory control applied to the service and, therefore, how connection charges are calculated.

In particular, we have explained that:

- where connection services are provided in a contestable market, the incremental cost of the connection service is recovered up-front, in its entirety, from the access seeker; and
- the incremental cost revenue test in the National Electricity Market (NEM) is:
  - applied only in certain circumstances;
  - not applied when there is the prospect of competition in connection services; and
  - accompanied by mechanisms that protect existing customers from the risks associated with deferment of the recovery of the incremental cost of connection – which we discuss further in section 3.1.3.

#### Different cost structures across services have implications for efficiency

There are two important reasons, linked to the Authority's statutory objective, to draw a clear distinction between the connection service and the network service, ie:

- the cost structures of the connection service and the network service are very different, with implications for economically efficient pricing and use; and
- there are observed transactions for the connection service that occur separately from the network service, because the connection service is subject to some degree of competition, which we discuss in section 4.1.[40]

With regard to the first observation above, the costs of connection services are comprised of up-front costs that are required to connect a customer to the network and that can be causally linked to the customer's decision to connect. In contrast, the costs of network services are comprised of both sunk and ongoing costs which must be incurred (and recovered) to support the provision of network services to customers, but which may not be attributable to any one customer.

It follows that the efficient pricing structures to recover the costs of these two distinct services will be different, with:

- efficient connection charges comprised of up-front charges, so as to reflect and recover the up-front costs incurred in the provision of this service; and
- efficient lines charges may comprise a range of potential structures, reflecting the largely sunk and unattributable nature of the costs and the potentially wide range of subsidy-free prices.

We explain below that the Authority's proposed approach to connection pricing does not promote economic efficiency in the setting of these charges.

### 3.1.2 The neutral point does not promote efficiency for connection services

- Connection pricing at incremental connection costs promotes allocative efficiency.
- By considering connection and distribution services together, the Authority proposes connection charges that fall below the incremental cost of the connection service, ie, at net incremental cost or the neutral point. Connection pricing below incremental cost, eg, at net incremental cost, encourages inefficient over-connection.

[40] This tends to suggest that connection services may be supplied in a different market from network services. However, for the reasons that we note in this section, the prospect that the services may be supplied in different markets may not be necessary to establish that the structure of efficient charges differs between them.

- Despite the Authority's substantial focus on allocative efficiency, the neutral point does not promote allocative efficiency. By consequence of its focus on allocative efficiency, the Authority has not considered how the promotion of competition may improve productive and dynamic efficiency.

### Pricing at incremental costs promotes allocative efficiency

The costs of connection services are comprised of up-front costs that:

- are required to connect a customer to the network; and
- can be causally linked to the customer's decision to connect.

In these circumstances, an economically efficient orthodox approach, and one that promotes economic efficiency, is to charge customers for their connection to the network to reflect the costs that they impose on the distributor. In addition, by connecting to the distribution network these customers also impose costs on the network, including other network connections and customers, which contribute to the distributor's regulated revenue and are subsequently recovered through ongoing lines charges.

This approach is standard in many regulatory settings, including as promoted by the Authority for the pricing of transmission services in New Zealand, which we explain further in section 5.3.

### The Authority proposes the neutral point as its basis for efficiency

Rather than applying this concept of reflectivity of incremental cost to the connection service, the Authority's framework has applied it across the combination of connection and distribution services. The outworking of this approach is that revenue from up-front connection charges and ongoing lines charges combine to recover the total incremental costs of connection and ongoing network services.

The Authority calls this the neutral point, although CEPA refers to it more descriptively as the net incremental cost approach, since up-front connection charges are calculated as total incremental connection and network costs net of lines charges revenue. Net incremental connection costs are typically lower than incremental connection costs, as we explain in section 2.1.1.

The Authority assumes that a connection charge at net incremental cost, ie, the neutral point, would ensure that a customer covers the incremental cost of their connection over time.[41] However, there are some important caveats to the usefulness of this observation because:

- this cannot be the basis for efficient connection pricing over the long run, since then only connection costs would be recovered and no customers would make a contribution to sunk network costs, ie, non-incremental network costs; and
- setting connection prices below incremental costs necessitates an explicit cross-subsidy between connection charges and lines charges, which gives rise to the prospect of inefficient connection to and use of distribution networks.

In respect of the first observation, allowing for a significant degree of price discrimination in connection services may assist in allowing distributors to connect applicants with very low willingness-to-pay, whilst still recovering overall costs. We understand that there are no regulatory constraints that would prevent such outcomes arising in the New Zealand context.

In respect of the second observation, we discuss the concept of a cross-subsidy in section 3.1.3. The Authority is correct to note that pricing below incremental cost, eg, at the neutral point, may encourage connections. Generally, lower connection charges would be expected to encourage connections. However,

[41] Consultation paper, para 5.6(a).

this observation by itself neither sheds light on the efficient pricing or number of connections, nor does it justify pricing at net incremental cost.

There are two potential inefficient outcomes with regards to connection pricing, ie, inefficient under-connection and inefficient over-connection. The Authority's approach focuses on the risk of inefficiently low connections, which is the consequence of connection charges that are too high.

Under the assumption that connection and network services are economically distinct, inefficient under-connection arises when customers that derive a connection benefit that exceeds the incremental cost of their connection do not connect because the connection price they are charged exceeds their benefit of connection. Put simply, where connection and network services are distinct, under-connection relates to connection charges that exceed incremental connection costs.

### The Authority focuses on the allocative dimensions of economic efficiency only

Consistent with the dimensions of economic efficiency we present in section 1.1, the Authority places substantial weight on the concept of allocative efficiency only, ie, by focusing on ensuring that connection charges are sufficiently low to encourage connections. However, economic consideration of allocative efficiency dictates that prices are set:[42]

- above the incremental cost of providing the service; and
- below the opportunity cost of the service for the customer.

In principle, price discrimination can further improve allocative efficiency within these bounds by recovering relatively more costs, by charging higher prices to customers that have a higher willingness-to-pay (or opportunity cost) and lower prices to those with a lower willingness-to-pay. That is, effective price discrimination could allow all customers that value the service at least as much as the incremental costs of their use are able to acquire the service.

The Authority's position is that, within the paradigm of combined connection and network services, connection charges at net incremental costs is the price level that promotes allocative efficiency. We also note above that net incremental cost is lower than incremental connection costs.

It follows that, in the context of connection services being economically distinct from network services, the Authority's proposed efficient connection charge is too low and does not promote allocative efficiency. That is, the Authority's proposed efficient connection charge, ie, the neutral point, underestimates the efficient connection charge, which is equal to the incremental cost of connection. Accordingly under the assumption of distinct connection and network services, the Authority's approach is more likely to result in inefficient over-connection, ie, a price that is too low, than inefficient under-connection, ie, a price that is too high. This contrasts with the Authority's focus, which is primarily on the risk of inefficient under-connection.

Notwithstanding this focus on allocative efficiency, the Authority has not considered how the promotion of competition may improve productive and dynamic efficiency and deliver outcomes that are in the long-term interests of consumers. Specifically, the Authority's analytical framework focuses on the reduction of connection charges, and the prospects of this increasing the number of connections, rather than establishing a regulatory environment that would promote the reduction of connection costs over the long run.

Economic principles dictate that increased competition can lead to both higher productive and dynamic efficiency, ensuring that the service is provided at lowest cost, to the appropriate standard and preferences of consumers, over time. By excluding the effects of competition, the Authority has not proposed regulatory interventions that have considered all relevant aspects of the long-term interests of consumers. We discuss the Authority's consideration of competition further in section 4.

[42] We explain the economic concept of a cross-subsidy, with reference to these bounds, in section 3.1.3.

### 3.1.3 The Authority's approach imposes cross-subsidy and inefficient risk transfers

- The Authority's proposal would require a cross-subsidy that transfers the recovery of incremental connection charges into ongoing lines charges. This cross-subsidy arises in the context of the economic distinction between connection services and network services.
- A cross-subsidy between up-front connection charges and ongoing lines charges transfers connection cost-recovery risk from the connecting customer to the distributor and its other customers.
- This risk transfer is the driving force of inefficiency within the Authority's approach, with the proposed obligation to connect likely to compound the incidence of inefficient over-connection, particularly in areas of the network where demand is growing the fastest.
- There are well-established risk mitigation mechanisms available to distributors to address this connection cost-recovery risk. However, the Authority does not consider the appropriate inclusion of any of these mechanisms in its proposed interventions.

#### The economic concept of cross-subsidy

The Authority focuses on the prospect of cross-subsidies between new connections and existing connections,[43] which is supported by CEPA, who state that:[44]

> We consider it desirable to avoid cross-subsidisation between different groups of customers.

Notwithstanding this focus, neither the Authority nor CEPA provides an economic definition of the concept of a 'cross-subsidy' nor explains the specific efficiency concerns in relation to such cross-subsidies.

In economics, a cross-subsidy refers to the specific circumstance in which the costs recovered from a particular user, or group of users, either:[45]

- exceeds the costs required to provide the service to that user, or group of users, in isolation, ie, the standalone or bypass costs; or
- is below the incremental costs imposed by that user, or group of users, in the provision of the service to all users.

This definition clearly articulates that connection charges below incremental connection costs is a cross-subsidy between connection charges and lines charges with these lower, ie, subsidised, connection charges encouraging greater connection to the network.

Specifically, the approach of requiring the distributor (and therefore other customers using the network service) to cover the up-front costs of connection gives rise to cross-subsidies that may promote inefficient connections, since it allows an applicant to shift its business risks onto the distributor and other consumers.

Instead of addressing cross-subsidies, the Authority's proposed intervention would likely create new cross-subsidies or entrench existing cross-subsidies, because the Authority proposes to intervene to cap connection charges to a level below the incremental cost of providing the connection service. We discuss the implications of this cross-subsidy between services for the contestability of connection services in section 4.1.

[43] See: Consultation paper, paras 3.5, 7.15(e)-(f) and 8.15.

[44] CEPA report, para 28.

[45] Brown, S, J and Sibley, D, S, *The theory of public utility pricing*, Cambridge University Press, United Kingdom, 1986, pp 51-54.

### Cross-subsidies allow for risks to be transferred from customers to distributors

The Authority has suggested that shifting risks from connection applicants to distributors and their customers is a positive aspect of its intervention, noting that one reason the neutral point might be efficient is that:[46]

> …the cost of capital for electricity lines services is low relative to the costs of consumers financing an electricity distribution connection.

We agree that shifting risks from connection applicants to distributors and their customers would lower costs for connection applicants. However, this would not lower overall costs in the electricity system and may give rise to higher costs to the extent that this encourages inefficient connections.

In our opinion, there is good reason to expect that inefficient connections would result from the Authority's proposal. There are likely to be sound economic reasons that the cost of capital for electricity lines services is lower than the cost of financing an electricity distribution connection. This is because the provision of electricity lines services is a relatively low risk activity, as reflected in the Commerce Commission's (the Commission's) determination of the regulated rate of return. On the other hand, some connection applicants may have business cases that carry considerably more risk than this, as assessed by investors who require a return on the risks that they bear. Lowering up-front connection charges can be expected improve the economics of connection for exactly these 'marginal' investments.

Transferring these higher risks to distributors and their customer base is not a sound economic response to claims about high connection costs. By shifting risks away from connection applicants, the Authority's proposal would then render them indifferent to their incidence, whereas economic efficiency dictates that these risks should be reflected in their decision-making regarding whether to connect.

It follows that the difference between the cost of capital for distributors and connection applicants is one reason why pricing at the neutral point might give rise to inefficient connections.

The nature of the risks that are imposed on the distributor and, by extension, on other customers, relates to the tenure of the prospective connecting customer on the distribution network. Put simply, pricing at the neutral point amounts provides a 'rebate' in the form of future lines charges, so that to make the distributor and its customers whole for this rebate requires the connecting customer to remain connected to the network long enough to pay it back. If the connecting customer does not remain in business, or changes its technology or location, other electricity customers of the distributor will bear the costs of that decision in higher lines charges.

From an economic and regulatory perspective, distributors and other customers are not the parties who should most efficiently be absorbing these risks. The party best placed to manage these risks is the connecting customer itself, who makes its own choices about the investments that give rise to these risks, and makes subsequent choices about whether to withdraw from or modify the nature of this investment.

Notwithstanding the Authority's focus on connection charges that are too high – which we explain in section 3.1.2 – it does acknowledge the risk of inefficiently low connection charges:[47]

> …pricing below the neutral point increases the risk of enabling inefficient connections (ie, connections that would not have gone ahead with neutral point pricing) while shifting costs to existing users.

However, the Authority limits this acknowledgement to where prices are below the neutral point. The correct interpretation of the Authority's statement is that connection pricing below incremental cost leads to

[46] Consultation paper, para 5.9(b).

[47] Consultation paper, para 5.8(a).

inefficiencies since it encourages connection from customers who may impose greater costs on the network than the revenue that they are expected to contribute.[48]

### Relevance of the obligation to connect

We explain in section 2.2 that the Authority proposes to implement an obligation onto distributors to supply and maintain connections.

The combination of this obligation to connect with the Authority's proposed intervention to maintain connection costs below the incremental cost of connection amplifies the cross-subsidy between connection charges and lines charges that would be required and/or reinforced by the Authority's proposal. This is particularly pertinent in network areas where demand is growing fastest, in which we might expect more connection applications that are marginal.

The need for the obligation to connect is not immediately apparent. We assume that distributors are profit-maximising entities and therefore would only seek not to connect prospective applicants if doing so would increase their economic profit. It seems reasonable to suppose that, at the point of connection, distributors would weigh the potential expected revenue streams from the connection applicant against the costs over the expected length of the connection.

It follows that if a distributor decides not to connect an applicant, it may be that there is some reasonable basis for uncertainty as to the future contribution to network cost recovery from this customer. This uncertainty will reduce the distributor's expectations of future revenue and, in order for the distributor to be made whole for its connection costs, requires a relatively higher connection charge offering. This future uncertainty makes it more difficult for the distributor and prospective connection to agree on an up-front connection charge.

Although it might be economically rational for distributors to drive a hard bargain on connection applicants, it would not be profit-maximising to do so to the extent that a significant proportion of connection applicants with willingness-to-pay exceeding incremental cost choose not to connect.

The imposition of an obligation to connect would substitute the commercial considerations of a distributor on this basis and replace it what appears likely to be a 'rule of thumb'. The basis on which this would be expected to improve economic efficiency is unclear.

### Risk mitigation mechanisms available to distributors

In our opinion, to the extent that the Authority proceeds with any such obligation to connect in combination with requirements to charge less than the incremental cost of connection, it should do so only with clear exemption criteria that provide scope for distributors to reject connections in circumstances in which the connection would otherwise be likely to be inefficient. Examples of such exemption criteria could include:

- where a distributor has a reasonable basis for assessing that the connection applicant is able to pay the full incremental cost of connection, such that there is no reason to impose any additional risks on the existing customer base;
- where a distributor has a reasonable basis for expecting that the connection applicant will not remain connected for a period of time sufficient to pay back any rebate implicit in the connection charge; or
- where a connection applicant is unable to secure financial guarantees for its future lines charges.

We have previously commented on the Australian context for distributor connection charging in which connection charges are set at net incremental cost.[49] The third exemption criteria that we list above is

[48] In this statement, the Authority contends that the neutral point is the incremental cost of a combined connection and network service. However, for the reasons that we set out in this section, there are sound economic reasons to consider economic efficiency on the basis of individual services, rather than treating distinct services jointly, as the Authority does.

[49] Our December 2024 report, pp 31-33.

applied in the narrow circumstances and geographies in which distributors are required to set charges below incremental cost. Specifically, the AER permits prepayments or financial guarantees to be sought from the access seeker to offset the deferment of incremental connection costs over time, where the distributor assesses that there is a high risk that it may not earn the estimated incremental revenue.[50] On establishing this framework, the AER explained that:[51]

> Securities fees, whether by prepayment or financial guarantee, help to insure DNSPs against the risk of failing to collect the total estimated incremental revenue associated with a connection offer. In the absence of a security scheme, if the DNSP does not collect the total estimated incremental revenue, then the shortfall would eventually be recovered through higher network tariffs to all other network users.

Such a requirement for a security guarantee reduces the likelihood and severity of the inefficient connection of the 'riskier' applicants as described above. That is, riskier applicants may not be in a position to provide this security guarantee, reflecting their relatively riskier business prospects, and therefore are less likely to connect. From an economic perspective, this would give rise to an efficient outcome – that the applicant does not connect on a basis that transfers these risks to other electricity customers.

## 3.2 The proposed intervention does not promote economic efficiency

In this section we discuss the economic reasoning applied by the Authority in the development of its proposed interventions within the context of its proposed approach.

The distinction between this section and section 3.1 is that where section 3.1 comments on the overarching framework for considering economic efficiency proposed by the Authority, this section focuses on the economic rationale advanced by the Authority for its proposed intervention based on the balance point.

### 3.2.1 The balance point is not based on economic efficiency

- From the starting point that the neutral point is 'the lowest subsidy-free pricing level', the balance point does not represent an efficiency improvement relative to any other efficient allocation of connection cost-recovery. Rather, the balance point is an approach to recovering connection costs that seeks to target a type of inter-generational equity.
- A new argument advanced by the Authority, that increases in the connection charges above the balance point could cause 'hold-up', thereby contributing to inefficiency, is without foundation and reverses economic orthodoxy.
- Put simply, the Authority does not have a solid principled basis as to how its proposed intervention in connection pricing will improve economic efficiency.
- The Authority is unable to substantiate the problem it contends, being the inefficient delay of connections through high connection charges and does not present an economic rationale as to how its proposed balance point approach represents an efficiency improvement relative to the status quo.

The Authority's proposal to intervene in connection pricing with the balance point as the key pricing concept is not motivated by and does not align with principles of economic efficiency. That is, putting aside the validity of the assumption that connection and network services can be treated as a single service, the Authority's proposed balance point approach does not promote economic efficiency.

[50] AER, *Connection charge guidelines for electricity retail customers*, April 2023, paras 10.1.2-10.1.3.

[51] AER, *Connection charge guidelines for electricity retail customers*, Final decision, 20 June 2012, p 61.

In any case, the Authority is unable to put forward a clear case as to how connection pricing at the balance point represents an efficiency improvement on connection pricing at the neutral point, or any other proposed efficient approach to the cost-recovery of connection charges.

### The balance point does not accord with the principles of economic efficiency

In its October 2024 consultation paper, the Authority explains that, when connection charges are set at the neutral point, existing customers are made neither better nor worse off from a new connection, since the combination of up-front and ongoing charges exactly covers the costs imposed by that connection.[52]

It follows that connection charges must be above the neutral point in order for customers to contribute to the recovery of shared network costs. In light of this tension, the Authority contends that the balance point is:[53]

> …an efficient above-neutral point for connection pricing.

The Authority's consideration of the proposed connection price level should therefore be framed so as to best promote its statutory objective to promote economic efficiency and competition.

Instead, the Authority uses the balance point to prevent discrimination between new and existing customers with respect to their contribution to sunk and shared costs. That is, the Authority has focused on the prospect that new customers might pay more across connection and network services than existing customers.

CEPA supports the Authority's proposal to base connection pricing on the balance point principle, stating:[54]

> In our view the proposal to set connection charges at the balance point is consistent with sound regulatory policy. This rule prevents the selected EDBs from engaging in a form of inter-temporal price discrimination.

CEPA's endorsement of the balance point concept is carefully worded and does not suggest that it promotes the Authority's statutory objective by reference to economic efficiency or competition.

We agree with CEPA that the balance point offers a constraint on a form of inter-temporal price discrimination. Indeed, this appears to be its primary motivation. We do not agree that the setting of connection prices at the balance point is 'sound regulatory policy'. In any case, nothing turns on whether we agree or disagree with CEPA on these points, since they are not captured within the Authority's statutory objective.

Rather, consistent with our understanding of the Authority's statutory objective, the key factors determining whether the Authority should proceed with its proposed intervention is the degree of alignment with the promotion of economic efficiency and competition.

'Inter-generational equity', ie, the prospect that new customers might pay more across connection and network services than existing customers, is the principle that underpins the Authority's concept of the balance point.

This principle is not directly related to matters of economic efficiency, as we present in section 1.1. That is, the balance point does not promote:

- the allocation of resources to their highest value use, ie, allocative efficiency;
- the production of goods and services at the least possible cost, ie, productive efficiency; or
- innovation and investment in response to changing customer preferences and technologies, ie, dynamic efficiency.

[52] October 2024 consultation paper, para 7.58.

[53] Consultation paper, para 5.40(c).

[54] CEPA report, para 15.

That is, the motivation for the balance point sits outside the realm of economic efficiency.

Notwithstanding, the Authority has advanced arguments for how the balance point might promote economic efficiency. These have changed since its October 2024 consultation paper but remain without a sound economic foundation.

In its October 2024 consultation paper, the Authority asserted that:[55]

> .. connection charges above the balance point can be inefficient as they allocate connection applicants a higher lifetime cost than existing users from the same consumer group. This may in turn suppress connection growth.

The Authority makes similar, albeit less specific claims, in its current consultation paper.[56] However, it has also introduced new arguments for the balance point, based on the contention that connection pricing above the balance point could cause 'hold-up'.[57]

None of these arguments establish any plausible link of the balance point to economic efficiency, for the reasons that we set out further below.

We agree with the Authority that high connection charges could, in principle, discourage customers whose use of the network is marginal from connecting. This is inevitable at any level of connection pricing. We set out above why this does not provide a clear basis for requiring connection charges to be set below incremental cost. The balance point plays no role in these considerations.

### The Authority contends an application of the hold-up problem that is not well-founded

The concept of hold-up refers to the possibility that a party could be induced to make investments under the premise of low prices or good terms, and then these prices and terms are not made good on once the investment is sunk. Concerns about hold up may give rise to economic harm where they may prevent investments that would otherwise be efficient from occurring.[58]

However, the Authority's reference to the theory of 'hold-up' is misplaced. The Authority states:[59]

> Prohibiting undue price discrimination by monopoly suppliers can address the 'holdup problem' that can harm investment confidence and lead to under-investment.
>
> Where pricing is determined case-by-case, a distributor can set charges at a level that extracts maximum value from an applicant that has made sunk investments prior to procuring their connection. For example, an applicant may invest in property, planning and design prior to securing an electricity connection (or upgrade). If the applicant cannot proceed without the connection, and does not have a choice of distributors, the distributor is in a position to 'hold up' the applicant and extract the value from their investment.

The concerns expressed in these paragraphs appear to be about price discrimination and the shifting of economic rents between connection applicants and existing connections. They do not relate to the hold-up problem. In any case, there is no basis in economic efficiency for either concern.

Distributors' revenues are constrained by the Commission and the shifting of rents can only occur between distribution customers. We explain in section 3.1.1 above that price discrimination may offer a means of

[55] October 2024 consultation paper, para 7.63(d).

[56] Consultation paper, para 5.6(b).

[57] Consultation paper, para 5.8(c).

[58] Tirole, J, *The theory of industrial organisation*, The MIT Press, United States, 1988, pp 24-26.

[59] Consultation paper, paras 5.15-5.16.

increasing economic efficiency, and it is unclear what the Authority means when referring to 'undue' price discrimination, or how this relates to the promotion of its statutory objective.

Concerns about hold-up would only arise in relation to connection pricing where distributors are expected to reduce their connection charges over time. To the extent that total charges are simply distributed between connection charges and lines charges as conceptualised by the Authority, reducing connection charges and increasing lines charges (relative to what they would otherwise be) may be seen as expropriating the connection investments of existing users. It follows that concerns about decreasing connection charges may potentially hold up connection investments.

Put another way, if connection applicants expect connection charges to increase over time, then they will be incentivised to connect as quickly as possible so as to minimise their overall charges. The quicker an applicant connects, the more likely it is that it will face lower connection charges and enjoy the benefits of lower lines charges as connection charges increase further.

In this respect, it is not 'axiomatic that increasing prices will generally decrease demand' as the Authority states.[60] In fact, regulatory action that promises decreases in prices could perversely lead to delays in connection as applicants wait for lower connection charges in future or are concerned that lower connection charges could potentially be associated with higher lines charges in the future.

### 3.2.2 The consequences of departing from principles of economic efficiency

- It is rare for an economic regulator to directly consider the issues of inter-generational equity.
- There is recent evidence from the water sector in New South Wales, Australia, in which departures from the principles of efficiency for affordability concerns did not result in alleviating cost-pressures and had other unintended consequences in the market. As such, the regulatory framework is currently conducting a phased reintegration of the previous efficiency considerations.

In our experience, economic regulators have rarely given significant direct consideration to issues of inter-generational equity, in contrast to the Authority's focus on the balance point in this context. However, where regulatory authorities have shifted focus away from efficiency and competition this often has unintended consequences through the promotion of uneconomic conduct.

A relevant case study is the water sector in Australia in which so-called 'developer charges' were implemented by water businesses to recover the costs of augmenting system capacity from developers.[61] In the electricity context, this is analogous to the 'deep' element of connection charges, with water businesses recovering shallow connection costs on an incremental basis.

Although the purpose of developer charges was for economic efficiency and to allocate the risk of stranded common assets,[62] they were identified as a contributing factor to rising housing affordability concerns.[63] Subsequently, developer charges were halted completely in New South Wales in 2008,[64] on the basis of equity concerns about housing affordability.

These changes were not long-lived, with a subsequent review by the New South Wales government finding that the removal of developer charges:[65]

[60] Consultation paper, para 5.31.

[61] IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council – Developer charges from 1 October 2000*, 21 September 2000, p 1.

[62] IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council – Developer charges from 1 October 2000*, 21 September 2000, p 4.

[63] NSW Productivity Commission, *Review of infrastructure contributions in New South Wales*, Final report, November 2020, pp 100-101.

[64] NSW Department of Planning, *Planning circular: PS 08-017*, 23 December 2008.

[65] NSW Productivity Commission, *Review of infrastructure contributions in New South Wales*, Final report, November 2020, pp 100-103.

- did not generally make housing more affordable, but represented a transfer to land owners by means of higher land prices;
- led to capital constraints on development; and
- resulted in distortions to incentives by interfering with market signals.

As such, developer chargers are currently having a phased reintroduction to send more efficient signals about the cost of growth and to ensure that existing customers do not cross-subsidise growth infrastructure.[66]

### 3.2.3 The Authority's proposed solution does not improve on the status quo

- The Authority is unable to substantiate the problem it contends, being the inefficient delay of connections through high connection charges, and does not present an economic rationale as to how its proposed balance point approach represents an efficiency improvement relative to the status quo.
- Put simply, the Authority does not have a strong theory as to the efficient connection price level within its approach.

#### The Authority does not present empirical evidence to support its identified case for change

The problem contended by the Authority is that greater reliance on connection charges may delay or prevent new connections that should be encouraged because they are 'efficient' in the sense that they both cover their own costs and contribute to shared costs.[67]

The Authority frames this problem at the level of economic principle, with little direct evidence of connections that are delayed or prevented by the magnitude of connection charges. In particular, the Authority states that:[68]

> There is no systematic source of information on deterred or delayed connections, and this activity is inherently difficult to observe.

The Authority provides some examples of submissions from connection applicants who are dissatisfied with connection charges,[69] but also notes that:[70]

> …[a]ccess seekers who lodged complaints often still proceeded with the connection project citing that they did not have an option given the monopoly position of distributors.

This brings the Authority's proposed case for intervention into question, ie, that there is limited observable evidence that distributor connection charge price discrimination has the effect of causing inefficient delay and deferral of network connections.

#### The balance point principle does not promote economic efficiency above the current regulatory arrangements

Under the current approach, ie, status quo, to connection pricing, distributors are able to negotiate a connection charge that, in principle will be:

[66] NSW Productivity Commission, *Review of infrastructure contributions in New South Wales*, Final report, November 2020, pp 103 and 129.

[67] Consultation paper, para 5.2.

[68] Consultation paper, para 5.33.

[69] Consultation paper, paras 5.34-5.38.

[70] Consultation paper, para 4.10.

- sufficient to recover the total costs of connection, when coupled with the ongoing lines charges of the connection; and
- below the willingness-to-pay of the connecting customer, when accounting for ongoing lines charges.

Consistent with the definition of allocative efficiency and cross-subsidies we present in sections 3.1.2 and 3.1.3, such an approach to connection pricing is efficient, in that any customer who values connection to and ongoing use of the network greater than the proposed up-front connection charges and ongoing lines charges will connect and use the network.

However under the Authority's proposed approach, connection charges are required to be set at the balance point. In the context of customers having a range of willingness-to-pay and opportunity costs associated with connection to and use of the network, removing the possibility of price discrimination within a group of customers, ie, pricing at a single point, necessarily gives rise to an inefficiency.

That is, there is no one single efficient price in this context, as supported by the Authority, which states that:[71]

> …pricing above the neutral point will deter some efficient connection demand…

It follows that, within the Authority's context of the neutral point as the efficient connection price point, the requirement to price at the balance point will create inefficient under-connection to the network. This inefficiency refers to customers who value connection to the network above the neutral point but below the balance point.

Accordingly, the proposed position of balance point pricing demonstrates that the Authority has not developed a well-founded economic theory as to the efficient connection price.

[71] Consultation paper, para 5.8(b).

# 4. The Authority's intervention does not promote competition

In this section we explain that the Authority does not consider the potential effects on competition of its proposed interventions on markets for the provision of contestable connection services. The promotion of competition is one of the limbs of the Authority's statutory objective.

We explain that the likely effect of the Authority's proposals that could require connection charges to be strictly below incremental cost would be to harm competition in relevant markets for the provision of connection services.

We also explain that the Authority's suggestion that market power is a problem giving rise to increasing reliance levels for connection charges is not well-founded. In a competitive market for the provision of connection services, in which there was no market power, connection charges would likely be charged at no less than incremental cost. The Authority has not presented any reliable evidence of connection charges prevailing at levels above incremental cost.

## 4.1 Pricing below incremental connection costs affects the prospects of competition for connection services

- Some connection services can be provided by entities other than the distributor, ie, accredited service providers, and so may be subject to some degree of direct competition.
- The setting of connection charges below incremental connection cost cross-subsidises their provision through the recovery of connection costs through lines charges. Accredited service providers are not able to offer connection charges below incremental cost and therefore prices at these levels limits their ability to compete for the provision of contestable connection services.
- The Authority's proposed intervention requiring distributors to set connection charges below incremental connection costs may raise barriers for accredited service providers to compete, and so is likely to harm competition by rendering the connection service incontestable. Over the long run, the process of competition is harmed and might be expected to give rise to higher connection costs than would arise with the prospect of competitive pressure to drive productivity gains.
- The Authority's apparent preference for a regulatory intervention rather than exploring the promotion of competition to achieve a market-based outcome does not appear to be consistent with its statutory objective.

Distribution network connection services may be subject to some degree of competition, ie, are contestable or have components that are contestable. These services may be provided by service providers that are accredited by the distributor. On the other hand, network services are not subject to direct competition.

The Authority proposes to intervene in the setting of connection charges in a way that may prevent these charges from reaching the incremental cost of providing connection services. The Authority's objective is clearly illustrated by the weight of its concerns about rising reliance on connection charges to fund connection costs and its framework by which the neutral point and the balance point – which are both expected to be lower than incremental cost – are proposed as important benchmarks for connection pricing.

However, prices below incremental costs are not consistent with outcomes that would be achieved through the process of competition. Further, prices below incremental costs would in fact be expected to harm, or stifle, competition, for the reasons that we set out in the remainder of this section.

We explain in section 3.1.3 above that connection charges below the incremental cost of providing the connection service entail an explicit cross-subsidy, since these charges are outside the subsidy-free range. Connection charges that are lower than incremental cost can only be sustained when the shortfall is funded by higher lines charges.

Where the connection service is subject to competition, or could be subject to competition in the future, the prospects for such competition developing or succeeding are remote when distributors are required to set connection charges that are below the incremental cost of providing connection services.

That is, unlike distributors, competing service providers are not able to cross-subsidise connection charges below incremental cost through:

- other services, since we assume that they do not provide other services for which they can exert market power to maintain prices higher than cost; or
- higher connection charges on other customers, since they would lose these higher priced customers to other connection service providers.

It follows that if the Authority proposes to require distributors to set connection charges below incremental connection costs, this is likely to harm competition for the provision of connection services by rendering the connection service incontestable.

These potential competitive effects of the Authority's proposed approach hinges on the presence of real competition or likelihood of future competition in markets for the provision of connection services.

We understand that there is real competition and the prospect of further competition in markets for connection services in New Zealand. For example, Vector allows customers to engage – at their own expense – contractors to undertake civil works on their premises as part of the infrastructure costs of connection, facilitating a degree of competition for some components of connection services.

Data provided by Vector for 482 connections projects[72] accepted by customers during 2025 indicates that total costs subject to competition (comprising civil and traffic management costs) represent:[73]

- at least 30 per cent of project costs for 26 per cent of projects; and
- at least 20 per cent of costs for 51 per cent of projects.

This information indicates that contestable costs are often a significant part of overall costs for connection projects and may exceed what is indicated by Vector's data, precisely because Vector's recorded costs will not include those contracted to competitors.[74]

If the Authority's proposal requires Vector to provide connection services for charges that are strictly below their incremental cost, then competition to provide connection services in Vector's service area will be harmed. A symptom of this harm to competition will be seen in the economic prospects for accredited service providers, who are unlikely to be able to find customers willing to pay for the cost of civil works when Vector is required to provide those works for charges that are strictly lower than their cost.

However, harm to competition is not the same as harm to competitors. Rather, the harm to competition will arise because the Authority's proposed intervention will require Vector to cross-subsidise the costs incurred in the provision of these civil works through higher lines charges, thereby limiting the ability of accredited

[72] In this context, a connection project is a significant exercise and this excludes a much greater number of connections that are not classified as projects.

[73] HoustonKemp analysis of detailed connections projects cost data, provided in confidence by Vector.

[74] For example, of these projects, 221 (ie, 46 per cent of projects) have no recorded civil and traffic management costs, which might arise either because some projects do not require such costs or because these costs have been contracted out to competitive providers of the service. Other projects might similarly understate such costs because some of them have been incurred by external contractors.

service providers to compete on their merits. This intervention may raise barriers for the success of firms that minimise costs while offering the best price-product-service package to consumers, and so the process of competition is harmed. Over the long run, this harm to competition might be expected to give rise to higher connection costs than would arise with the prospect of competitive pressure to drive productivity gains.

Consequently, there is the potential for real competition for connection services on Vector's network and on other distribution networks. In our opinion, the Authority's proposal would harm competition (or harm the development of competition) for the provision of these services. Since these services are provided within the electricity industry, this potential harm to competition is not consistent with the limb of the Authority's statutory objective that requires it to promote competition in the electricity industry for the long-term benefit of consumers.

In effect, the Authority's proposal to require connection charges to be lower than incremental costs appears to reflect a preference for the administrative setting of prices and the subsequent allocation of resources, rather than relying on competitive markets to determine these prices and the subsequent allocation of resources. We explain at section 5.3 that this preference is at odds with conventional regulatory thinking, which recognises that the purpose of regulation is to replicate the outcomes of competitive markets – and that leveraging competition to achieve these outcomes is far more effective than by seeking to do so through administrative means. Indeed, this style of regulatory thought is consistent with the economic framework proposed by the Authority for transmission pricing – in which it has been clear that market-based frameworks are to be preferred and administrative pricing is the least-preferred option. The Authority does not explain why the distribution pricing context warrants a fundamentally different conceptual foundation.

The Authority has previously indicated that there may be circumstances in which requiring connection charges to be below incremental costs may have effects on competition, ie:[75]

> …connection works that include vested assets are more likely to result in a negative connection charge – ie, where the incremental revenue exceeds the incremental cost and contribution to network costs.

The Authority suggested that in such cases, to support contestability:

> …distributors should make a payment to the applicant (or their contractor).

We have previously commented on the Authority's proposed approach to competition concerns,[76] as have Axiom Economics[77] and Frontier Economics.[78] We explained that the Authority's suggested approach was not carefully considered and did not address how the proposed payments would work within the regulatory framework administered by the Commission.

The Authority's current consultation paper does not repeat its previously stated proposal for distributors to make payments for the difference to the connection applicant or their accredited service provider. The Authority's consideration of the effect of its proposals on competition is limited to a single statement (that we cite in section 1.1 above) in which it states that there are no direct competitive impacts of the proposed interventions.

The Authority has neither addressed the previously identified harms competition associated with its proposals that would require connection prices to be lower than incremental cost, nor has it explained its reasoning as to why there are no competitive concerns with its proposed position.

[75] October 2024 consultation paper, para 7.160(b).

[76] Our December 2024 report, pp 20-21; HoustonKemp, *Response to submissions on the Electricity Authority's proposed distribution pricing Code amendment – a report for Vector*, 24 January 2025, pp 18-19.

[77] Axiom Economics, *Letter to Vector*, 11 January 2025, p 16.

[78] Frontier Economics, *Efficient pricing of distribution network connections*, 18 December 2024, pp 23-24.

## 4.2 Issues of market power are not relevant to the Authority's intervention

- The Authority discusses market power as part of the economic framing for its proposed intervention. However, we explain below that the Authority's concerns regarding market power play little role in any rationale for the proposed intervention.
- In a competitive market for the provision of connection services, competing service providers would set connection charges at no less than incremental costs. This demonstrates the contradiction in the Authority's concern that connection charges set at incremental cost is indicative of market power in the provision of connection services.
- In our opinion, there does not appear to be any evidence that market power is giving rise to any problems in respect of the pricing of connection services.
- Notwithstanding, concerns regarding market power represent an economic problem that could merit intervention such as mandating contestability or limiting connection charges to some measure of actual or average connection costs. As its proposed intervention differs from these considerations, it appears as though the Authority is not primarily motivated by market power concerns.

CEPA argues that distributors have market power over the setting of connection charges, ie:[79]

> …the potential for an adverse exercise of market power in connection charging, combined with a clear shift in connection charging policy, and an absence of mechanisms for connecting parties to mitigate the effects of that market power…

The Authority asserts that this market power could allow distributors to allocate costs at will to new connections by drawing a link between:[80]

- the market power of distributors, as monopoly network service providers, to dictate the portion of network costs to allocate to new connections; and
- evidence of some distributors sharply increasing the share of costs allocated to new connections over time.

The Authority has analysed historical reliance level data between 2014 and 2025 and forecast expected reliance levels to 2030, with this analysis indicating that Vector's:[81]

- historical reliance level has been significantly higher than the average of all other distributors; and
- expected reliance level is forecast to exceed 100 per cent beyond 2028, ie, that up-front connection charges are more than up-front connection costs.

We understand that the Authority's claim that Vector's up-front connection charges are expected to exceed its up-front connection costs is an outworking of the timing difference between when connection costs are incurred and connection charges are applied. The lumpy nature of connection costs can give rise to a reliance level over 100 per cent over relatively shorter time horizons, with the reliance level over a longer time horizon never exceeding 100 per cent.

In any case, the Authority's arguments do not appear to involve a formal assessment of the relevant market in which distributors possess market power or follow these arguments through to their logical conclusions about the costs that distributors should be allowed for the provision of connection services.

[79] CEPA report, para 62.

[80] Consultation paper, para 5.2(a).

[81] Consultation paper, para 5.20 and figure 5.1.

In the absence of market power, ie, if the provision of connection services were effectively competitive, we would expect that connection charges would be set at levels that are at least sufficient to recover incremental cost – but would not materially exceed this benchmark. However, the Authority's concerns about connection charges do not seem to be primarily focused on connection charges that are above incremental cost – these concerns arise even in situations in which connection charges remain below incremental cost but are increasing.

If the Authority's concern is that distributors possess market power to the extent that they are charging customers for connection services at levels that materially exceed the cost of providing the connection, then we agree that this would represent an economic problem that could merit an intervention. Two potential types of intervention that would address this problem could include:

- the mandating of contestability (or some form of contestability) so as to address the perceived market power of distributors; or
- the placing of limits on connection charges to prevent them exceeding some measure of actual or average connection costs, ie, similar to the Authority's 'allocation limits' proposed intervention option.

The Authority's proposed intervention differs substantially from these approaches, in particular:

- the proposed level of connection charges centres on the balance point, which does not reflect actual or average connection costs, but rather historical connection charges, as we describe in section 2.1.1; and
- the Authority neither consider the competitive impacts of its proposed intervention, nor does it discuss the relevance of the contestability of connection services in its problem identification and intervention assessment.

It appears to us that the Authority's proposed intervention is not primarily motivated by a desire to address concerns about market power by distributors in the provision of connection services.

In any case, connection services remain subject to the regulated revenue allowance determined by the Commission. It follows that distributors have no ability to recover more than their costs over the long run.

Although the regulated revenue allowance does not prevent the possibility that distributors may seek to raise connection charges above incremental cost, there is no reliable evidence that this is occurring. CEPA's comment about the possibility of this occurring appears to be a point of economic principle, rather than an empirical observation that supports a regulatory intervention.

If anything, the evidence accumulated by the Authority about connection charges appears to demonstrate a preponderance of evidence for precisely the opposite problem. That is, many distributors are able to set connection charges at levels that are much lower than the incremental cost of providing the services, which harms the development of competition in the provision of these services.

# 5. The Authority's economic framework for assessment

In this section we describe how the disconnect between the Authority's proposed intervention and its statutory requirements, as described in sections 3 and 4 above, can be traced to the lack of clear economic framework applied by the Authority.

We explain how the Authority's proposed intervention is an outworking of an assumption that increasing levels of reliance levels of connection charges is a policy problem that requires a solution, as opposed to being developed on a foundation of the economic principles consistent with its statutory objectives. The use of such an economic foundation would likely have resulted in proposed intervention that focused on an outcome of efficient connection pricing rather than an outcome of lower connection pricing.

We also demonstrate that a more conventional economic framework would result in an approach which seeks to promote connection charges that are market-based and cost-reflective. Such an approach would target connection charges be set at incremental connection costs, promoting allocative efficiency, while also promoting competition for the provision of these services, to the extent that connection services are contestable. This approach aligns with that taken by the Authority for transmission connection pricing.

We further explain the consequences of the lack of economic framework on the Authority's regulatory process.

## 5.1 The use of economic frameworks in regulatory design

At a high-level, an economic framework is the analytical structure and underlying concepts – founded in economic principles – used to link the identified market failure to the proposed intervention, while ensuring that the proposed intervention:

- remains proportionate to the materiality of the identified problem;
- is consistent with the stated objectives or requirements of the intervention or overarching regulatory regime; and
- does not create unintended consequences.

In our experience, sound regulatory practice involves the use of an economic framework to assess whether regulatory intervention is required and, if so, the form and structure of the proposed intervention. Put simply, the economic framework provides the underlying conceptual connection between the regulatory authority's objective, the market failure and the proposed intervention.

Without a sound economic framework it is difficult to establish a clear link between identified problems, proposed interventions and expected outcomes. It follows that, proposed regulatory intervention derived without a sound economic framework is at risk of producing recommendations that may be:

- inconsistent with the objectives of the regulatory framework; and/or
- disconnected from the market failure they were intended to address.

## 5.2 The Authority's economic framework

- The Authority's approach and proposed intervention appear to be based on an intent to reduce connection charges, rather than being developed to achieve its statutory objectives through the application of a well-founded economic framework.

- In our opinion, the Authority's is unable to provide empirical evidence to support its assertion of the identified need for intervention. In addition, the Authority does not apply a sound economic framework to identify an economically efficient connection charge or apply the hold-up problem in this context.
- Despite clear guidance to promote its statutory objectives of efficiency and competition, the Authority still lacks a well-reasoned framework for defining what economic efficiency means with respect to connection pricing and does not adequately consider the effects of competition in the provision of connection services.
- The effectiveness of the proposed obligation to connect is impacted by the absence of a well-reasoned economic framework by the Authority to determine its proposed efficient level of connection charges.

In this section we explain that the Authority lacks a sound economic framework, with which it can identify the need for regulatory intervention and, if required, justify the proposed intervention through the promotion of its statutory objectives.

### 5.2.1 Description of the Authority's economic framework

It is difficult to identify the economic framework applied by the Authority in the development of its proposed recommendations. The closest the Authority comes to describing an economic framework is a high-level description of the *'basic principles that ensure everyone benefits from the cost-spreading effects of connection growth'*, ie:[82]

> More efficient connection pricing supports more efficient allocation of costs. New connections should at least meet their own costs (over time), rather than expecting a subsidy from existing users. Pricing should also be non-discriminatory, so similar types of connections are treated the same, and new connections make a similar contribution to older connections.

From this statement, it appears that the Authority is focused on:

- avoiding cross-subsidies; and
- ensuring connection charges are equitable over time.

The process conducted by the Authority to arrive at the preferred option for connection pricing, as reflected in the structure of the report, proceeds as follows:

- state its statutory objectives, which includes an objective to promote efficiency;[83]
- describe the case for intervention, being that connection charges are inefficiently high, although what level is inefficiently high is never identified;[84]
- propose a range of intervention options;[85] and
- determine a preferred intervention option on the basis of a qualitative assessment of risk, cost and effectiveness.[86]

Rather than being founded in a clear economic framework, the Authority's approach is based on a clear intent to stall and/or reverse the trend that it observes towards higher reliance on connection charges to fund connection capital expenditure. That is, the Authority asserts that reducing up-front connection charges –

[82] Consultation paper, para 4.23.
[83] Consultation paper, section 3.
[84] Consultation paper, section 5.
[85] Consultation paper, section 6.
[86] Consultation paper, paras 6.35-6.40.

without reducing total connection costs or total consumer charges over time – is in the long-term interests of consumers.

#### Economic framework applied to the obligation to connect

It is clear that the Authority's intention for the obligation to connect is to increase the number of efficient connections, with the benefit of increasing the customer base over which shared network costs can be allocated and recovered.

Although there is nothing conceptually wrong with the Authority's framing of the obligation to connect, the shortcomings of the Authority's approach to deriving efficient connection pricing – which we describe below – have consequences for its proposed obligation to connect.

Put simply, the obligation to connect is intended to encourage efficient connections. However, the Authority is unclear as to the efficient level of connection charges, which impacts the effectiveness of the obligation to connect.

### 5.2.2 Critique of the Authority's economic framework

We observe that the economic framework and approach used by the Authority is not well-founded in economic principles. In particular, the Authority:

- lacks empirical evidence to support the foundation of its economic framework, being the delay in connections as a result of higher connection charges;
- does not apply a sound economic framework to identify an economically efficient connection charge; and
- misinterprets and misapplies the economic principle of the hold-up problem in justifying its position.

We present further details of these comments, in turn below.

#### The Authority does not substantiate its position with empirical evidence

We explain in section 3.2.3 that the Authority provides little direct evidence of connections that are delayed or prevented by the magnitude of connection charges. In particular, the Authority:

- states that there are no data regarding deferred or delayed connections;[87] while
- provides some examples of submissions from connection applications that demonstrate dissatisfaction with the level of connection charges,[88] noting that these access seekers often proceeded with connection.[89]

These observations by the Authority indicate that current levels of connection pricing are often not sufficiently high as to exceed the willingness-to-pay of prospective connection applicants.

For a price to be inefficiently high, there must be at least one customer that:

- does not consume the good or service, ie, their willingness-to-pay is below the applicable connection charge; and
- has willingness-to-pay that exceeds the incremental cost of providing the good or service.

[87] Consultation paper, para 5.33.

[88] Consultation paper, paras 5.34-5.38.

[89] Consultation paper, para 4.10.

However, the Authority does not clearly articulate its consideration of the relative comparison of incremental connection costs, connection charges and customer willingness-to-pay when maintaining its assertion that connection charges are inefficiently high and causing inefficient under-connection to the distribution network.

More broadly, isolated instances of connection applicants being inefficiently dissuaded from proceeding with connection does not establish a clear policy case for changes to connection pricing. The Authority has not presented clear evidence of a substantial problem requiring a policy response.

#### The Authority does not identify an efficient connection price level

The derivation of an economically efficient connection charge, or efficient range of charges, is fundamental to the Authority's proposed intervention in that it defines:

- when intervention will be required, ie, when observed connection charges depart from this efficient level; and
- the price level for which distributors will be required to offer in response to an intervention.

However, as we explain at section 3.1, the Authority does not have a well-founded framework for describing what efficient connections charges look like.

In reports previously submitted to the Authority, we have elaborated on these concerns. In particular, we have explained that connection charges set below the incremental connection cost in the manner proposed by the Authority may give rise to two forms of inefficiency, ie:[90]

- inefficient connection decision-making by connection applicants, who may decide to connect when it is not efficient for them to do so, because connection pricing below the incremental connection cost artificially lowers their risk profile; and associated with this
- inefficient business decision-making by connection applicants, who may proceed with an investment that delivers profits only because of the transfer of risk onto distributors and other electricity customers.

In addition, Axiom Economics commented on the Authority's proposed use of 'reliance limits' as an intervention option that:[91]

> There is no basis in economic theory to believe that using [the proposed approach to calculate reliance limits] will produce an efficient benchmark. The primary merit of these numbers seems to be their mere existence.

#### The Authority misinterprets the economic principles of the hold-up problem

A main component of the Authority's argument is a hypothesised 'hold up' problem, in which connections are deterred when distributors can engage in discriminatory pricing to all surplus value from the connecting customer.[92]

However, we explain in section 3.2.1 that this hold-up problem characterised by the Authority is not consistent with an economic understanding of the hold-up problem, in which the extraction of all surplus value takes place after the investment in a sunk asset.

### 5.2.3 The Authority's position does not align with its statutory objectives

In our opinion, the application of a sound economic framework in this process would likely have resulted in a focus on the assessment of a connection charge (or range of connection charges) that is efficient and the

[90] Our December 2024 report, section 4.2.2.

[91] Axiom Economics, *Economic review of problem definition – a report for Vector*, December 2024, p 20.

[92] Consultation paper, paras 5.15-5.18 and 5.32.

role that competition for the provision connection services could play in reducing connection costs – and thereby connection charges – over time.

In other words, the Authority's starting point is to reduce the reliance level, rather than to ensure that connection charges are set at an efficient level both in the near-term and over time. Further, the Authority demonstrates little concern at the prospect that many connection charges may be too low, from the perspective of promoting economic efficiency and competition.

It follows that the Authority does not appear to have formulated an economic framework around its statutory objectives to apply in this context. The Authority's proposed intervention has not been conceived or designed to promote these statutory objectives and is therefore inconsistent with these statutory objectives, as we explain in sections 3 and 4 above. This misalignment with its statutory objectives is illustrated by the lack of a sound economic framework that the Authority applies in this context.

Instead, it appears that the Authority has pursued an alternate objective to those specified in its statutory objective. Specifically, the Authority's approach and proposed intervention options reveal consideration of equity as its fundamental objective in this context, rather than its statutory objectives of efficiency and competition. That is, we observe that the Authority:

- promotes the balance point principle as an efficient outcome, whereas the balance point is the price level that maintains a particular view of equity as between new and existing customers and not founded in the principle of economic efficiency – as we explain in section 3.2.1; and
- discounts the ability for price-discrimination to improve allocative efficiency in this context.[93]

## 5.3 The application of a conventional economic framework

In this section we set out a high-level economic framework that the Authority could have applied in this context.

We explain in section 5.1 that a sound economic framework links the identified market failure to the proposed intervention, where this proposed intervention is consistent with the overarching objectives of the regulatory framework. By way of reminder, in the context of connection pricing, we explain in section 1.1 that the Authority has two relevant statutory objectives, ie, to promote economic efficiency and to promote competition.

Competition drives efficiency,[94] with market-based outcomes, ie, those obtained without regulatory intervention, the first-best outcome when compared to administrative-based outcomes, ie, those obtained through regulatory intervention.[95] As such, a sound economic framework should promote connection charges that are market-based.

Economic efficiency includes, amongst other dimensions, the allocation of resources to their highest value use, ie, allocative efficiency.[96] Allocative efficiency is encouraged by ensuring prices for goods and services are set to reflect the real resource cost of supply, ie, marginal costs, which provides incentives for efficient use of and investment in these goods and services.[97] As such, a sound economic framework should promote connection charges that are cost-reflective.

[93] Consultation paper, paras 4.23 and 5.13(b) and pp 22-23.

[94] See: section 4.1.

[95] See, for example: Kahn, A E, *The economics of regulation: Principles and institutions*, Wiley, United Kingdom, 1988, pp 12/I, 17/I-18/I, 29/I-30/I, 183/I, 49/II-50/II and 189/II.

[96] See: section 1.1.

[97] See, for example: Pass, C, Lowes B, and Davies L, *Economics (Collins Internet-Linked Dictionary of)*, HarperCollins Publishing, June 2014, p 15 of 32 in 'A' section; and Morgan, W, Katz, M, and Rosen, H, *Microeconomics*, McGraw-Hill Education, United Kingdom, 2006, p 424.

Connection charges set at incremental connection costs are both market-based, ie, those that would occur in workably competitive markets; and cost-reflective, ie, reflect marginal or incremental costs. We explain in section 5.3 that economic principles suggest that prices that reflect incremental costs are economically efficient, with this approach standard in many regulatory settings.

In fact, the Authority itself has applied this approach in the pricing of transmission services in New Zealand, where the Authority's guidelines explain that the purpose of the connection charge is:[98]

> …to recover the cost of the connection investments that connect that designated transmission customer's assets to the interconnected grid.

In previous consultations, the Authority has described this approach to connection pricing as, variously:[99]

- 'market-like', in that it reflects the price structures that would be expected under a workably competitive market;
- 'service-based', as the costs of the service are recovered from the party that receives the service;
- 'cost-reflective', as the charges reflect the costs of the service; and
- efficient, by virtue of the service-based and cost-reflective nature of this approach.[100]

Further, in regards to transmission network connection pricing, the Authority has stated that:[101]

> …investment in connection assets typically exhibit large economies of scale. The efficient approach in this case is to charge the full cost of connection assets…

In light of the substantial similarities between the two services, distribution network connections are also likely to display economies of scale, as supported by the Authority.[102] It follows that the Authority has previously stated that connection pricing at incremental cost is efficient in the context of electricity network connections.

When setting out a conceptual framework for transmission pricing, the Authority has previously highlighted a 'hierarchy' of charges, in which it expresses its preference order for various pricing approaches. The purpose of this hierarchy reflects the Authority's focus on the efficiency of the electricity industry.[103] We show the Authority's representation of this hierarchy in figure 5.1 below, in which the Authority states that it prefers (from most to least desirable):[104]

- market and 'market-like' charges, which either result from the interaction of buyers and sellers in workably competitive markets, or mimic such charges;
- exacerbators pay charges, which require charges on a party whose action causes costs to be incurred;
- beneficiaries pay charges, which levy charges on a party (or parties) that derive benefits from costs that are incurred; or
- administrative charges, which include any methodologies that are not captured in one of the above approaches.

[98] Electricity Authority, *Transmission pricing methodology*, 2020 guidelines, 10 June 2020, para iii.

[99] Electricity Authority, *Transmission pricing methodology: issues and proposal*, Second issues paper, 17 May 2016, para 60.

[100] Electricity Authority, *Transmission pricing methodology: issues and proposal*, Second issues paper, 17 May 2016, para 5.33.

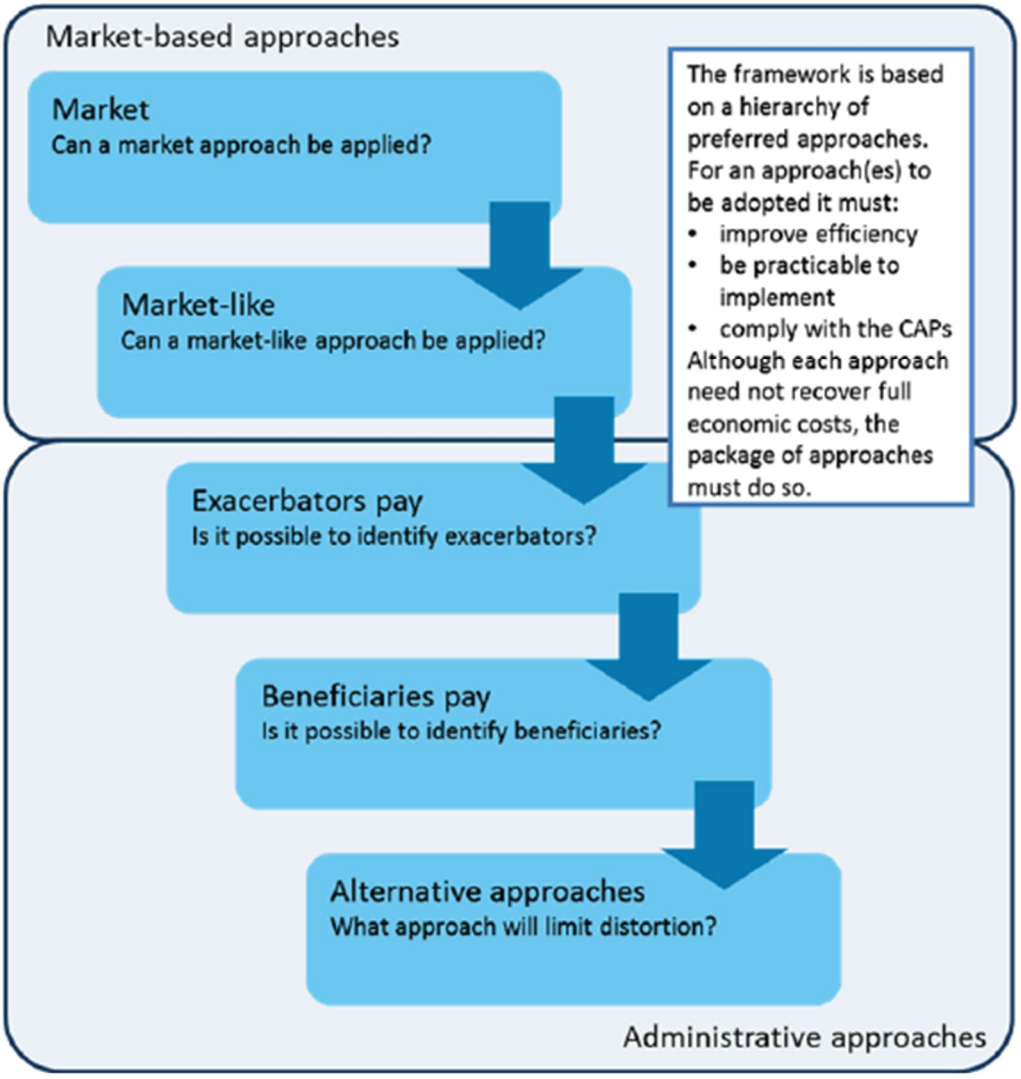
[101] Electricity Authority, *Transmission pricing methodology: issues and proposal*, Second issues paper, 17 May 2016, para 5.29.

[102] Consultation paper, footnote 65, p 52.

[103] Electricity Authority, *Transmission pricing methodology: issues and proposal*, Second issues paper, 17 May 2016, para 4.20.

[104] Electricity Authority, *Transmission pricing methodology: issues and proposal*, Second issues paper, 17 May 2016, paras 4.26-4.41.

Figure 5.1: Authority's hierarchy of charging approaches for transmission pricing




*Source:* Electricity Authority, *Transmission pricing methodology: issues and proposal,* Second issues paper, 17 May 2016, figure 9.

The description above of the Authority's approach to transmission connection pricing contrasts with the Authority's proposed approach for distribution connection pricing. Consistent with our understanding and framing of the issues arising for distribution connection pricing, charges that are based on incremental cost reflect 'exacerbators pay' charges and have properties that are preferable (in terms of their contribution to economic efficiency) to charges that are below incremental cost and that are motivated by broader equity concerns.

The rationale for this difference in the Authority's approach over time is unclear since, despite the distinction between transmission and distribution services, the underlying economic principles are reasonably similar for connection to the transmission and distribution networks.

## 5.4 Consequences of lack of framework on regulatory process

- There are workability concerns regarding the application of the Authority's preferred targeted intervention option.
- It is unclear how the Authority will determine when connection charges are deemed to be inefficiently high as to warrant targeted intervention.
- In the event of targeted intervention, it is unclear as to how distributors will be expected to calculate the balance point, given the practical challenges of deriving an estimate of the balance point.

We explain in section 2.1 that the Authority's preferred option is the 'targeted intervention', which is centred around the balance point principle, ie:[105]

> …is designed to identify and address instances where connection charges are inefficiently increasing due to a distributor allocating more shared network costs to new connections – ie, where connection pricing is above the balance point.

The process by which the Authority will implement this targeted intervention includes three steps, ie:[106]

- an ongoing scanning process of available information to identify where connection charges are inefficiently high, with this information including connection pricing methodology documents, charge reconciliations and information disclosures;[107]
- a deeper inquiry into identified instances of high connection charges, to determine whether the initial observations were explained by factors other than pricing above the balance point; and
- a direction to a distributor to change its connection pricing where warranted, with this targeted intervention requiring a distributor to update its connection pricing in accordance with the balance point principle.

The Authority describes the focus of the initial scanning process as:[108]

> …to identify distributors whose pricing requires new connections to pay a materially higher contribution to shared network costs than comparable existing connections – ie, the pricing does not align with the proposed connection charge balance point principle

The effect of the targeted intervention is that the distributor receives a direction from the Authority to amend its connection pricing to comply with the balance point principle.[109]

The proposed targeted intervention is not, itself, a methodology for deriving and implementing efficient connection charges, but simply a threat that the Authority will intervene, without a clear statement of the framework by which it will undertake that intervention. In particular, the workability of this option is uncertain with regards to:

- the threshold for which a targeted intervention will be triggered; and
- in the event of a targeted intervention, the practical derivation of the balance point, for which connection charges must be based.

[105] Consultation paper, para 7.2.
[106] Consultation paper, para 7.6.
[107] Consultation paper, para 7.10.
[108] Consultation paper, para 7.13.
[109] Consultation paper, para 7.18(g).

The Authority describes the process by which targeted intervention will be triggered as in response to '*scanning available information to identify where there may be inefficiently high up-front charges*'.[110]

This process will require the derivation of threshold connection charges, above which the Authority will deem to be inefficiently high. However, as we explain in section 5.2, the Authority lacks a sound economic framework and so has not provided clarity as to what it deems to be inefficient in this context, outside of the esoteric concept of the balance point.

Accordingly, the Authority has not been able to provide guidance as to what they deem to be these inefficiently high up-front connection charges for which a targeted intervention will be required.

Relatedly, the balance point concept is not well-defined, which creates another workability concern for the Authority's proposed intervention. The Authority describes the balance point as being where:[111]

> …new connections contribute to sunk and shared costs at a level that is commensurate with similar existing connections.

However, the balance point is conceptually difficult to derive and there is little to no consideration of this by the Authority to date. In box 5.1 below we explain some of the challenges associated with implementing the balance point concept. As we explain, these challenges have little to do with economic efficiency as sought by the Authority's statutory objective.

### Box 5.1: Challenges associated with implementing the balance point concept

The balance point is motivated by the Authority on the basis that current or future generations of access seekers should be treated on a similar basis to past generations. This is sought to be achieved by ensuring that new connections contribute to sunk and shared costs at a level that is commensurate with similar existing connections.

We foresee substantial difficulties with implementing this concept. In particular, it is unclear:

- how far back in history one would go to pursue this concept of equal treatment – given that the basis for connection charges has changed over time it would likely make a significant difference as to whether the balance point reflected five years of history, 10 years or 20 years, noting that many residential customers may have connected even further in the past; and
- what commensurate contributions would look like and how these would be measured, including the extent to which one would:
  - require the same contributions from each customer or consider these contributions to be proportionate to some measure of consumption or customer size;
  - consider contributions made by existing connections as 'net of' costs that were incurred by the distributor to facilitate the connection and therefore undertake detailed consideration of historical connections costs; and/or
  - take into account changing regulatory and/or policy settings that have impacted upon connection pricing and customer contributions made in the past.

The answers to these questions are not easy to determine. Further, the key consideration upon which the answers depend is not concerned primarily with economic efficiency but is determined by what concept of equity is sought in the implementation of the balance point concept.

[110] Consultation paper, para 7.6(a).

[111] Consultation paper, para 5.6(b).

## 5.5 Economic analysis not supported by cost benefit analysis

We explain in section 2.1.2 that – in determining its preferred option for regulatory intervention – the Authority conducts only a high-level, qualitative assessment of costs as part of a multi-criteria analysis.

Typically, the identification of a preferred option is accompanied by a supporting evaluation of the relative costs and benefits of a short-list of proposed potential options.

In our opinion, this is not consistent with sound regulatory practice since, notwithstanding the difficulties in quantifying the costs of regulatory intervention, it is uncommon for a regulatory authority to first select the proposed approach and then subsequently consider the costs. Rather, in our experience, it is more common for regulatory authorities to conduct some form of robust cost assessment prior to, or alongside, the selection of the preferred intervention or approach. This reflects that a cost benefit analysis is a fundamental part of policy analysis, not a final step in the process after all other elements are complete.

However, a robust assessment of the costs and benefits of proposed options requires a clear articulation of the economic framework with which this assessment will take place. As such, the absence of such a quantitative analysis reveals that the Authority has not tied down its conceptual approach to promoting its statutory objectives of efficiency and competition.

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# New Zealand electricity distributors' upfront connection charges

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Prepared for Vector Limited

2 February 2026

Contents



Figures and Tables

# Executive summary

Vector Limited (Vector) has requested Oxera Consulting LLP (Oxera) to review and respond to the consultation launched by the New Zealand Electricity Authority (EA) in November 2025 in relation to the load upfront connection charges and distributor obligations to connect (the EA Consultation).[1] Vector has asked for Oxera's assessment, from an economic and policy perspective, of both the *form* of the EA proposals (based on our international experience) and their *substance*.

The Oxera team that has authored this report includes experts in utility regulation, competition economics, energy economics and financial economics. With extensive experience in the New Zealand regulatory markets, going back to the early 2000s, Oxera has provided advisory services to the New Zealand Commerce Commission (NZCC) and to industry stakeholders, in relation to key regulatory methodologies for the energy and other regulated sectors.

The Oxera experts that have supervised this work include:

- Sahar Shamsi, CFA, Oxera Partner—an expert in financial economics, energy markets, and regulated utilities, with over 15 years of experience. Sahar has significant international experience in energy network regulation, and has submitted expert evidence in multiple New Zealand electricity and gas Input Methodologies reviews and default price paths (DPPs) since 2014;
- Elizaveta Kovaleva, CFA, Oxera Managing Consultant—a specialist in financial economics for regulated utilities, with ten years of experience. Elizaveta's expertise is in financial and regulatory issues, with particular focus on energy network regulation. She has been developing expert evidence for the electricity and gas networks in New Zealand since 2022;
- Oxera Associate Professor Julian Franks, Fellow of the British Academy (FBA) and Emeritus Professor of Finance at London Business School, has extensive experience in regulated sectors, including advising the New Zealand Commerce Commission;
- Dr Gunnar Niels, Oxera Managing Partner—an expert in competition and regulatory economics with over 30 years of

[1] Electricity Authority (2025), 'Reducing barriers for new connections: up-front charges and distributor obligations. Consultation paper', 17 November, accessed 15 December 2025. Hereafter, the 'EA Consultation' for referencing.

experience in the field, who has co-authored the textbook *Economics for Competition Lawyers*, and has testifying experience in many jurisdictions including New Zealand.

Through the proposals in its Consultation, the EA is seeking to address its concerns about the upfront connection charges by New Zealand electricity distribution businesses (EDBs or 'distributors'), which the EA considers may be excessively high and which have the potential to rise over time.[2] It is concerned that excessive upfront costs could deter business growth, new infrastructure, housing development and electrification in general. More broadly, it is seeking to improve the 'efficiency of connection pricing' for connections to the distribution network.[3]

The EA started to address its concerns with 'fast-track measures', introduced as part of a decision published in July 2025 (the July Decision).[4] These measures are intended to bridge the period until the full reform of new-connection pricing, planned for the 2030 price control period. Their focus is mainly on enhancing transparency, providing data for further reform, and addressing the 'first-mover' and 'last-straw' disadvantage problems.[5]

However, the EA considers that these fast-track measures do not prevent or unwind (what it considers to be) a trend towards higher connection charges. Therefore, in its current Consultation, it is proposing additional interim restraints, ahead of the full reform towards 2030—it is this Consultation that is assessed in this report.

The EA is consulting on a **targeted intervention** proposal, under which, from mid-2026 to 1 April 2030, when the full reform is expected to enter into force (the period of interim restraints),[6] it would screen for distributors that are likely to require intervention, assess their charging practices and, if the assessment confirms the EA's concerns, require selected distributors to update their charging policies according to the 'balance point' principle (or, in particular, such that the upfront connection charges do not exceed the balance point).

[2] EA Consultation, p. 2.
[3] EA Consultation, para. 4.24.
[4] Electricity Authority (2025), 'Distribution connection pricing Code amendment – Decision', 18 July, para. 5.16. Hereafter the 'July Decision' for referencing.
[5] The first-mover disadvantage refers to the issue where a user has to pay for infrastructure that will then be used by other users. The last-straw disadvantage refers to the pricing for the user that triggered the need for network capacity upgrades.
[6] EA Consultation, paras 7.24 and 7.27.

This **balance-point principle** being introduced by the EA refers to a proposed charging framework where upfront connection charges are:[7]

[…] set at a level such that the contribution to shared network costs from new connections is commensurate with the contribution from existing connections.

The principle allows a distributor to recover from the user all incremental costs caused by that user and a proportion of shared network costs, as long as all users (within one type), including new and existing ones, contribute to the shared network costs in a similar way.

It is our understanding that the incremental costs are defined to include both the (direct) connection extension costs, to enable the connection, as well as the (indirect) network reinforcement costs, to expand the network capacity. It is also our understanding that the principle itself does not prevent distributors from choosing to recover these costs via upfront connection charges or ongoing charges (and hence have high upfront charges). Nonetheless, in its Consultation, the EA has highlighted concerns about the upward trend in upfront connection charging of selected distributors (specifically by Vector),[8] and therefore, it appears that its intent behind the proposed reform is for selected distributors to reduce their level of (and reliance on) upfront connection charges. Note that there is an inconsistency between the EA's concept of the balance-point, which may in principle allow for high upfront connection charges, and the EA's intent, which appears to be to keep the upfront connection charges low in practice. Accordingly, we consider the challenges applying the principle and in keeping upfront connection charges low.

The practical implication of the balance-point principle is that from the application of the interim restraints in 2026 onwards, distributors are not meant to change the 'depth' or 'shallowness' of their charging methodology, such that (new) users will contribute similarly to the shared network costs over time.

Specifically, if the distributor has:

- a 'deep' methodology, i.e. it allocates most of the costs to be recovered via upfront connection charges, it needs to continue doing so;

[7] EA Consultation, para. 7.24 (a).
[8] EA Consultation, para. 5.20.

- a ‘shallow’ methodology, i.e. it allocates only the direct incremental costs of extending a connection to the upfront connection charge, it needs to continue doing so.

[✂[9,10]]

In the context of the chronology set out above, there are some internal inconsistencies in the EA’s proposals.

- On the one hand, it appears that the EA is concerned about Vector’s move over time from a relatively shallow charging regime to a deeper one—as evidenced by the EA’s focus in the Consultation on a higher level of upfront connection charging over time. Therefore, the practical implication is that the EA would want Vector to move from its current practice to a shallow regime.
- On the other hand, a literal interpretation of the balance-point principle could also support that, given that Vector now has a ‘deep’ regime, persisting with this regime would be consistent with the EA’s principle—i.e. deep should remain deep and shallow should remain shallow, in line with inter-generational equity.

Accordingly, there appears to be a mismatch between the EA’s intent and its design of the balance-point principle. For the purposes of the analysis in this report, we assume that—notwithstanding this ambiguity—the EA intends that Vector should move to a shallower regime going forwards, and then persist with that shallow regime.

As described above, the EA’s proposed balance-point principle constrains Vector in its choice of the connection charging methodology.

In this report, we have assessed the form and the substance of the EA Consultation, and outline our key observations below.

[9] [✂]
[10] [✂]

### The form of the EA Consultation—assessment against international practices

To assess the form of the EA Consultation, we have compared it with several other New Zealand and international market reviews of potential market failures and proposed remedies, namely:

- New Zealand Commerce Commission (NZCC) market studies;
- the UK Competition and Markets Authority (CMA) market investigations;
- European Commission state aid assessments;
- European and UK excessive pricing reviews.

While the EA Consultation has similarities with the processes mentioned above, we observe the following differences from the good regulatory practice that we have identified in the international precedent. We consider that these differences have an impact on the effectiveness of the EA Consultation in achieving its objectives.

- The EA has combined the problem statement and its proposed regulatory intervention into a single consultation, limiting the level of detail in its assessment of each of the topics. The EA has also provided limited consultation opportunities (one for fast-track measures and one for the targeted intervention).
- There is limited (empirical) analysis underpinning the theory of harm.
- The EA undertakes limited assessment of the proportionality and effectiveness of the proposed remedy. The (illustrative) impact assessment performed by the EA does not robustly measure the expected impact that the targeted intervention would have on networks.[11]
- The proposed targeted intervention remedy is selective by design.

We further observe the following additional limitations of the form of the EA Consultation.

[11] The EA's (illustrative) impact assessment suggests, by design, that connection charges are lower if they are assumed to be lower, and that spreading the costs currently borne by a small number of new connections (via connection charges) across all existing connections (via ongoing charges) reduces the per-customer impact of those costs. This conclusion holds by construct, and does not balance trade-offs in policy objectives to robustly measure the impact that the targeted intervention would have—e.g. in relation to network financeability, system efficiency etc.

- The EA's **empirical support** for the case for intervention is **limited**. In particular, the EA builds its case on anecdotal evidence of the perception that connection charges are high, indirect indicators of deterred or delayed connection activity, and a rising trend in 'reliance levels' (i.e. a portion of growth capital expenditure (CAPEX) directly funded through upfront connection charges).[12] We find that the rising trend in reliance levels is insufficient evidence of incompliance with the balance-point principle, and that further empirical investigation is essential to justify intervention. The EA acknowledges limitations of its analysis,[13] but introduces its proposed reforms regardless.
- The **targeted intervention** is **premature** from a policy perspective. The EA recognises that fully reforming load connection charges is premature due to the limited available data and potential distortive effects on the price-quality path regulation conducted by the NZCC. We consider that the same challenges apply to the proposed targeted intervention, as the data required to check if a given distributor is in breach of the balance-point principle has not been collected and analysed by the EA, and any intervention would be potentially distortive to the NZCC's regulation. The proposed targeted intervention measure is therefore not sufficiently justified.
- The **EA does not use standard cost-allocation terms.** It does not specify how its cost standard definitions, such as the balance-point principle, map against standard measures of cost allocation, such as long-run incremental costs (LRIC) or fully allocated costs (FAC); neither does it guide distributors on best practices of cost allocation, which need to be undertaken based on a consistent methodology of identifying cost drivers. The EA plans to intervene ex post when it has concerns that its balance-point principle may not have been met, without giving clear ex ante regulatory guidance on how costs should be allocated. This does not provide sufficient clarity to distributors about how to mitigate the risk and costs of the EA's targeted interventions, and hence increases regulatory risks.

**The substance of the EA Consultation—implementation challenges**

Having reviewed the EA's Consultation, the July Decision, and reports by the EA's advisers, CEPA, supporting the EA's publications, we remain

[12] EA Consultation, section 5. Growth CAPEX consists of the consumer connection and system growth CAPEX.
[13] EA Consultation, para. 5.40 (f).

unsure about how the EA plans to operationalise aspects of the balance-point principle, especially in the context of demand uncertainty. In particular, we highlight two ambiguities in the EA's description:

- it remains unclear how the EA would assess whether the contribution of charges to the shared network costs is '**commensurate**', to ensure that the balance-point principle is met—'commensurate' contribution could mean equal dollar amounts, equal percentages (of shared network costs), or applying the same cost-allocation methodology based on cost drivers;
- it is also unclear whether 'similar contributions over the lifetime of the customer', within the definition of the balance-point principle, is intended as a **static test** (assessed only at the time of quoting the connection charge) or a **dynamic one** (requiring recalibration of ongoing charges as customers' demand changes).

Each interpretation would have significantly different implications for networks, and, without clarity, productive engagement with the proposal is challenging, and distributors are exposed to enhanced regulatory risk.

To assess the balance-point principle, we have modelled it in an illustrative way using a few configurations. Our takeaways from the modelling exercise are as follows.

- The most practical interpretation of the '**commensurate**' contribution to the shared network costs among users is to say that the proportion of the shared costs that the new user should cover over the lifetime of its connection should equal the average proportion of the network that it benefits from over the years. For example, if all users use the same capacity and there are two of them for two years and just one in the third year, the average contribution for the user remaining until the end of the period over three years that would reflect its usage of the network is (50% + 50% + 100%)/3 = 67%.
- The **dynamic approach** to the balance-point principle (as described above) requires continuous rebalancing of the ongoing charges, to ensure that the principle holds based on cost and demand outturns, which are likely to be different from forecasts. Our modelling finds that this rebalancing is impossible to implement unless each user is treated individually rather than in consumer groups. However, such individual

treatment is **impractical** (and would lead to significant administrative burden). It would cause **volatility** in individual ongoing charges and **discrepancy** between users in the level of the individual charges.

- At the same time, under a **static approach** to the balance-point principle (as described above), the users would not ultimately pay the proportion of the shared network costs over the lifetime of their connections that would reflect their usage of the network, since demand and cost forecasts inevitably diverge from actual outcomes, not least due to the significant (but uncertain pace of) growth in electricity demand that will tend to accompany New Zealand's delivery of its net zero targets. Therefore, we consider that the static approach would tend to be **ineffective** in fully achieving (ex post) equity of treatment for the users, which is presumably the EA's aim. In other words, this approach would not appropriately account for demand uncertainty.
- For the balance-point principle to be effective, it must be able to distinguish accurately between incremental and shared network costs. The choice about how costs are classified governs whether, and to what extent, some users are perceived to subsidise the others.

**The substance of the EA Consultation—unintended consequences**

As noted above, we understand that Vector has made its load connection charging methodology deeper, in the context of the greater demand and network capacity requirements. While it remains unclear how the EA expects the balance-point principle to be implemented in practice, the EA proposal appears to effectively impose a cap on connection charges. This constraint would limit Vector's ability to adjust the depth of its charging regime if the EA enforces it through a targeted intervention.

Deep, shallow and mixed connection charging regimes are widely used internationally, which by itself provides evidence that each of them has its pros and cons, and that context, path-dependencies and other characteristics of a specific energy market are important in choosing the most appropriate regime. For example, the key benefits of shallow regimes are simplicity and encouragement to connect. However, given the lower cost-reflectivity of a shallow regime, it typically does not provide locational price signals for efficient network development.

In contrast, deep regimes encourage efficient network development due to their cost-reflectivity, imply lower cost-recovery risk for distributors—

as they provide distributors with more cash flows upfront—but tend to create greater barriers to connect for users, and greater administrative burden. In markets facing strong connection demand (and strong demand uncertainty), encouraging efficient network development tends to become increasingly important as capital investment needs grow to match (anticipated) demand. At the same time, sufficient levels of upfront cash flows are needed for funding those (anticipatory) investments. These considerations are relevant for the New Zealand market at the moment: official New Zealand government forecasts show increasing electricity demand, and high levels of uncertainty as regards future demand pathways, to 2050.[14]

Below, we consider some detrimental effects that a shallow regime may have on Vector and customers that the EA needs to account for when assessing its proposed targeted intervention.

- [✂] moving [✂] towards a shallower regime, [✂] would tend to be a restatement of the cross-subsidy between existing users and new connections, to the extent that there was such a cross-subsidy, originally.
- A deeper regime, by definition, means that a greater proportion of costs is recovered upfront, which has at least three implications:
  - lower cost and demand forecast risk and hence lower bills volatility, which is beneficial for customers;
  - support of the distributor's financeability. Mitigation of pressures on financeability will tend to benefit network users to the extent that it allows distributors to finance investments in network reliability;
  - avoidance of the increased risks and upward pressure on the cost of capital due to revenue deferral.
- Moving from a deeper to a shallower regime may affect competition in the market for delivering connection extensions, where Vector competes with other contractors at the time of connection. Relative to the status quo, if Vector reduces the extent of its upfront charges, it will be better placed to compete with third parties, as it will have lower prices for new connections than previously.[15]

[14] Ministry of Business, Innovation & Employment (2024), 'Electricity Demand and Generation Scenarios: Results summary', July, Figure 1 and page 8.
[15] We note that it may not be feasible for third parties to defer recovery of connection charges, given that they do not have an ongoing relationship for ongoing charges with electricity network users, as Vector does.

Finally, we discuss how the EA has not considered all the risks introduced by the targeted intervention, as its impact assessment is high-level and lacks robust quantitative analysis, including any detailed assessment of administrative and implementation costs. As a result, the EA does not reliably demonstrate that the positive outcomes outweigh the risks and costs introduced through its proposed intervention.

**Conclusions**

To summarise, the takeaways from our review of the form and the substance of the EA Consultation are as follows.

While the EA Consultation has similarities with comparable international processes that we have assessed, we observe that the Consultation differs from the good regulatory practice we have identified in international precedent with respect to aspects of its timeframe, clarity of the theory of harm and policy objectives, and assessment of the proposed remedy.

We also find that: first, the EA's case for intervention is not robustly underpinned by empirical analysis; second, the proposed targeted intervention regime is being introduced prematurely from a policy perspective, not least as the EA itself acknowledges a limited evidence base is inhibiting its full reform agenda being implemented at this stage; and, third, the EA's guidance on cost allocation is insufficient to provide clarity and guidance to networks, which are seeking to mitigate the risks and costs of an ex post intervention.

Practically, there are also significant implementation challenges as regards the balance-point methodology the EA has proposed, especially in the context of demand and cost uncertainty. It is unclear whether the balance-point principle is intended to be applied in a static (ex ante) or dynamic (ex post) way. We find that the principle would be ineffective at achieving the EA's objectives of each user contributing similarly to the shared cost if it is applied in a static way (due to forecast uncertainty), and would be impractical if it is applied in a dynamic way.

Finally, we highlight that there are pros and cons of deep and shallow regimes, and the policy and regulatory context in which they are set is important. As a result, the EA's proposed constraints on distributors changing between shallow and deep regimes may not be optimal in the current circumstances, given the increasing demand. We find that a shallow regime would be associated with greater forecast risk and bills volatility, potential financeability challenges and higher risks of revenue deferrals, while a deep regime would be more supportive of networks'

investment needs in the current New Zealand context. Moreover, any such change to the charging regime needs to be coordinated with the NZCC's price-quality path regulation, to ensure the costs that are not covered by upfront connection charges are covered by revenue allowances, and that the allowed returns of networks reflect the increased risk exposure the EA's proposed measure would introduce.

# 1 Introduction

1.1 Vector Limited (Vector) has requested Oxera Consulting LLP (Oxera) to review and respond to the consultation by the New Zealand Electricity Authority (EA) in relation to the load upfront connection charges and distributor obligations to connect (the EA Consultation).[16]

1.2 The EA is proposing 'a targeted intervention framework that involves identifying where there are excessively high up-front charges and engaging with those distributors to understand what is driving high prices. If warranted, [the EA] would direct those distributors to reduce their connection charges' in line with the 'balance point principle' proposed by the EA.[17]

1.3 In parallel, this Consultation proposes to introduce 'explicit obligations for distributors to offer and maintain connections, and connection upgrades'.[18] The Consultation is undertaken as part of the EA's broader reform initiative to improve the 'efficiency of connection pricing' for load connection to distributors.[19] The initiative has started from the 'Distribution connection pricing proposed Code amendment' consultation in October 2024, which was followed by a decision in July 2025 (the 'July Decision'), directing the implementation in April 2026 and April 2027 of the 'fast-track measures'.[20] These measures are being introduced in anticipation of the broader reform to be undertaken for the upcoming price control period starting in April 2030 (referred to as the 'full reform'). However, as the EA would like to address the concerns it has identified with the upfront connection charges before April 2030, it is considering introducing interim restraints on charges for new connections and connection upgrades, on which it is consulting as part of the EA Consultation issued in November 2025. These interim restraints are assessed in this report.

1.4 The overall reform—the fast-track measures, plus the interim restraints and the full reform—appears to be an ad hoc initiative by the EA, triggered because, according to the EA: 'Excessive up-

[16] EA Consultation.
[17] EA Consultation, p. 2 and para. 5.40. (c).
[18] EA Consultation, p. 3.
[19] July Decision, para. 5.16.
[20] July Decision, para. 3.1.

front costs could deter business growth, new infrastructure, housing development and electrification in general.'[21] It does not appear to constitute a standard process of market and/or regulatory review that the EA routinely undertakes. Indeed, the effects of its proposed reforms overlap with—and may undo the effects of—the Input Methodologies review recently undertaken by the New Zealand Commerce Commission (NZCC).[22]

1.5 Accordingly, in this report, we consider the *form* of the EA's consultation process, with respect to regulatory good practice. This includes looking at whether its theories of harm are well-developed, whether its evidence base is well-formed, whether its remedies are proportionate and well-targeted, and whether its proposals will have the intended effect within the context of the New Zealand electricity distribution sector and its wider regulation.

1.6 In addition to commenting on the form of this Consultation, we engage with the *substance* of the EA's proposed interim restraints on the connection charges, and assess the potential consequences of these restraints for the distributor. We highlight the implications for cash flows and the financeability of the sector, as well as its risks.

1.7 The report is structured as follows.

- We outline the key definitions used by the EA and the key aspects of its July 2025 fast-track measures, as well as the interim restraints proposal being considered as part of the EA Consultation (section 2).
- We discuss regulatory and policy best practice for similar processes, drawing on international precedent. This is to contextualise where the EA appears to have limitations in its methodological approach and the evidence base supporting the proposed interim restraints (section 3).
- We consider some of the risks and unintended consequences that may accompany the implementation of the EA's proposal, as currently outlined in its Consultation (section 4), before setting out our conclusions in section 5.

[21] EA Consultation, p. 2.
[22] New Zealand Commerce Commission (2025), '2025 reset of the electricity default price-quality path', accessed 15 December 2025.

# 2 The EA's proposals

2.1 In this section, to set out the context for the rest of the report, we summarise our understanding of the EA's proposals in relation to the upfront connection charges and distributors' obligation to connect. We start by outlining the relevant cost measure definitions used by the EA (section 2.1), before summarising the measures implemented by the EA in July 2025 (section 2.2). Finally, we outline the EA's proposals for an interim restraint on connection charges that it is currently consulting on (section 2.3).

## 2.1 Relevant cost measure definitions in the EA Consultation

2.2 Below, we explain the key concepts and definitions that are relevant to the EA Consultation. In particular, we cover the definitions of:

- connection charges (section 2.1.1);
- incremental costs (section 2.1.2);
- the neutral point (section 2.1.3);
- the balance point (section 2.1.4).

2.3 The EA has provided detailed information about the connection charges and incremental costs in its July Decision on fast-track measures.[23] We have not seen updated (or different) definitions put forward in the EA Consultation, which is the EA's latest publication on the topic. We also note that CEPA, the EA's advisers on both the aforementioned Decision and the Consultation, provided additional clarifications about connection charges in its report supporting the July Decision.[24] We assume that the EA endorses the clarifications provided by its advisers CEPA, not least as the CEPA reports accompany the EA Consultation documents.

2.4 In our assessment, we have considered the sources mentioned above, where possible prioritising the EA Consultation.

### 2.1.1 Connection charges

2.5 The EA's definition of the connection charge (which is also referred to as the 'upfront connection charge' or a 'capital

[23] July Decision, section 4.2.4.
[24] The CEPA report is attached to the July Decision. July Decision, pp. 147–93.

contribution', the latter being from the perspective of the distributor) is pivotal for its interim restraint proposals, which are about potentially limiting the upfront connection charge.

2.6 Specifically, the connection charge is an upfront payment charged to a new user to connect to the distributor's network.[25] The EA considers that it is equivalent to:[26]

- the incremental (direct, indirect, upfront and ongoing) cost of adding a new connection;

**minus**

- the expected revenue to be collected from the new user through ongoing network charges over the duration of the connection;

**plus**

- the expected contribution by the user to shared network costs.

2.7 Put differently, the EA considers that the combination of the upfront connection charge and the revenue from ongoing charges covers incremental costs caused by the new connection/user, plus a share of the shared costs.

2.8 We demonstrate the concept in the following equation:

the connection charge =

incremental costs
– incremental revenue
+ shared network costs.

2.9 With respect to the EA's positioning on the interim restraint proposals, we note the following.

- From the Code amendments introduced due to the fast-track measures, we understand that the distributor's revenues and its costs should both be captured in present-value terms—discounted by the midpoint of the latest regulatory weighted

[25] July Decision, p. 116, 6B.4 (1).
[26] Ibid., pp. 121–3, 6B.11.

average cost of capital (WACC) range over an assumed connection duration.[27]

- Connection charges differ from connection fees—the latter are amounts paid by an applicant to a distributor for administrative tasks relating to establishing or upgrading a connection, such as processing applications and completing inspections.[28] The level of connection fees does not appear to be a focus of the EA's proposals.

### 2.1.2 Incremental costs

2.10 With reference to the July Decision,[29] we understand that, for the purpose of the EA Consultation, incremental costs include the direct and indirect, upfront and ongoing costs of the distributor incurred as a result of adding a new connection to its network.[30] This includes costs that are associated with both the connection itself and the reinforcement of the network (for instance, costs relating to security or capacity).

2.11 The EA outlines the following categories of incremental costs.[31]

- **Extension costs** cover work needed to create or enhance a connection without increasing shared network capacity, or for extension-like upgrades that primarily benefit the applicant, based on the lowest-cost compliant (minimum-scheme) design.
- **Customer-selected enhancement costs** are the extra costs incurred when a customer chooses connection features or upgrades beyond the minimum-scheme configuration.
- **Network capacity costs** capture the minimum-scheme cost of works that do increase shared network capacity (but are not extension-like upgrades), including allocations of additional capacity.

[27] The assumed connection duration is generally set at 30 years for residential connections and 15 years for non-residential connections. See July Decision, Appendix A: Proposed Code amendment, 6B.11 (1), (2) and (6). In the latest (2023) input methodologies, the regulatory WACC allowance for EDBs was set at the 65th percentile, rather than the midpoint. (See New Zealand Commerce Commission (2023), 'Electricity Distribution Services Input Methodologies (IM Review 2023) Amendment Determination 2023', p. 93, accessed 15 December 2025).
[28] July Decision, p. 109.
[29] We understand that the EA's view of what constitutes incremental costs for the purpose of its Consultation is reflected in the July Decision, as the EA has explicitly referred to that Decision in its Consultation. We also note that no updated definition of these terms was provided in the EA Consultation. July Decision, Appendix A Proposed Code amendment. EA Consultation, para. 4.26. (c).
[30] July Decision, pp. 108–23.
[31] As defined in the amendments to the 'Electricity Industry Participation Code 2010' introduced in the July Decision on the 'Distribution connection pricing Code amendment'. July Decision, pp. 108–23.

- **Incremental transmission costs** relate to works on *transmission-level* grid connection assets to enable or modify a connection. However, whether the EA would consider such costs to be appropriately 'incremental' within the context of its Consultation on *distribution-level* charges is unclear.
- **Localised historical cost recovery** represents charges imposed to recover past distributor-driven enhancement or network development costs that were designated, when incurred, to be recovered by new connections.
- **Operating cost loading** reflects the incremental operating costs attributable to a connection.

2.12 Both the EA and CEPA also refer to the concept of **net incremental costs**, which are incremental costs net of expected incremental revenues.

### 2.1.3 The neutral point

2.13 While the neutral point is not the main focus of the EA Consultation,[32] it is a foundational concept of the anticipated full reform of connection charges.

2.14 In the EA Consultation, the neutral point is described as follows:[33]

> Neutral point pricing means income from connection charges and lines [i.e. ongoing] charges are just enough to cover the incremental cost of a new connection. In other words, the net (of income) incremental cost of a connection is zero. This is the lower bound, 'floor' of the subsidy-free range, and means existing users are made no worse off (and no better off) by new connection.

2.15 As with the connection charges reconciliation, the neutral point is considered in present-value terms over the lifetime of a connection—i.e. the neutral point equation does not have to hold every year.[34]

### 2.1.4 The balance-point principle

2.16 This is the focal principle of the EA Consultation, as it is the purpose of the Consultation for the EA to explore options to eliminate instances of distributors pricing connection charges

[32] Rather, the EA is mostly concerned with distributors pricing their connection charges in line with the balance-point principle (discussed below).
[33] EA Consultation, para. 7.3 (a).
[34] July Decision, Footnote 61.

above this balance point.[35] According to the EA, for compliance with the balance-point principle, connection charges should be:[36]

[…] set at a level such that the contribution to shared network costs from new connections is commensurate with the contribution from existing connections.

2.17 The EA further clarifies that:[37]

Balance point pricing involves maintaining a consistent approach over time, and the level of the balance point will vary by distributor (depending on their historical approach to connection pricing).

2.18 In contrast with the neutral point, this principle is not directly concerned with the relationship between the connection charge and the incremental costs and revenues, but instead focuses on comparing the contribution to the shared network costs between new and existing connections. We understand this to mean that the contributions to shared network costs should be similar for *comparable* existing and new connections, insofar as connections are from the same consumer group, and have similar incremental costs.[38] The EA states that a distributor is not compliant with the balance point when the distributor's:[39]

pricing requires new connections to pay a materially higher contribution to shared network costs than comparable existing connections […].

2.19 In section 3.4, we examine the difficulties that stakeholders might face in mapping the neutral- and balance-point terms to standard cost-allocation practices.

2.20 In section 4, we discuss the conceptual and practical issues that arise with the EA's definition of the balance-point principle and with its suggested approach to enforcing the implementation of this principle. In particular, we touch on the implications of demand uncertainty on the effectiveness of this principle.

[35] The EA Consultation (para 7.4) notes: 'For now, the Authority is focusing on the balance point issue. Broader connection pricing efficiency will be addressed via the further reform process.'
[36] EA Consultation, para. 7.24.
[37] EA Consultation, para. 5.6.
[38] EA Consultation, para. 7.15.
[39] EA Consultation, para. 7.13.

## 2.2 Measures implemented in the July Decision

2.21 As discussed above, the EA Consultation is preceded by the July Decision, which introduced four fast-track measures intended to bridge the period until the full reform of new-connection pricing planned for the 2030 price control period.[40]

1 **Connection enhancement cost allocation**—distributors are to disclose the level of a 'minimum scheme', a connection (project and price) that reflects the cheapest and simplest unconstrained connection that the distributor can reasonably provide, considering its standards. Any enhancement costs related to this connection (e.g. if the installed connection is of a greater capacity, higher security or of a non-standard configuration) are to be paid by whichever party (the distributor or the customer) requires it. The customer may also request a connection with reduced functionality (a 'flexible' connection) at a lower fee—for example, the load on that connection could be capped so as not to affect peak demand on the network.[41]

2 **Pioneer scheme policy**—distributors are to develop and publish a policy for establishing 'pioneer schemes', according to which the user that funds a network extension would receive rebates from those that follow and use the extension. The EA argues that this would, in part, address the 'first-mover' disadvantage problem, whereby the first applicant pays disproportionately higher costs than those that follow.

3 **Connection charge reconciliation**—distributors must prepare a reconciliation that breaks down their quoted connection charge price into: a) an incremental cost; b) incremental revenue; and c) shared network cost components (as per section 2.1.1). The EA argues that this improves transparency of how costs are allocated to new connections. This measure is also meant to be a key source of data to calibrate future connection charge pricing methodologies, as part of the interim restraints and the full reform.[42]

4 **Capacity costing**—a distributor that chooses to allocate network capacity costs to connection charges must do so using published rates that allocate costs as capacity is requested and

[40] EA Consultation, para. 4.26.
[41] A flexi scheme may incorporate load control or other operating arrangements that reduce extension costs (e.g. because they enable the use of a smaller transformer) or upstream capacity costs (e.g. by ensuring that the connection does not contribute to peak demand). July Decision, para. 6.5.
[42] July Decision, p. 4.

provided, not when it is built.[43] The EA argues that this enhances predictability of charges and removes 'last-straw' pricing, whereby a new user provides upfront funding for a capacity upgrade that will serve other connections in the future.

2.22 The EA considers that these four fast-track measures implemented from 2026–27 represent an important step towards a full reform of connection pricing. However, it also considers that the measures leave distributors with significant residual discretion over how much cost they allocate to new connections and how their pricing methodologies are implemented.[44] As part of its July Decision on the fast-track measures, the EA therefore suggested that it might consult on further changes to address its concerns with rising connection prices.[45]

## 2.3 Measures proposed in the EA Consultation and considered for the full reform

2.23 While the EA has already decided to implement fast-track measures in anticipation of full reform of connection charges, it finds that these measures do not prevent or unwind (what it argues to be) a trend towards higher connection charges. Therefore, it proposes additional interim restraints, ahead of a full reform.

- Among other goals, the EA's potential intention for a **full reform** is to reduce the rising connection charges of certain distributors by requesting the pricing to be set between the neutral and balance points.[46]
- The **interim restraints** considered in the EA Consultation have a more limited objective: to eliminate instances of pricing above the balance point.[47]

[43] When a distributor undertakes a capacity upgrade (e.g. a larger transformer or feeder), it must not allocate the whole cost of that upgrade to the one 'last-straw' connection that triggered it. Instead, it must create posted capacity rates (e.g. $/kVA at each network tier and costing zone) and then charge each new or upgraded connection its share of those costs based on the capacity that connection will use each time it takes up some of the remaining headroom. July Decision, pp. 36–7.
[44] July Decision, p. 157.
[45] July Decision, p. 2.
[46] EA Consultation, para. 11.20 (e).
[47] EA Consultation, para. 11.20 (f).

2.24 The EA has considered five ways forward for the interim restraints, including the 'do nothing' option, which equates to relying on:

- the four fast-track measures, to be implemented in 2026–27, and
- full connection pricing reform, to be implemented over the 2030 price control period.

2.25 The EA's preference is the **targeted intervention** option, which it envisages would:

- screen for distributors with high or increasing reliance level(s), i.e. a high portion of growth investment directly funded through upfront connection charges;
- conduct deeper examinations of the indicated distributors to establish whether intervention is justified;
- require selected distributors to update their charging methodologies in compliance with the balance-point principle. The EA would also potentially request revenue-path amendments from the NZCC as needed.

2.26 Separately, the EA proposes to introduce a **duty to connect** for distributors—i.e. an explicit obligation on distributors to offer and maintain network connections and upgrades, supported by clearer rules on withdrawal of supply and the technical and commercial standards for access.[48] The EA considers this necessary because distribution is an essential natural-monopoly service, and New Zealand distributors currently lack general obligations to provide new or upgraded connections.[49] Without such obligations, the EA considers that its introduction of limits on upfront connection charges could lead some distributors to refuse or delay connections or rely on onerous standards as de facto barriers, undermining pricing reform.[50]

[48] EA Consultation, Part B – Distributor supply obligations.
[49] EA Consultation, para. 10.10.
[50] EA Consultation, para. 10.7.

# 3 The form of the EA Consultation—assessment against international practices

3.1 Vector has asked us to comment on procedural standards and other characteristics of the *form* of the EA Consultation. This includes conceptual and principles-based considerations, such as whether the EA's theories of harm are well-developed; whether its evidence base is well-formed; whether its remedies are proportionate and well-targeted, and, thereby, whether its proposals are likely to have their intended effect within the context of the New Zealand electricity distribution sector and its wider regulation.

3.2 Our assessment of the form of the EA's consultation is undertaken with reference to common practice by other regulatory authorities.

3.3 This section is structured as follows.

- We compare the EA Consultation with international practice of market reviews (section 3.1).
- We comment on the EA's empirical analysis undertaken to explain its case for intervention (section 3.2).
- We consider the EA's proposal for targeted intervention that it is consulting on, in the context of a full reform and fast-track measures, and what it adds to the other measures (section 3.3).
- In, we compare the EA's cost allocation guidance with standard cost allocation measures (section 3.4), and our conclusions are set out in section 3.5.

## 3.1 Common practices for market reviews

3.4 Market investigations, and other investigations by authorities—such as independent or governmental departments—are generally governed by (i) well-defined duties and objectives, and (ii) clear processes for engagement and consultation with relevant parties.

3.5 While the EA has not labelled the upfront connection charging reform as a market review or investigation, the EA Consultation

pursues the same economic regulatory objectives that guide market investigations in other cases:[51]

- diagnosing whether market behaviour (connection pricing and access practices) is inefficient; and
- where relevant, intervening to correct any identified inefficiencies for the long-term benefit of consumers.

3.6 These objectives directly reflect the EA's statutory mandate under Section 15 of the Electricity Industry Act to promote competition, reliable supply, and efficient operation in the electricity industry for the long-term benefit of consumers, and to protect small consumers in dealing with distributors.[52]

3.7 As such, the EA Consultation has features of a market investigation, yet, based on our review, falls short of the procedural standard relative to similar exercises conducted by other authorities. In the following section 3.1.1, we first outline the key procedural features of comparable cases conducted by other authorities in New Zealand and internationally. Then in section 3.1.2, we compare the EA Consultation with practices in those cases.

### 3.1.1 Procedural features of economic reviews and investigations

3.8 We consider the following examples of economic reviews and investigations:

- the NZCC market studies;
- the UK Competition and Markets Authority (CMA) market investigations;
- European Commission state aid assessments;
- European and UK excessive pricing reviews.

#### NZCC market studies

3.9 The first example of reviews comparable to the EA Consultation that we consider is the NZCC market studies.[53] According to the NZCC guidelines for conducting market studies: 'market studies look at whether markets are working well for consumers and

[51] EA Consultation, p. 2. For other cases, see, for instance, Competition Commission (2013), 'Guidelines for market investigations: Their role, procedures, assessment and remedies', April, paras 155–156, 321 and 351.
[52] EA Consultation, para. 3.2.
[53] New Zealand Commerce Commission (2020), 'Market Studies Guidelines', 19 November.

how they could work better'.[54] As such, the objective of the EA Consultation matches the objective of the NZCC market study. Therefore, one can reasonably expect the two processes to have comparable procedural features.

3.10 The NZCC guidelines suggest that a market study be done in phases, as outlined in Table 3.1.

Table 3.1 NZCC market study guidelines—phases of consultation

| Phase | What it entails |
|---|---|
| Launch the study | Publication in the '*Gazette*', followed by a 'Process statement' with information on processes to be followed and how interested parties can be involved |
| Request and gather information | Information requests for voluntary or compulsory submissions, and discussions with interested parties |
| Test analysis and findings | Test, with relevant parties, the analysis and the effects of recommendations, e.g. through working papers, open discussions and data rooms |
| Issue draft findings | Make the draft report publicly available for comment, also seeking further submissions from interested parties |
| Hold a conference | Optional, aimed at informing the final report |
| Publish final report and recommendations | Final report published with findings and any recommendations. |

Source: Oxera based on New Zealand Commerce Commission (2020), 'Market Studies Guidelines', 19 November.

3.11 The outcome of a study may involve recommendations to enhance market performance, or lead to further actions, such as starting an investigation into a particular conduct.[55] Notably, further actions, such as imposing remedies, would require additional assessments and consultation in the form of a dedicated investigation or as part of the price control review. This process allows for adequate consultation and evaluation of any proposals, and their effects on various aspects of the regulatory regime, where applicable.

[54] New Zealand Commerce Commission (2020), 'Market Studies Guidelines', 19 November. para. 13.
[55] Ibid., paras 22–23.

### The UK CMA market investigations

3.12 Within the international landscape, the UK CMA's market investigations regime gives an example of a structured approach for conducting a market review, with its focus on assessing 'whether competition in a market is working effectively, where it is desirable to focus on the functioning of the market as a whole […]'.[56] As such, it is different from the EA's upfront charging reform, in that it focuses exclusively on competition issues. However, the similarity is that it takes a market-wide rather than a single-player approach, it uses an investigative process, and it can impose a remedial action on a party without it infringing the law.[57]

3.13 The CMA's market investigation process follows comprehensive guidelines that establish clear timeframes and consultation opportunities, as well as a structured framework to assess theories of harm and remedies.

- **Clear timeframes and consultation opportunities**. An indicative timeline of a CMA market investigation, summarised in Table 3.2, shows that the process contains multiple stages to ensure depth of analysis, adequate stakeholder consultation, and assessment of remedies, if any. The overall process takes around 18 months.

Table 3.2 UK CMA market investigations—indicative timeline

| Stage of process | Timing within 18-month investigation |
|---|---|
| Reference | Pre-reference sharing of appropriate information with the CMA by the CMA market study team/the relevant body |
| 'First day letter'/initial information requests<br>Publication of Initial Issues Statement (setting out theories of harm and inviting views on possible remedies)<br>Initial submissions from the main and third parties | Months 1–2 |
| Site visits and hearings | Month 3 |

[56] Competition Commission (2013), 'Guidelines for market investigations: Their role, procedures, assessment and remedies', April, para. 18.
[57] Ibid., para. 21.

| Stage of process | Timing within 18-month investigation |
|---|---|
| Further interaction with parties and consultation on analysis (e.g. roundtables, confidentiality rings, disclosure rooms, working papers) | Months 2–11 |
| Final deadline for all parties' submissions before the Provisional Decision Report (PDR) | Month 11 |
| Publication of the PDR on the adverse effect on competition (AEC) and remedies (if needed) | Month 12 |
| Consideration of responses to PDR<br>Response hearings with parties | Months 12–16 |
| Final deadline for all parties' submissions before the Final Report | Month 16 |
| Publication of the Final Report | Month 18 |

Source: Competition and Markets Authority (2017), 'Market Studies and Market Investigations: Supplemental guidance on the CMA's approach', July, para. 3.29.

- **Structured assessment of theories of harm.** To structure its assessment with clear grounding in economic principles, the CMA sets out one or more 'theories of harm' in its investigations. A theory of harm is a hypothesis of the ways in which harmful competitive effects might arise in a market and adversely affect customers.[58] These provide a framework for understanding market functioning and identifying undesirable restrictions in competition.[59] The initial theories of harm are set out in an issues statement published at an early stage in an investigation, giving relevant parties sufficient time to comment.[60] Clear theories of harm are vital in ensuring that proposed remedies (if any) are targeted at the cause of the problem, and therefore minimise the risk of adverse effects.
- **Comprehensive assessment of remedies**. The guidelines offer a standard selection of remedies that the CMA typically considers, from least to most intrusive.[61] All remedies considered by the CMA are assessed based on their:
  - **effectiveness** in achieving their aims, including their **practicability**;[62]
  - **reasonableness** and **proportionality**, with a proportionate remedy being the least onerous needed to achieve its aim,

[58] Competition Commission (2013), 'Guidelines for market investigations: Their role, procedures, assessment and remedies', April, para. 163.
[59] Ibid., para. 164.
[60] Ibid., paras 69 and 166.
[61] Ibid., figure 1.
[62] Ibid., paras 334–341.

and which does not create disadvantages that are disproportionate to the aim;[63]
- **impact on parties** mostly likely to be affected by them, considering both beneficial and potentially negative effects, including the costs to business.[64]

### European Commission state aid assessments

3.14 State aid intends to address market failures and is lawful only when state intervention is proven to facilitate the development of an economic activity, and does not impair trading conditions to an extent that would outweigh the broader public benefits.[65]

3.15 State aid assessments are different from the EA's proposed reform, in that they are focused on a specific intervention (the aid by the state), but there are similarities. In particular, the selected measure needs to be demonstrated to strike the right balance between the benefits it brings and any distortions it causes or may cause.

3.16 State aid assessments typically follow a set of well-established criteria. For example, the European Commission's guidelines on state aid for climate, environmental protection and energy suggest that one needs to demonstrate:

- which economic activity is facilitated by the aid;
- how an incentive effect (to facilitate an activity) is created by the aid;
- that there is no breach of law;
- the necessity of the aid;
- its appropriateness;
- its proportionality;
- its transparency;
- the avoidance of undue negative effects on competition and trade.

[63] Competition Commission (2013), 'Guidelines for market investigations: Their role, procedures, assessment and remedies', April, paras 342–347.
[64] Ibid., paras 348–353.
[65] European Commission (2022), 'Communication from the Commission – Guidelines on State aid for climate, environmental protection and energy 2022 (2022/C 80/01)', 18 February, para. 8, accessed 12 December 2025.

These criteria apply across a wide range of state aid assessments.

### European and UK excessive pricing reviews

3.17 Another framework that we consider is that for determining when excessive pricing constitutes an abuse of market power.[66] The relevance of this framework to the EA's proposed upfront charging reform is that both require an assessment of the case for intervention.

3.18 This European and UK excessive pricing assessment framework consists of two steps, referred to as 'limbs'.

- **Limb 1: Excessiveness**. This assessment seeks to establish whether the difference between the costs incurred and the prices charged (or revenue earned) is excessive. The analysis evaluates whether the costs incurred by customers are reasonably attributable costs that would be incurred under normal competition, including a reasonable rate of return. If prices are found to be significantly and persistently above costs, the analysis proceeds to Limb 2. If not, there is no abuse.
- **Limb 2: Unfairness**. This assessment seeks to establish whether the price that has been charged is unfair in itself. This requires an assessment of possible explanations for why prices may justifiably be significantly larger than costs. A critical notion in this setting is the concept of 'economic value': a price may be considered excessive if it is in excess of the economic value that consumers derive from the product/service.[67]

3.19 The well-defined tests outlined within competition law precedents seek to ensure that there is a sufficiently high evidence barrier for intervention, which in theory helps to minimise any adverse effects as a result of excessive regulation.

## 3.1.2 Assessment of the EA Consultation against common practices for economic market reviews

3.20 The EA Consultation displays several instances of departing from good regulatory practice, as drawn out with reference to some of the case studies above. Below we outline the key

[66] For exemplary cases in which the framework was established, see *United Brands v. Commission* Case 27/76; and *Attheraces Ltd v. BritishHorseracing Board Ltd* [2007] EWCA Civ 38.
[67] As set out in the CAT judgement of the Hydrocortisone Decision, *Allergan PLC and others v. CMA* [2023] CAT 56.

limitations of the EA Consultation that we envisage and explain how these may lead to suboptimal outcomes and unintended consequences.

### Compressed timeframes with limited consultation opportunities

3.21 Best-practice regulatory intervention in markets can be conceptualised as several stages: the definition of the problem, assessment of evidence, consultation on potential interpretation, and only afterwards the selection of and consultation on specific remedial measures. By contrast, the EA appears to have combined the problem statement and its proposed regulatory intervention into a single consultation, limiting the level of detail in its assessment of each of the topics.

3.22 The EA's current process has also provided relatively limited opportunities for stakeholders to engage:[68]

- October 2024: the consultation paper on 'Distribution connection pricing proposed Code amendment', introducing the fast-track measures;[69]
- November 2025: the consultation paper on 'Reducing barriers for new connections: up-front charges and distributor obligations', setting out the present proposed intervention.

### Selective intervention by design

3.23 The EA Consultation's proposed remedy, i.e. the targeted intervention approach, is selective by design. As a result, the targeted market participants may be affected disproportionately.

3.24 In other contexts, for instance in the UK funerals market investigation, the CMA focused on (but was not limited to) the largest players,[70] even though the set remedies affected all market participants.[71] Limited additional monitoring measures

[68] We understand that the EA also shared some RFIs with stakeholders, although we do not know how extensive these were. [✂]
[69] A parallel consultation on 'Network connections project: stage one amendments' was launched on the same date, addressing non-pricing issues. See Electricity Authority (2024), 'Network connections project: stage one amendments – Consultation paper', 25 October.
[70] Competition and Markets Authority (2020), Funerals Market Investigation. Final report, 18 December, para. 1.18.
[71] Ibid., para. 9.16.

were applied only to larger operators, screened by the number of branches (with the threshold set at five or ten branches for different measures).[72]

3.25 The EA explicitly describes its approach as 'targeted', which presumably means that it will apply regulatory intervention only to specific distributors and/or specific cases, rather than applying a consistent approach to all distributors facing similar regulatory frameworks and constraints. As CEPA states: 'The Authority considers that the issues it has identified are only relevant for a minority of EDBs. A targeted approach would ensure regulatory intervention only for EDBs where there is a concern while mitigating any unintended consequences of an aggregate rule.'[73]

3.26 There is some evidence that suggests the EA is focused specifically on Vector, such that it is not undertaking market-wide analysis in robustly diagnosing its concerns and identification of remedies. For example:

- when presenting evidence for the increase in reliance levels, the EA Consultation singles out Vector (see Figure 5.1), stating that: 'Vector is presented separately because it is the largest distributor and has shown rapid increases in its reliance level in recent years'[74];
- in deciding whether to issue a direction to reduce the charges, the EA plans to consider, among other elements, 'distributor size and connection application volumes'.[75] This explicitly incorporates distributor size as a criterion for targeting, suggesting that larger distributors are more likely to be subject to intervention;
- the EA acknowledges that targeted intervention involves 'administrative cost both for the Authority and any EDBs identified at the screening stage', but notes that 'costs will be lower for EDBs not selected';[76]

[72] Ibid., paras 9.158–9.159, 9.166–9.172.
[73] CEPA (2025), Connection obligations and interim restraints on connection charges. New Zealand Electricity Authority, 13 November, para. 84.
[74] EA Consultation, paras 5.19–5.20. See also EA Consultation paras 5.24–5.25 and Figure 5.3, where Vector's reliance levels compared to the variation in the number of non-standard connections over time is singled out.
[75] EA Consultation, para. 7.19.
[76] EA Consultation, para. 9.15.

- the EA develops an impact analysis of the targeted intervention for Vector only.[77]

### Limited (empirical) analysis underpinning theory of harm

3.27 The theory of harm in the EA's Consultation can be briefly summarised as: distributors, due to their market power, have been increasingly shifting shared network costs onto new connection applicants through higher upfront charges, without offsetting reductions in their ongoing lines charges. As a result, this has deterred some efficient new connections.

3.28 The EA Consultation provides only limited empirical support for its theory of harm, as we discuss further in section 3.2. The narrative in relation to its case for intervention is relatively high-level, e.g. covered in about ten pages within the Consultation document, with limited empirical analysis, and without developing either the qualitative or the quantitative evidence base to encompass players across the market.[78] Rather, as cited above, there are anecdotal examples to derive, or clearly set out, the theory of harm, and much of the analysis (or diagnosis) refers to Vector's data.

3.29 In comparison, in other cases, theories of harm are tested and refined through data collection and analysis. For example, the UK CMA typically formulates initial theories of harm early in the process, before gathering quantitative and qualitative evidence to assess whether those theories are supported or need to be revised. This iterative process comprises issues statements, working papers and interim reports, which all outline theories of harm and their potential evolution. The CMA's cloud services market investigation is an example of this evidence-based assessment of theories of harm, with multiple working papers assessing initial theories of harm based on evidence gathered during the investigation.[79]

3.30 More conceptually, while the EA starts with the concern about high charges and their impact on economic growth and efficiency of network development, its proposed remedy (the balance-point principle) is focused on ensuring consistent

[77] EA Consultation, paras 8.2–8.3, 8.22–8.31.
[78] EA Consultation, section 5.
[79] See the working papers collected on the CMA's website page dedicated to its Cloud Services Market Investigation, accessed 15 December 2025.

treatment of the users. In a literal interpretation of the balance-point principle, therefore, if the upfront connection charges have historically been high, they can stay high and still be compliant with the balance-point principle, but this would presumably be of continued concern to the EA.

3.31 Due to the lack of a robustly evidenced and clearly articulated theory (or theories) of harm, the EA's proposed remedy may, in fact, not be effective at addressing its concerns. As an example, the lack of clarity on the EA's policy objectives, underpinning its theory/theories of harm, has been cited by stakeholders as a conflict of equity and efficiency objectives in previous submissions.[80]

### Limited assessment of proportionality and effectiveness of the EA's proposed remedy

3.32 The EA Consultation dedicates a short section to the qualitative evaluation of the interim interventions, based on three criteria: effectiveness, cost, and risk.[81] In principle, these dimensions could be broadly aligned with common practice on remedies assessment frameworks, as referenced in the case studies above—albeit good regulatory practice would also usually entail an assessment of whether remedies are proportionate. Moreover, the actual evaluation carried out by the EA is high-level (set out in three pages) and it does not represent a thorough or systematic review. For example, there is no clear evaluation scorecard against which options are assessed. It would have been helpful for the EA to have undertaken a more well-evidenced approach (as is adopted in UK market investigations and European state aid control regimes) to remedy design to ensure that it is minimising the risk of (unintended) adverse consequences. The CMA's funerals market investigation, for instance, dedicates a full chapter to assessing individual remedies against 'guidelines criteria', including their

[80] See HoustonKemp (2024), 'Review of the Electricity Authority's proposed distribution pricing Code amendment – A report for Vector', 20 December, section 4.3.2.
To further contextualise this, we note that the Consultation suggests that the EA's underlying policy objective is to lower connection charges, with related concerns that high connection charges may deter new housing, business development, and electrification. However, perversely, if connection charges were to face downward pressure, below cost-reflective levels, this could risk encouraging uneconomic connections—projects that would otherwise not proceed if applicants faced the true incremental and shared network costs. Such an approach would tend to distort investment signals and undermine allocative efficiency by enabling connections whose benefits do not outweigh their costs. In fact, a higher level of (uneconomic) connection costs would put upward pressure on user charges, which would appear contrary to the objective at the outset of reducing charges.
[81] EA Consultation, para. 6.35.

implementation method and timing, interactions within the remedies package, and potential consequences for the affected parties.[82]

3.33 The EA does not clearly assess whether, or to what extent, the proposed interim interventions would contribute to achieving its stated objectives further, in addition to the fast-track measures already in place. This question could be referred to as a '**necessity**' of the measure. It is acknowledged in the Consultation that the EA is required to have regard to the government policy statement which 'specifically refers to efficient network pricing' and that the proposals are 'directly aimed at improving the efficiency of network pricing'.[83] However, it does not explain why the fast-track measures—which, according to the earlier July Decision paper, were designed specifically to address concerns about inefficiently high connection charges and lack of transparency—would be insufficient on their own to meet these objectives; nor does it quantify the incremental efficiency gain expected from the new interim restraint measures.

3.34 By contrast, in the UK market investigations, remedies are considered in light of their potential adverse effect on competition (AEC) and the customer detriment identified earlier, with the CMA considering for the remedies package how it will 'work together to address the AEC and resulting customer detriment'.[84]

3.35 Furthermore, the EA Consultation does not take into account whether the preferred measure is **least distortive to the market** and **proportionate**. The only consideration that the EA appears to raise as regards distortions is the need for revenue path reconciliations, and as regards proportionality—the associated resource-intensity of the options. As is further discussed in section 4.3 below, the targeted intervention has implications for distributors' financeability and risk, which the NZCC needs to assess together with other elements of the price control. Proportionality and potential distortions to the market are

[82] Competition and Markets Authority (2020), Funerals Market Investigation. Final report, 18 December, section 9.
[83] EA Consultation, paras 3.7–3.8.
[84] Competition and Markets Authority (2020), Funerals Market Investigation. Final report, 18 December, para. 9.198.

assessed in both European state aid control and UK market investigation regimes.[85]

### 3.2 EA's empirical support for intervention is not sufficient

3.36 The EA refers to the increasing 'reliance level' (which '[…] indicates the portion of growth investment directly funded through up-front connection charges') as key evidence that connection charges are rising.[86] We have analysed Vector's reliance levels in the RY25–RY30 period using the same data as that underlying the EA's analysis, disaggregated by CAPEX category ('consumer connection' and 'system growth'). Our analysis finds that:

- Vector has allocated approximately all expenditure associated with 'consumer connection' to new customers (see Figure 3.2 below). This expenditure category captures costs relating to both new and/or existing customers (para. 3.38). Without further analysis, it is not possible to determine what proportion directly corresponds to new customers. If all costs in this category relate to new customers, Vector's allocation would be cost-reflective. The EA does not appear to have assessed this, i.e. the reasonableness of Vector's charging strategy with respect to its intent [✂].
- Vector has allocated varying proportions of system growth expenditure to new customers between RY25 and RY30. In the earlier years, the allocation is less than 100%, while in later years (RY28–RY30), it is expected to exceed 100%, reaching a forecast of 200% in RY30 (Figure 3.3). These costs are linked to (forecast) demand changes; the EA acknowledges that high reliance levels may be explained by the timing of investments, among other factors, and are not a priori 'of concern in terms of pricing efficiency'.[87] Accordingly, more empirical analysis would be needed to substantiate whether there is a concern at a given point in time—e.g. determining whether new or existing customers should bear a given set of costs requires analysis of the proportion of the system growth investment that will serve

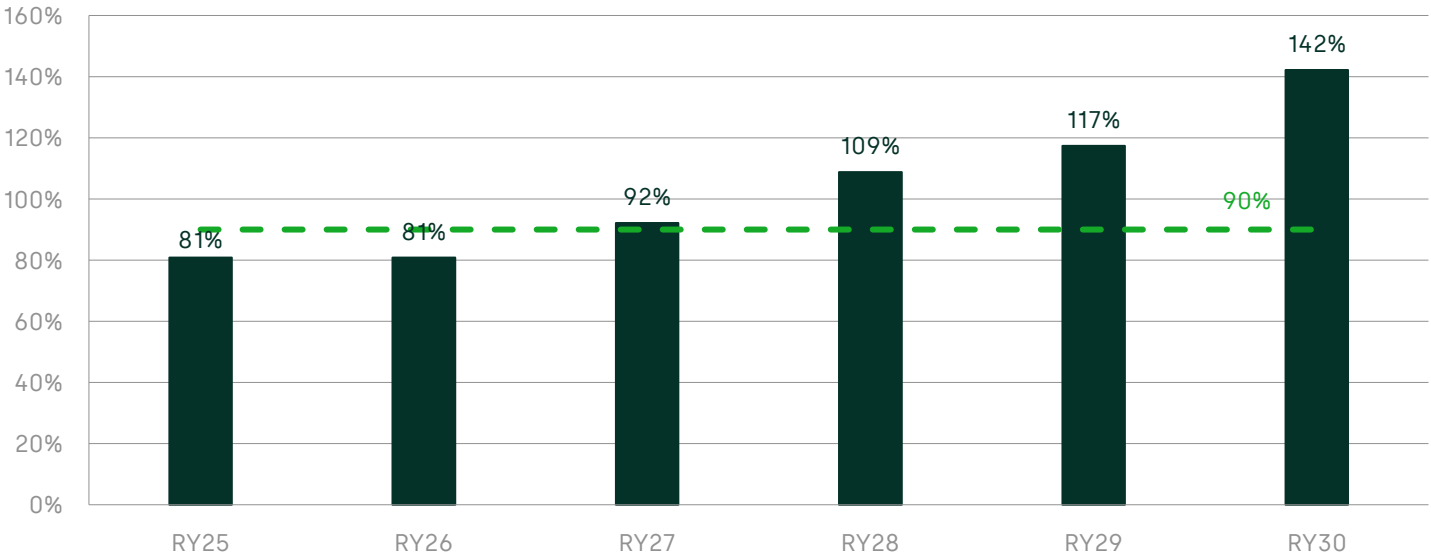
[85] See European Commission (2022), 'Communication from the Commission – Guidelines on State aid for climate, environmental protection and energy 2022 (2022/C 80/01)', 18 February, section 3.2, accessed 12 December 2025. See also Competition Commission (2013), 'Guidelines for market investigations: Their role, procedures, assessment and remedies', April, paras 342–347.
[86] EA Consultation, para. 6.16, defines 'reliance level', and in section 5 which provides justification for the 'Case for intervention', increase in reliance level is used as key evidence.
[87] EA Consultation, para. 7.17 (b): 'High observed reliance in a given year could be explained by lumpy investment activity or mismatches in timing of accounting recognition between contributions and expenditure. In either case, this may not be of concern in terms of pricing efficiency.'

new customers. The EA should also consider longer-term forecasts, particularly those extending beyond 2030.

### 3.2.1 Disaggregate analysis of 'reliance level'

3.37 As illustrated in Figure 3.1 below, Vector's overall reliance is expected to remain broadly aligned with 90% up to RY27, exceeding 100% only in RY28–RY30. The EA's illustrative impact assessment uses a 90% reliance limit, while its previous consultation proposed 82% for Vector.[88] Therefore, prior to RY28, Vector's reliance is broadly consistent with the EA's referenced benchmarks.

Figure 3.1 Vector's reliance level, RY25–RY30




Note: The reliance level is estimated as 'capital contributions for consumer connections and system growth as a portion of those same expenditure categories'. The RY29 and RY30 reliance levels of 117% and 142% match the EA's estimates presented in Table 8.2 of the EA Consultation.
Source: Oxera analysis using Vector's RY25 disclosures.

3.38 The EA reliance calculation combines two fundamentally different CAPEX categories, as per NZCC's definitions:

- **consumer connection CAPEX**—costs driven by the '[…] establishment of a new customer connection point or

[88] The 90% is from the EA Consultation, para. 8.23. The 82% is from Electricity Authority (2024), 'Distribution connection pricing proposed Code amendment. Consultation', Table 7.2.

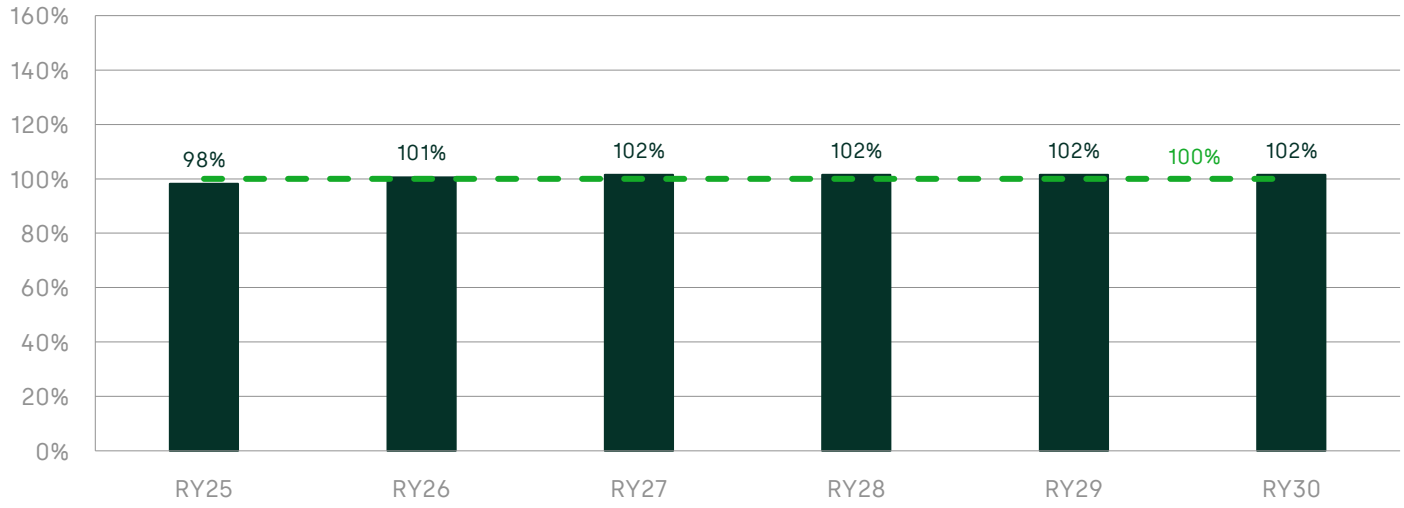
alterations to an existing customer connection point'.[89] The definition suggests that this category covers the costs for both new and existing users;

- **system growth CAPEX**—costs driven primarily by '[…] a change in demand or generation on a part of the network which results in a requirement for either additional capacity to meet this demand or additional investment to maintain current security and/or quality of supply standards due to the increased demand'.[90] Increased demand could be from both new and existing users.

3.39 Applying a combined limit below 100% to both categories conflates distinct cost types and prevents disaggregated analysis that would provide greater clarity about the trends of upfront connection charges.

3.40 For example, as shown in Figure 3.2, when analysed separately, the contribution from consumer connection expenditure remains broadly stable, at c. 100% between RY25 and RY30.

Figure 3.2 Consumer connection capital contributions, RY25–RY30




Note: Consumer connection capital contribution is estimated as capital contributions for consumer connection as a portion of the same expenditure category.

[89] New Zealand Commerce Commission (2024), 'Electricity Distribution Information Disclosure (Targeted Review 2024) Amendment Determination 2024 [2024] NZCC 2', p. 25.
[90] Ibid. p.51.

Source: Oxera analysis using Vector's RY25 disclosures.

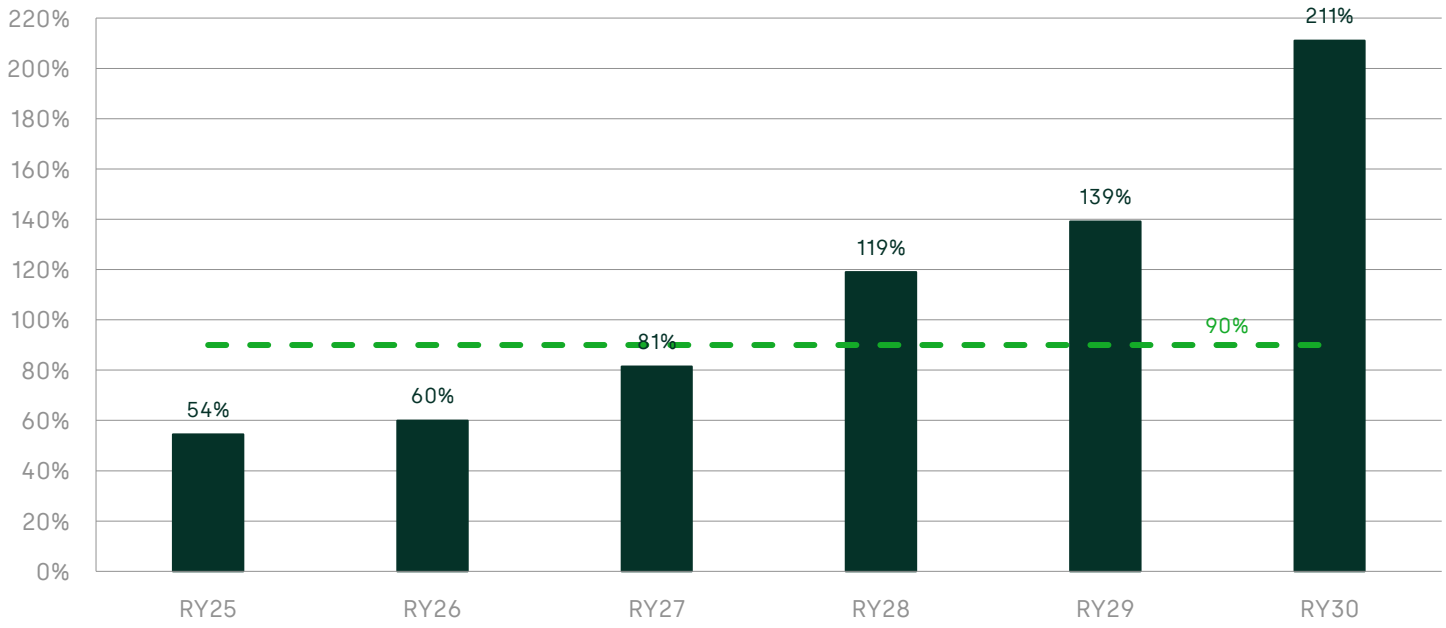
3.41 To understand whether the 100% recovery from consumer connection CAPEX reflects recovery of direct costs attributable to new customers, or whether part of the cost represents shared network costs that also benefit existing customers, would require detailed project-level analysis.

3.42 However, the stability of this ratio at approximately 100% over the five-year period indicates that greater proportional contributions from consumer connection CAPEX are not driving the increase in Vector's overall reliance ratios between RY28 and RY30.

3.43 In contrast, Figure 3.3 below shows that contributions from system growth CAPEX have been trending upwards, from 54% in RY25 to a peak of 211% in RY30. We note that longer-term forecasts are currently not publicly available. As discussed above, we suggest that the EA explores whether any trends it asserts are indeed long-term trends or, in the case of this particular ratio, potentially driven by lumpy CAPEX timing.[91]

[91] If CAPEX is incurred over a few years but benefits users beyond the cohorts joining the network in those exact years, the distributor may wish to recover the costs from other cohorts outside of the CAPEX period. When viewed through an annual ratio of contributions to expenditure, it may appear that the annual ratio is volatile (erroneously) indicating that certain cohorts pay more or less than others. In reality, when averaged over multiple years, the distributor's overall reliance on capital contributions to finance expenditure may have remained unchanged. Therefore, CAPEX timing must be carefully considered when drawing conclusions from such analysis. Comparing multi-year averages, instead of annual ratios, can help smooth out the effect of CAPEX timing.

Figure 3.3 Vector's system growth capital contributions, R25–RY30




Note: System growth capital contribution is estimated as capital contributions for system growth as a portion of the same expenditure category.
Source: Oxera analysis using Vector's RY25 disclosures.

3.44 The increase in system growth CAPEX contributions is largely concentrated in the last three years of the forecast period (RY28–RY30), with contributions expected to increase by 52% in RY30 relative to RY29. As per the NZCC definition, the primary driver of system growth CAPEX is a change in demand or generation (see para 3.38 above). This is further supported by a report from New Zealand government, which forecasts a significant upward trend in electricity demand from the mid-2020s compared to the early 2020s,[92] suggesting that the increase in system growth CAPEX contributions is likely to have been driven by demand.

3.45 Undertaking such analysis to understand the drivers of pricing behaviour—rather than presuming a priori harm from the level of pricing—would be consistent with good regulatory practice (see for example, the 'limb 2' step in section 3.1.2). Indeed, the disaggregated analysis we have undertaken (presented in the preceding two figures) shows that a presumption of harm

[92] Ministry of Business, Innovation and Employment (2024), 'Electricity Demand and Generation Scenarios: Results summary', July, accessed 11 December.

primarily from headline analysis of the reliance levels over time would not be robust.

### 3.3 The targeted intervention measure is premature from a policy perspective

3.46 At the time of the July Decision, the EA decided not to undertake a full-scale reform, citing as its rationale the lack of data to calibrate its balance-point principle and distortive effects to the NZCC's revenue allowances.[93] We observe that the same reasons appear to apply to—and would, by internal consistency, tend to inhibit the policy adoption of—the targeted intervention remedy.

3.47 The **data availability** problem has not been resolved yet—the relevant data will start to be collected from April 2026 when the fast-track measures take effect, and 'will take time to mature', as noted by the EA.[94] Any data required for a full reform is also required for the targeted intervention, as the balance-point principle would need to be calibrated. As a result, the EA appears to apply inconsistent standards of evidence: rejecting full reform (that would apply to everyone) due to current information gaps, while advancing a selective intervention to specific distributor(s) that relies on the same information base, which it has assessed to be inadequate.[95]

3.48 The targeted intervention would appear to be as **distortive for the NZCC's price-quality path regulation** as a full reform, for the selected distributor(s). We understand that the EA can request the NZCC to re-open the price-quality paths, therefore the NZCC would be able to recalibrate the allowances. However:

- this requires further processes to take place and leads to additional administrative burdens;
- it does not promote stability of regulation, which is valued by investors; and
- regulatory allowances need to be assessed as a package, and revisiting certain parts of the package may have a knock-on effect on other elements.

[93] July Decision, para. 5.11. EA Consultation, para. 6.25.
[94] EA Consultation, para. 6.25 (a) (iii).
[95] CEPA (2025), 'Connection obligations and interim restraints on connection charges. New Zealand Electricity Authority', 13 November, para. 35, (accessed 15 December 2025).

3.49 In relation to this third point, we discuss in section 4.3 that the EA's proposal may lead to the deterioration of the distributors' financeability position and increase its risks. These factors need to be assessed when setting cost and return allowances.

3.50 Finally, while the targeted intervention includes a sunset clause—expiring in April 2030, when the more comprehensive and enduring connection pricing reform is envisaged to take place—the direction to be issued under the proposed measures would continue to have effect.[96] This means that the targeted intervention regime may continue to have effect when a future comprehensive reform is in place. The possible interactions between the two are not acknowledged in the EA's consultation.

### 3.4 The EA does not use standard cost-allocation terms

3.51 As discussed in section 2.1, the EA has developed two 'novel' terms to describe connection charge policy settings: the neutral point and the balance point.[97]

3.52 The EA's concept of neutral-point pricing corresponds to the minimum charge for newcomers: if the sum of the upfront and ongoing charges is below the neutral point, the newcomers are subsidised by existing users.[98] At the balance point, '[…] the contribution to shared network costs from new connections is commensurate with the contribution from existing connections.'[99] The EA assumes that pricing above the balance point is discriminatory (between cohorts) and risks deterring optimal connection activity.[100]

3.53 The EA does not adequately explain how its terminology corresponds to commonly used cost standards,[101] and does not provide guidance on how costs should be allocated in practice, e.g. with reference to cost drivers. We discuss these issues in the subsections below.

[96] EA Consultation, paras 7.24–7.25.
[97] In its Consultation, the EA notes: 'While the terms "neutral point" and "balance point" are novel, they relate to orthodox economic concepts. Neutral point pricing is also known as net incremental cost or subsidy-free floor price.' See EA Consultation, footnote 32.
[98] EA Consultation, paras 5.6 (a), and 5.8 (a).
[99] EA Consultation, Appendix B, para. 6B.11 (A).
[100] July Decision, para. 9.10 (iii).
[101] While the EA's 2024 Consultation includes a diagram that references the concept of 'standalone cost' and notes that 'neutral point' relates to 'net incremental cost', this treatment does not adequately explain the relationship between the EA's terminology and established economic cost standards.

### 3.4.1 Cost-allocation standards

3.54 The EA's terminology does not correspond to the common cost-allocation standards used in similar regulatory settings. We list a few standard cost-allocation concepts below, and then seek to map the EA's terminology against these standard measures.

- **Long-run incremental costs (LRIC)**—costs which, in the long run, are directly attributable to, or are caused solely by, a sustained product or service(s) increment, over and above the provision of existing products or services. LRIC therefore refers to the costs that would be avoided in the long run if the firm were to stop serving newcomers.
- **LRIC+**—the LRIC for the product or service in question, plus a share of the costs that are common between different products or services. Related to this, we note that the NZCC uses **total service long-run incremental costs (TSLRIC)** to set regulated wholesale telecommunications prices. TSLRIC covers both the costs that are 'directly attributable to, or reasonably identifiable as incremental to, the service'; and a reasonable allocation of forward-looking common costs'.[102] We see TSLRIC and LRIC+ as broadly comparable.
- **Fully allocated costs (FAC)**—an accounting method for attributing all the costs of a company to its various products and services. Under FAC, direct costs such as dedicated equipment are traced to specific services that drive them, while shared costs such as office expenses cannot be directly linked to specific services and must be allocated using cost drivers (i.e. measurable metrics such as labour hours, square footage, users' demand) or other methods.
- **Stand-alone costs (SAC)**—the costs of meeting a defined service or product increment on its own, i.e. if no service were provided to other users. This is typically the highest cost measure and, in this case, would mean that all the costs of running the network would be allocated to one user.

3.55 In general, charges are likely to be highest under the SAC approach and lowest under LRIC.

3.56 It is ambiguous how the EA's definitions map against standard measures of cost allocation. We interpret from its terminology that the neutral point may be seen as corresponding to the LRIC,

[102] NZ Commerce Commission (2015), 'Final pricing review determination for Chorus' unbundled bitstream access service: Final determination', paras 131–132, accessed 15 December 2025.

while the balance point maps to either LRIC+/TSLRIC or FAC. The neutral-point mapping is supported by the EA's high-level clarification that neutral-point pricing refers to 'incremental cost' or a 'subsidy free price floor'.[103] We consider that the incremental costs under the neutral point are long-term because of the examples the EA provides for the incremental costs, such as extension cost and network capacity cost.[104] The balance-point mapping is more uncertain due to the limited methodological guidance set out by the EA.

3.57 Where cost-reflectivity is imposed in regulated sectors, regulators provide clear guidelines on the appropriate cost-allocation standard to apply. For example, as noted above, the NZCC has referred to TSLRIC to set regulated wholesale telecoms prices.[105] Ofcom (communications in the UK) and Ofwat (water in England and Wales) issue detailed regulatory accounting guidelines which, while not always explicitly prescribing FAC, generally result in cost-allocation standards that closely approximate FAC, to ensure cost-reflective pricing while protecting against excessive charges.[106]

3.58 The most appropriate cost-allocation standard depends on the context. For example, the UK Competition Appeal Tribunal (CAT) approach in the *Le Patourel v BT* case illustrates this context-dependency. In relation to an alleged excessive pricing claim against BT, where a key issue of dispute was in relation to cost allocation by BT Group, in its pricing strategies, the CAT rejected both SAC and FAC as the correct pricing measure. Instead, it stated that the correct measure should lie somewhere within the range offered by two approaches in the context of that particular case.[107]

[103] EA consultation, para. 5.6(a) and footnote 32.
[104] July Decision, Part 6B, defines the components of incremental cost including 'extension cost of the relevant minimum scheme, excluding any incremental transmission cost' and ' network capacity cost of the relevant minimum scheme'.
[105] NZ Commerce Commission (2015), 'Final pricing review determination for Chorus' unbundled bitstream access service: Final determination', paras 131–132, accessed 15 December 2025.
[106] Ofwat (2021), 'RAG 2.09 – Guideline for classification of costs across the price controls', October; Ofcom (2025), 'Annex 2: Cost identification and allocation', 21 November, both accessed 15 December 2025. Note, BT Group's regulatory financial statement methodology, developed under Ofcom's regulatory framework, appears to employ FAC principles, see: BT Group, 'Accounting Methodology Documentation Relating to the 2024 Regulatory Financial Statements', accessed 15 December 2025.
[107] In addition, the CAT made it clear that: 'firms in competitive conditions should enjoy a considerable degree of flexibility in how common costs are recovered'. CAT (2024), *Le Patourel v BT*, Case Number: 1381/7/7/21, 19 December, para. 907, accessed 15 December 2025.

3.59 The EA intends to undertake a *targeted intervention* approach, whereby it will investigate distributors' connections charging methodologies case by case if it is concerned that the balance-point principle may not be adhered to. It is therefore problematic that the EA has not provided sufficient guidance on its cost benchmark, making it more difficult for stakeholders to understand the concepts, and hence creating uncertainty about the appropriate cost-allocation standard to apply in this context. Moreover, the uncertainty regarding the definition of the cost standard in the first instance (i.e. does the balance point correspond to LRIC+ or FAC) adds to the uncertainty surrounding the intended implementation of the cost standard. In other words, it is not unambiguous or clear what common cost standard the distributors will be measured against, nor how the standard is to be applied in the context of the NZ electricity distribution industry.

3.60 The mapping of the EA's terminology with the standard one would help stakeholders engage with the Consultation more efficiently, and potentially reduce the ambiguity behind some of the EA's terms. Indeed, the EA provided a chart mapping the neutral- and balance-point principles to SAC and incremental costs, demonstrating that it considers such information to be enhancing clarity.[108] However, given that the chart does not comment on the allocation of the shared costs, we did not find that it provided sufficient clarity.

### 3.4.2 Cost allocation drivers

3.61 In addition to the cost-allocation standard (i.e. the choice between such concepts as SAC or FAC), the cost-allocation principles need to be defined to allocate common costs and identify (indirect) incremental costs, and differentiate between the two.

3.62 Given that the balance-point principle requires common costs to be allocated among the users and the incremental costs they are causing to be identified, it would be useful for the EA to provide recommendations on how distributors should go about allocating the common costs.

[108] Electricity Authority (2024), 'Distribution connection pricing proposed Code amendment. Consultation', Figure 7.1.

3.63 There are pros and cons in different approaches for allocating costs, as well as different case-by-case considerations that could guide one cost driver to be preferred over another, in different settings. For example, companies may allocate common costs using revenues as a cost driver. While this can be a transparent, easily audited and objective means of allocating costs, it would also tend to introduce circularity into the assessment—costs may need to be allocated independently of revenues.[109] Rather than using revenues as cost drivers, distributors could identify other measurable metrics driving the costs, such as the number of users, the capacity they request, or their consumption patterns.

3.64 As an example of regulatory guidance, such principles (in relation to implementing cost standards) are outlined by the regulators Ofcom and Ofwat in their regulatory accounting guidelines, with Ofcom being less prescriptive than Ofwat.[110]

3.65 We are not aware of similar guidelines being available to distributors in New Zealand. There are information disclosure requirements, but these are less detailed than we consider is needed in this case to provide objective ex ante guidance to companies.[111] Indeed, this is especially so when the company faces the risk of ex post 'targeted intervention' in relation to how it has implemented its charging. The fast-track measures also provide some clarity, but these also do not outline cost-allocation principles.[112]

3.66 Such guidance on cost-allocation principles would help with the interpretation of the concept of 'commensurate' contribution to shared network costs within the definition of the balance-point principle.[113] Without such guidance, the commensurate contribution could mean equal amount, equal percentage, or the same methodology being applied to allocating costs based on cost drivers.

[109] The Regulatory Authority of Bermuda suggested this approach. See Regulatory Authority of Bermuda (2024), 'Review of the Regulatory Accounting Instructions for Electricity Sector: Final Report', 20 November, Annex 1, para. 14, p. 34, accessed 15 December 2025.
[110] Ofwat (2021), 'RAG 2.09 – Guideline for classification of costs across the price controls', October; Ofcom (2025), 'Annex 2: Cost identification and allocation', 21 November, accessed 15 December 2025.
[111] NZ Commerce Commission (2024), 'Electricity Distribution Information Disclosure (Targeted Review 2024) Amendment Determination 2024 [2024] NZCC 2'.
[112] July Decision, section 6 (Connection enhancement cost allocation).
[113] EA Consultation, para. 5.6 (b).

### 3.5 Summary of the assessment of the form of the EA Consultation

In this section, we have assessed the form of the EA Consultation. While it has similarities with the international processes that we have reviewed, we observe that the Consultation differs from international practice in its timeframe, clarity of the theory of harm and policy objectives, and assessment of the proposed remedy, which we consider has an impact on the effectiveness of the EA Consultation in achieving its objectives.

We further observe the following additional limitations of the form of the EA Consultation.

- The EA's **empirical support** for the case for intervention is **limited**. In particular, the EA builds its case on anecdotal evidence of the perception that connection charges are high, indirect indicators of deterred or delayed connection activity, and a rising trend in reliance levels. The EA acknowledges that it cannot reliably draw inference from data on reliance levels, but still appears to rely on this data, within its limited base of quantitative evidence. Accordingly, we examine historical data for Vector, in relation to reliance levels, and demonstrate that the rising trend in reliance levels is insufficient evidence of non-compliance with the balance-point principle; further empirical investigation about the drivers of the (changes in) reliance levels would be essential to justify intervention. The EA acknowledges limitations of its analysis,[114] but introduces its proposed reforms regardless.
- The **targeted intervention** is **premature from a policy perspective**. The EA recognises that conducting a full reform on load connection charges would be premature due to the limited available data and potential distortive effects on the price-quality path regulation conducted by the NZCC. We consider that the same challenges apply to the proposed targeted intervention, which is therefore not sufficiently justified. While imposing additional regulatory risks on distributors, the targeted intervention is not sufficiently different from a full reform in terms of the restraints it places on distributors.
- The **EA does not use standard cost-allocation terms.** It does not specify how its cost standard definitions, such as the balance-point principle, map against standard measures of cost allocation, such as LRIC or FAC); neither does it guide

[114] EA Consultation, para. 5.40 (f).

distributors on best practices of cost allocation, which need to be undertaken using a consistent methodology of identifying cost drivers. The EA plans to intervene ex post when it identifies concerns that its balance-point principle may not have been met, without giving clear ex ante regulatory guidance on how costs should be allocated. This does not provide sufficient clarity to distributors about how to mitigate the risk and costs of the EA's targeted interventions.

# 4 The substance of the EA Consultation—unintended consequences

4.1 In this section, we assess the extent to which the proposed targeted intervention on the basis of the balance-point principle risks the introduction of additional risks for networks and consumers.

4.2 First, we explore how some **ambiguities** about the practical enforcement of the balance-point principle may affect the distributors' ability to meaningfully engage with and operationalise the EA's proposal (section 4.1). In particular, we look at what would constitute a 'similar contribution' to shared network costs, and whether the balance point is to be applied as a static or dynamic test.

4.3 Next, we examine the implications of applying a balance-point principle from both static and dynamic perspectives, with particular focus on the influence of **forecast risk** (section 4.10). Our analysis indicates that the static approach entails significant administrative burden and proves ineffective ex post, while the dynamic approach imposes an even greater administrative burden, rendering it impractical.

4.4 We then examine how these identified ambiguities as regards the description of the balance-point principle, alongside the implications of its application, contribute to additional risk for distributors and existing users. We consider a greater exposure to demand, regulatory, systematic interest and financeability risk leading to higher effective costs of capital and/or allowed return requirements (section 4.1.3). We also highlight the increased reliance on the NZCC's price control to compensate distributors for these higher risk.

4.5 Finally, we conclude that the EA's impact assessment does not fully account for these risks and that it has not demonstrated that the benefits of enforcing a specific balance-point calibration would outweigh the combined effects of these additional costs and risks, which are ultimately likely to be borne by (existing) consumers, and may also require the NZCC to allow higher returns for networks going forward (section 4.1.4).

### 4.1 The substance of the EA Consultation—implementation challenges

4.6 While the EA and CEPA provide clarifications on the balance-point principle in their publications, some details surrounding its practical enforcement, as proposed under the targeted intervention framework, remain unclear—specifically how exactly the EA would determine whether the balance-point principle has been breached or met.

- First, while the EA has provided guidance on the **definition of incremental costs** (e.g. see section 2.1.2), our expectation is that there will remain discrepancy as regards which costs different distributors consider incremental and shared, and uncertainty about whether the EA would consider their classification appropriate. Accordingly, it is important for networks to have clarity about the EA's methodological approach (e.g. which cost standard applies) as well as its implementation approach (e.g. how the cost standard should be implemented where there is room for judgement on cost drivers and allocation keys[115]). Given that the incremental and shared network costs are treated differently under the balance-point principle, agreeing on this classification will be important.
- Second, as discussed in paragraph 3.66 above, the EA's expectation of a **'commensurate' contribution** from both existing and new connections remains ambiguous—it could mean equal dollar amounts, equal percentages (of shared network costs), or simply applying the same cost-allocation methodology based on cost drivers. Each interpretation would have significantly different implications for networks, and, without clarity, productive engagement with the proposal is challenging.
- Third, it is unclear whether 'similar contributions over the lifetime of the customer' is intended as a **static** test (assessed only at the time of quoting the connection charge) or a **dynamic** one (requiring recalibration of ongoing charges as customers' demand changes). We consider that the dynamic interpretation is not practical, as we explain below.

4.7 Focusing on the third uncertainty about static versus dynamic interpretation, the EA notes in its July Decision that the balance-point principle is to be applied 'over the lifetime of a

[115] This guidance could take the form of ex ante regulatory accounting guidelines and/or references to recognised accounting standards.

connection'. This means that the EA would, in theory, need to undertake the reconciliation of the connection charges, to incremental cost, incremental revenue and the contribution to shared network costs, and check that the contribution to shared network costs is similar among the users over multiple years. We see two potential interpretations of this approach.

- **Static approach**. If the assessment is static, the similarity of the shared network costs contribution would need to be ensured ex ante, at the time when the connection charge is quoted and the distributor has expectations about demand and expenditure.
- **Dynamic approach**. If the assessment is dynamic, the similarity of the shared network costs contribution would need to be ensured at any point in time, i.e. based on the outturn demand and expenditure data and the updated expectations about these. As a result, the ongoing charges would need to be constantly adjusted for all users.

4.8 Both approaches would lead to an increased administrative burden for distributors, but the impact is stronger under the dynamic approach. We note that the EA received feedback on the administrative burden associated with the balance-point before the July Decision, but neither the EA nor CEPA seems to have addressed it at the time.[116]

4.9 The conceptual ambiguity of the balance-point principle increases regulatory uncertainty for distributors. Without a clear definition of how the principle should be applied (e.g. static versus dynamic or with a specific definition of the 'commensurate' contribution to shared network costs), networks would face difficulty designing tariffs and making financing decisions, and there would be a regulatory risk of being non-compliant with the requirements.

4.10 Considering the ambiguity on the precise enforcement of the balance-point principle, we have constructed an illustrative model to capture the dynamics of enforcing both a static and a dynamic balance point, focusing on the potential outcome for existing and new users as well as distributors. We have interpreted the results of this model directionally rather than

[116] CEPA concluded on the raised concerns that: 'If, in the future, it is considered desirable to mandate the level of the upfront charge, consideration could be given to ensuring that there is sufficient scope for variation in the combination of the upfront and ongoing charges to reflect the variation in the connection costs.' (July Decision, p. 187)

with reference to specific levels.[117] The sections below outline the cost categories considered (section 4.1.1) and, more broadly, the approach used for our illustrative modelling (section 4.1.2). We then discuss the implications of cost and demand risks illustrated by the model (section 4.1.3), before concluding with our findings from this exercise, including highlighting the practical challenges of applying the EA's balance-point principle (section 4.1.4).

### 4.1.1 The categories of costs and charges to be used in the illustrative balance-point model

4.11 Based on the commentary on the balance point by the EA, including discussions in the July Decision,[118] we understand the EA to be focused on how much of the following three cost categories distributors recover, and at what point in time:

- direct incremental costs—the costs directly caused by the new user, e.g. extension costs and the customer-selected enhancement costs (as described in section 2.1.2);
- indirect incremental costs—the costs of increasing the network capacity as a result of the connection by the new user, e.g. the network capacity costs (as described in section 2.1.2);
- shared network costs—the costs that would need to be incurred even if no new user connects to the network.

4.12 We assume that the combination of the direct and indirect incremental costs form the *Incremental Cost* component defined in the code amendments introduced in the July Decision.[119] As for the shared network costs, the EA defined these in its latest consultation as 'the balance of costs that are not incremental to a single connection'.[120]

4.13 We understand that the three cost categories can be recovered through upfront connection charges (associated with a specific connection) or through ongoing revenues (i.e. the network charges paid by all network users). Under the status quo,

[117] A more detailed assessment would need to be undertaken for each distributor—using historical and forecast levels of costs, demand and charges—to make more precise statements about the impacts of the balance-point principle. Conducting such analysis for individual distributors at this stage is unlikely to be meaningful, as too many aspects of the balance-point principle remain uncertain and no empirical data is available for the connection charge reconciliation.
[118] In particular, the code amendments incorporated as part of the connection charge reconciliation measure.
[119] July Decision, Part 6B.11 of the proposed code amendments, p. 121.
[120] EA consultation, para. 7.14.

networks have discretion to set the upfront charge.[121] However, distributors face two constraints when adjusting ongoing charges:

- total revenue recovered from consumers needs to reflect the allowed revenue established by the NZCC under the price-quality regulation;
- ongoing charges are typically set at the level of consumer groups (or customer types) rather than tailored to individual connections.

4.14 [✂]

### 4.1.2 The illustrative model set-up

4.15 Based on the above, we developed an illustrative model to assess how distributors can adjust charges so that each user pays a comparable level of shared network costs over their lifetime, as per the definition of the balance point; and what secondary effects follow from enforcing a balance-point principle.

4.16 For simplicity, we assume that the first user (user 1) enters in the first year and becomes the 'existing user' in subsequent periods. In the second year, a new user enters (user 2), who has the same incremental costs as user 1.[122] By the third year, both users are treated as existing users. We further assume that both remain connected and continue paying charges for three years, after which the first user disconnects. The second user remains connected through the fourth year, which is the end of the model horizon. We assume that both users require the same capacity on the network and are otherwise the same.

4.17 We assume that, from the distributors' perspective, aggregate revenues should match aggregate costs (both incremental and shared). We assume all costs and revenues to be expressed in the net-present-value (NPV) terms, thus we make no explicit assumption on a particular WACC, for simplicity.

[121] July Decision, p. 157.
[122] This set-up aligns with the EA's description that the balance-point principle should stand for *comparable* consumers—i.e. consumers with similar incremental costs and part of the same consumer group. See EA Consultation, para. 7.15.

4.18 Furthermore, we assume that both users fall within the same consumer group, meaning that any adjustment to one user's ongoing charge would also affect the other. This reflects Vector's current structure, under which standard connections would fall under one large standard-rate customer category (for ongoing charges), as of 2020. This assumption enables us to capture the constraints that distributors experience in not being able to adjust individual ongoing charges within consumer groups, while trying to balance the contributions to shared costs paid by the old and new users within those groups. Finally, we populate the incremental cost and shared cost figures with illustrative amounts.

4.19 Through this model, we explore the following scenarios.

- In the **first scenario**, we consider how distributors can achieve the balance point in an ideal world where all forecasts (in terms of future costs and demand) materialise.
- In the **second scenario**, we simulate the EA's concern that motivates its proposal to intervene with interim restraints on connection charges: that distributors may be overcharging new users with connection charges, effectively making them pay for a greater proportion of the shared network costs than they benefit from.
- Next, we assess how forecast risk affects the balance-point scenario, which we consider across three dimensions:
  - **incremental cost uncertainty**—expected incremental costs may differ from actual costs. This is particularly relevant for ongoing costs, which distributors must forecast over the expected lifetime of a connection (approximately 30 years for a typical residential connection) to calibrate the connection charge;
  - **shared cost uncertainty**—the shared cost base may also diverge from expectations, which could require higher or lower recovery through ongoing charges, and which could affect the expected balance of shared network cost contributions;
  - **demand uncertainty**—expected demand may not materialise. When setting the connection charge for the first user, the distributor anticipates a certain volume of additional connections in future periods. If fewer users connect than expected, the distributor may need to recover a greater share of costs from the first user than originally intended (if more users connect, the initial estimate of the appropriate share of costs for the first user would be too high).

4.20 We note where our conclusions differ depending on the static or dynamic interpretation of the balance-point principle.

### 4.1.3 Implications of cost and demand risks based on the illustrative model

4.21 Under the **first scenario** where we simply calibrate the balance point, we find that the most practical interpretation of the balance-point principle is for a distributor to set the connection charge of user 2 at the level that would satisfy the following condition for that user: the proportion of the shared costs it covers over the lifetime of its connection equals the average proportion of the network it benefits from over the years, assuming all connected users benefit from the network equally. Table 4.1 illustrates these proportions.

Table 4.1 Intended allocation of shared costs in the first scenario

| | Year 1 | Year 2 | Year 3 | Year 4 | Average over four years | Average over lifetime of connection |
|---|---|---|---|---|---|---|
| User 1 | 100% | 50% | 50% | 0% | 50% | 67% |
| User 2 | 0% | 50% | 50% | 100% | 50% | 67% |

Source: Oxera assumptions.

4.22 Given that we ignore forecast risk in this scenario, the expected and outturn proportions paid are identical, therefore it does not matter whether we assume a static or dynamic balance-point interpretation.

4.23 We highlight that the accurate calibration of a connection charge in this setup depends entirely on correctly distinguishing between incremental costs and shared network costs. If a distributor sets a connection charge and subsequently reallocates some of that user's incremental costs into shared network costs, the already set connection charge becomes excessively high because the user has paid for costs that should have been recovered from all users. This shows that, even if the balance point appears to hold at the methodological level, any changes in underlying cost-allocation practices—whether over time or between distributors—would result in users not being treated equally in practice.

4.24 In the **second scenario**, which reflects the EA's concern about increased connection charges for newer connections, the model confirms that if the connection charge for user 2 is set above the balance-point level identified in the first scenario, ongoing charges for both users need to decrease after the entry of user 2 to keep the total revenues equal to the total costs. In that case, over the period assessed in the model, user 2 pays a higher proportion of the shared costs than user 1, which aligns with the EA's concern and shows that the model is calibrated appropriately. This occurs because a portion of the shared costs is effectively recovered through the new connection's upfront charge. As forecast risk is excluded in this scenario, the static and dynamic balance points remain equivalent in practice.

4.25 Next, we assessed how forecast risk can affect the distributor and the users. We summarise our observations in Table 4.2 and describe them below.

Table 4.2 Summary of findings from illustrative modelling

| **Type of uncertainty** | **Event** | **Outcome for network absent adjustment** | **Ongoing charge adjustment** | **Outturn shared cost coverage** | | **Balance-point principle compliance** | |
|---|---|---|---|---|---|---|---|
| | | | | User 1 | User 2 | Static interpretation | Dynamic interpretation |
| Incremental cost uncertainty | User 2 incremental costs are above forecast | Under-recovery | ↑ Increase for both users | Above their share | Below their share | Yes | No, unless user-specific recalibration is allowed, which is impractical |
| Shared cost uncertainty | Common costs are above forecast | Under-recovery | ↑ Increase for both users | Below their share | Above their share | Yes | No, unless user-specific recalibration is allowed, which is impractical |
| Demand uncertainty | User 1 disconnects early | Under-recovery | ↑ Increase for remaining user | Below their share | Above their share | Yes | No, unless user-specific recalibration is allowed, which is impractical |

Note: This table summarises our findings from the illustrative model set-up described above.
Source: Oxera.

4.26 We observe the following.

- Since the upfront connection charges for both users are set based on forecast costs and demand at the time the users connect, only their ongoing charges can subsequently be adjusted to balance the allocation of common costs between them, if costs or demand deviate from forecasts.
- **Incremental cost uncertainty**: if the *incremental costs* of user 2 in the third year turn out higher than expected when the connection charges were set, the distributor would under-recover its costs unless the ongoing charges are adjusted. To restore the balance, the distributor must increase ongoing charges going forward, and has to adjust these charges for both users as they fall within the same consumer group. This adjustment causes user 2 to cover *less* than its intended proportion of the shared costs, resulting in subsidisation by user 1.
- **Shared cost uncertainty**: if *shared costs* in the third year turn out higher than expected when the connection charges were set, the network would under-recover its costs unless the ongoing charges are adjusted. The distributor must increase ongoing charges going forward for both users, as they belong to the same consumer group. This adjustment results in user 2 contributing *more* than the intended share of common costs, effectively subsidising user 1.[123]
- **Demand uncertainty**: in this scenario, the cost forecast remains accurate, but the connection life of user 1 is shortened by one year—i.e. user 1 disconnects early. Without a recalibration of ongoing charges, the distributor would again under-recover its costs by the amount of the ongoing charges from user 1 that did not materialise. Increasing ongoing charges from the third year onwards would realign revenues and costs. This results in user 2 contributing more than its fair share and subsidising user 1 that

[123] This is because user 2 has two years left to pay ongoing charges, while user 1 has only one year remaining. As a result, the increase in ongoing charges will affect user 2 for longer. One way to address this would be to set different ongoing charges for the overlapping year (when both users are connected) and for the subsequent year (when only user 2 remains). Applying this approach at network scale (with thousands of users with different start and end of connection dates) would create significant additional administrative burden.

paid for fewer years than expected. This risk was previously highlighted to the EA as a *stranding risk*.[124]

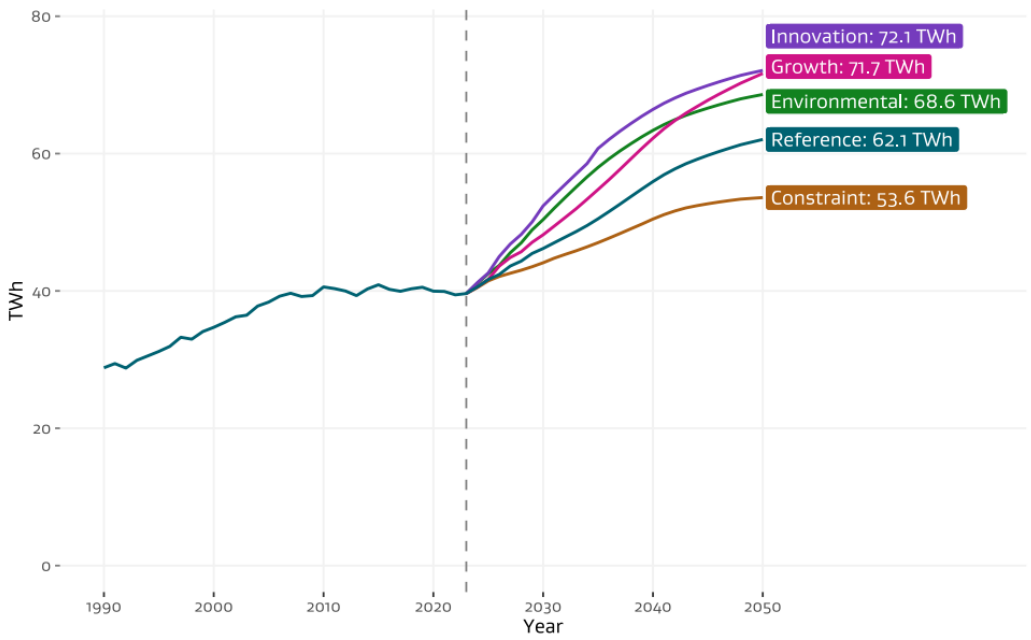
4.27 Under a static approach, no breach of principle arises from forecast error risk in the scenarios described above, as the connection charges for both connections were set with the expectation that the balance-point principle would hold. However, under a dynamic approach, the balance-point principle would be breached because the users would be contributing to the shared network costs more or less than they should individually, based on their usage of the network (see paragraph 4.21 for our assumed allocation principle).

4.28 The only way to restore the balance point from an ex post perspective (i.e. in a dynamic way) would be to separate the ongoing charges for the two connections, allowing user 1 and user 2 connection charges to be adjusted individually until the balance is achieved. Such adjustments would need to occur each time actual outcomes are found to deviate from the forecasts.

4.29 The risks described above are two-sided in nature, meaning outturn costs and demand may over- or under- materialise for any given year and user. Irrespective of the direction of the deviation, ongoing charges would require adjusting, to align the total expected revenues from (upfront and ongoing) charges with the distributors' allowed return. We note that there is significant uncertainty around New Zealand's electricity demand, as shown in Figure 4.1.

[124] July Decision, p. 184 and EA Consultation, para. 10.5.

Figure 4.1 Uncertainty in electricity demand forecasts in New Zealand




Note: Definitions of scenarios: a) Reference: Current trends continue with anticipated changes b) Growth: Higher economic growth drives immigration while policy and investment focus on priorities other than the energy sector c) Innovation: Current economic trends continue, alongside accelerated technological uptake and learning rates d) Constraint: International trends leave little room for domestic growth or innovation e) Environmental: New Zealand targets more ambitious reductions in emissions.
Source: Ministry of Business, Innovation & Employment (2024), 'Electricity Demand and Generation Scenarios: Results summary', July, Figure 1 and page 8.

4.30 Finally, we note that even if the distributor were asked to absorb part of these forecast risks by forgoing compensation for costs that were supposed to be remunerated, the end consumers would still be affected via the increased risks and hence financing costs. In such a scenario, the distributors' business would be seen as riskier by investors, increasing their required return.

### 4.1.4 Conclusions based on the illustrative model analysis

4.31 We draw the following conclusions from our analysis of the illustrative model.

- It is not possible to implement the balance-point principle in a dynamic way unless each user is treated individually rather than in consumer groups, to enable flexible differentiated treatment of their ongoing charges. If individual treatment were the default approach to ongoing charges (as opposed to the

exception), a dynamic balance-point approach would greatly increase administrative complexity, volatility in individual ongoing charges, and discrepancy in those individual charges.

- At the same time, under a static approach, the users would not ultimately pay a 'fair' proportion of the shared network costs over the lifetime of their connections, since demand and cost forecasts are very likely to diverge from actual outcomes. While the static approach keeps the administrative burden manageable, the approach will not achieve (ex post) fairness for the users.
- It is critical for the effectiveness of the balance-point principle to accurately distinguish between incremental and shared network costs. Reclassification of costs would imply that some users subsidise the others.

4.32 The analysis above was focused on illustrative implementation challenges of the balance-point principle. In the sections below, we now consider the likely practical implications of the balance-point principle for Vector.

## 4.2 Locking in to shallow or deep regimes

4.33 Connection charges for the electricity distribution network can be classified according to two main regimes, or a combination thereof: shallow and deep. In a shallow regime, new users cover through connection charges the costs of the infrastructure necessary to connect their installation to the network connection point. On the other hand, in a deep regime, connection charges include, in addition to the costs characteristic of a shallow regime, contributions for other network reinforcements and extensions required in the existing distribution grid to enable grid users' connection. In practice, many countries adopt hybrid systems, which combine elements of both regimes.[125]

4.34 The balance-point principle prevents networks from adjusting the proportion of shared network costs recovered through upfront and ongoing charges from one cohort of users to another, over time. In practice, from the point at which the balance-point principle applies, this would constrain distributors from moving between shallow and deep charging regimes, and

[125] European Union Agency for the Cooperation of Energy Regulators (ACER) (2025), 'Getting the signals right: Electricity network tariff methodologies in Europe ', 26 March, para. 2.36, accessed 15 December 2025.

vice versa. This occurs because the initial charging regime establishes a proportion of shared costs to be recovered from each user's upfront connection charge. A shift—such as moving from a shallower cost regime to a deeper one—would place a larger proportion of shared network costs on the new user while reducing the proportion recovered through ongoing charges, which are shared, thereby breaching the balance-point principle.

4.35 We understand this to be a result of the balance point's design. The EA stated in its latest consultation that:[126]

Balance point pricing implies allocation levels are stable over time if there is no change in the type of connection activity (eg, more high-cost connections), relative input cost levels (ie, between connection activity inputs versus other capex or opex inputs) or allocation of shared network costs between consumer groups.

4.36 The EA acknowledges in the consultation that '[i]ncreases [in upfront connection charges] are efficient where they are needed to prevent new connections from being subsidised.'[127] Vector has previously shared its perspective with the EA that [✂].

4.37 [✂]

4.38 [✂]

4.39 Vector's experience highlights that there are pros and cons for both shallower and deeper connection charge regimes, and neither is unequivocally preferable to the other. Instead, policy objectives and other characteristics of a specific energy market are key in choosing the most appropriate regime.

4.40 Indeed, deep, shallow and mixed connection charging regimes are all widely used internationally. In particular, in a sample of countries comprising the 27 member states of the European Union (EU) plus Norway, 11 adopt a shallow regime, six a deep

[126] EA Consultation, para. 7.15 (d).
[127] EA Consultation, para. 7.15 (f).

regime, and 11 a mixed regime.[128] This variability demonstrates that the appropriate depth of charging regime depends on both the unique circumstances of each geography's electricity grid, as well as the priorities of the respective regulators—below we discuss some of the main trade-offs between shallow and deep regimes.

4.41 It is helpful to note as relevant context that the Council of European Energy Regulators (CEER) offers seven principles to consider when choosing a charging methodology:[129]

- cost reflectivity;
- non-distortionary;
- cost recovery;
- non-discriminatory;
- transparency;
- predictability;
- simplicity.

4.42 There are trade-offs in the application of these principles. For example, shallow regimes are typically considered to be simpler, but deeper regimes are considered more cost-reflective. Table 4.3 outlines considerations typically highlighted when comparing the two alternatives.

Table 4.3 Pros and cons of shallow and deep regimes—typical characteristics

| | **Shallow regimes** | **Deep regimes** |
|---|---|---|
| Environmental and growth objectives | Incentivises connections, hence useful for growth and electrification | Puts greater burden on connectees, disincentivising them to connect |
| Price signals for efficient network development and cost reflectivity | Poor location price signals, due to poor cost-reflectivity | Strong location price signals due to stronger cost-reflectivity |
| Distributor's cost recovery | Higher risk in relation to cost recovery | Lower risk in relation to cost recovery |
| Simplicity | Simple in application | Requires cost-allocation assessments |

[128] European Union Agency for the Cooperation of Energy Regulators (ACER) (2025), 'Getting the signals right: Electricity network tariff methodologies in Europe ', 26 March, p. 88, figure 34, accessed 15 December 2025.
[129] Council of European Energy Regulators (2017), 'Electricity Distribution Network Tariffs CEER Guidelines of Good Practice', 23 January, p. 7, accessed 15 December 2025.

| | Shallow regimes | Deep regimes |
|---|---|---|
| Predictability of charges | More likely to be known in advance if a connection tariff is set without reference to costs | More likely to be bespoke and hence unpredictable |

Source: Oxera based on Klepo, M. (2006), 'An Approach to Transmission and Distribution Network Connection Charges', *Journal of Energy - Energija*, **55**:6, pp. 606–633, Table 1.

4.43 Table 4.3 shows that both regimes have their advantages and the choice of the preferred regime needs to account for policy objectives. Therefore, distributors wanting to switch from one regime to another may have valid reasons for their choice in their circumstances, which the EA's balance-point principle constrains.

4.44 As deep regimes encourage efficient network development, and imply lower cost-recovery risk for distributors, these are helpful features of the connections charging regime at a point when a jurisdiction is experiencing high demand (and cost) uncertainty. This is because the efficiency of the network's development would be maintained while meeting growth in demand, due to cost-reflectivity in market entry signals. Moreover, under deeper regimes, upfront distributors' cash flows would be higher, which is useful for funding network development investments. As we show in Figure 4.1 above, the Ministry of Business, Innovation & Employment is forecasting increasing level of electricity demand, and higher levels of demand uncertainty, as New Zealand pursues policies to reach its net zero targets.

4.45 In the following section, we discuss the risks that a shallow regime would create for distributors like Vector, in more detail.

## 4.3 Additional risks created by the balance-point principle

4.46 In this section, we discuss a few risks that we see the balance-point principle creating, in the context of the New Zealand electricity distribution sector:

- forecast risk and bills volatility;
- financeability constraints;
- the risks of revenue deferrals.

4.47 We end the section with considerations of the impact of these risks on the NZCC's price-quality path regulation.

### 4.3.1 Forecast risk and bills volatility

4.48 Constraining distributors' ability to efficiently and cost-reflectively cover costs of system growth through a change in connection charges potentially introduces new risks to both distributors and users.

4.49 A shallower charging regime increases the proportion of shared costs that are recovered through future ongoing charges. As a result, the network—and therefore all users—are exposed to greater forecast risk, specifically demand and cost risk. We introduced these risks in section 4.1.

4.50 If expected new users' **demand** does not materialise, the shared costs must be recovered from a smaller user base, and if existing users disconnect earlier than anticipated, they cease contributing their expected share of ongoing charges despite having paid an upfront connection charge that assumed continued participation.

4.51 **Costs** that were not recovered upfront are recovered through the ongoing charges paid by the remaining user base.[130] Should the price-quality path regulation allow for (at least partial) recovery of cost deviations in revenue allowances, cost deviations would need to be reflected in the ongoing charges.

4.52 The amount by which bills need to be adjusted is smaller in the scenario where a greater proportion of costs have already been recovered through upfront connection costs (i.e. a deeper charging regime).

4.53 We therefore conclude that preventing networks from applying deeper charging regimes may increase bill volatility for existing users and run counter to the EA's statutory objective of promoting the long-term benefit of consumers.[131] In effect, the NZCC has, in a similar vein, stated that it is undesirable to

[130] We understand that the EA and CEPA support this interpretation, noting that distributors' cost recovery is effectively moved into or out of the RAB regime depending on the size of the upfront connection charge. July Decision, pp. 162 and 185.
[131] EA Consultation, p.2.

increase volatility in the distributors' allowed revenues as well as the consumers' ongoing charges.[132]

### 4.3.2 Financeability of the distributor

4.54 While it remains unclear how the EA expects the balance-point principle to be implemented in practice, the EA explains that if it identifies that upfront connection charges exceed the proposed balance-point level, it would direct a reduction accordingly, as part of the targeted intervention proposal.[133] The practical impact of the EA proposal seems to effectively allow for the imposition of a cap on connection charges, within the EA's targeted intervention.[134]

4.55 As discussed above, when upfront connection charges are reduced, the shortfall translates into additional CAPEX that is added to the regulatory asset base (RAB) and would be recovered over the life of the connection through ongoing line charges (and other connections if the asset lives applied to RAB are longer than the life of the connection).[135]

4.56 While this may appear to be merely a timing change in cash flow, it may have material consequences for distributors' financeability. This means that distributors may not have the liquidity currently available to them to run their businesses, and may need to raise new financing. Typically, companies find it more practical to raise debt than equity, to the extent that credit rating metrics allow.

4.57 In this section, we illustrate the directional impact of the EA's proposal of the balance-point principle (and hence adopting a shallower charging regime) on Vector's financeability metrics. In

[132] 'In making our final decision, we have balanced the importance of enabling suppliers to recover allowable revenues in a timely way, alongside the desirability of managing aggregate volatility in gross allowable revenue and avoiding mid-period price-shocks.' New Zealand Commerce Commission (2023), 'Financing and incentivising efficient expenditure during the energy transition topic paper. Part 4 Input Methodologies Review 2023 – Final decision', 13 December, p. 352, para. D44, accessed 15 December 2025.
[133] EA Consultation, Appendix B, 6B.11B.
[134] In section 4.3.1, we demonstrated how the balance-point principle may limit networks' ability to change the extent to which network costs are recovered by capital contributions within a consumer group, while in this section, we explore how a reduction in the aggregate capital contribution would impact financeability.
[135] July Decision, pp. 162 and 185.

terms of the specific metrics we focus on FFO/debt, debt/EBITDA, FFO/interest paid and EBITDA/interest expense.[136]

4.58 We undertake our analysis based on the version of Vector's financial model that we used when outlining financeability analysis for the NZCC on behalf of Vector, ahead of DPP4 in March 2024, with the only adjustment for the inter period revenue cap in 2026.[137] Therefore, the model does not reflect Vector's latest financial forecasts and the results need to be interpreted directionally.

4.59 We are not in a position with reference to the EA's proposals at this stage to estimate the exact charge that would be required for compliance with the balance-point principle. However, for illustration, we assessed the indicative impact on credit metrics by assuming a reliance level of 90%, consistent with the EA's indicative threshold in its impact analysis.[138] We focus on the regulatory years 2029 (RY29) and 2030 (RY30) only, because these are the two years to which the proposed targeted intervention could apply, and which the EA assesses in its impact assessment.[139] Vector's expected reliance limits in RY29 and RY30 without the cap were [✂] and [✂].[140]

4.60 Our analysis shows that the proposed reform has an adverse impact on all key credit metrics relative to the counterfactual scenario (i.e. no limit on upfront charges and reliance levels). In RY29 and RY30, the FFO/debt, Debt/EBITDA, FFO/interest paid and EBITDA/interest expense ratios generally deteriorate [✂].

[136] The thresholds, which are consistent with a Baa1 rating, have been developed by Vector based on S&P's rating methodology. According to Vector's methodology, which we understand was informed by discussions with S&P in New Zealand, a breach of the threshold by one credit metric may lead to a deterioration of the overall credit rating of the company.
[137] Oxera (2024), 'DPP4 financeability consultation response—financeability modelling analysis', 15 March. We have adjusted the inter period revenue cap to correspond to 24% (nominal) in regulatory year 2026. Commerce Commission (2024), 'Default price-quality paths for electricity distribution businesses from 1 April 2025 – Final decision', November 2024, para 4.34.
[138] The reliance level captures the portion of growth CAPEX directly funded through upfront connection charges, see EA Consultation, para. 6.16. Growth CAPEX consists of the consumer connection and system growth CAPEX.
[139] EA Consultation, section 8 ('Impact analysis'); and para. 7.28. The regulatory year runs from 1 April to 31 March (e.g. RY29 runs from 1 April 2028 to 31 March 2029.)
[140] We undertake our analysis based on the version of Vector's financial model that we used when outlining financeability analysis for the NZCC on behalf of Vector, ahead of DPP4 in March 2024. Therefore, the model does not reflect Vector's latest financial forecasts (as explained in para. 4.58). The reliance level would increase to [✂] and [✂] in RY29 and RY30, respectively, if we were to rely on the latest financial forecasts as noted in the EA's Consultation impact analysis (EA Consultation, Table 8.2).

Table 4.4 Credit rating metric outcomes pre- and post-reform, RY29–RY30

| Credit metric | S&P threshold | RY29 (pre-reform) | RY30 (pre-reform) | RY29 (post-reform) | RY30 (post-reform) |
|---|---|---|---|---|---|
| FFO/debt | **(no lower than) 13.00%** | [✂] | [✂] | [✂] | [✂] |
| Debt/EBITDA | **(no higher than) 4.00x** | [✂] | [✂] | [✂] | [✂] |
| FFO/interest paid | **(no lower than) 3.00x** | [✂] | [✂] | [✂] | [✂] |
| EBITDA/interest expense | **(no lower than) 4.00x** | [✂] | [✂] | [✂] | [✂] |

Source: Oxera analysis using Vector's financeability model as of March 2024.

4.61 Table 4.4 shows that a reduction in upfront charges equivalent to a reliance limit of 90% would worsen the ratios and hence Vector's financeability[✂]. However, we note that the modelled results are sensitive to the assumption of the reliance limit, and given that the EA may assume lower levels of reliance limits in its case-by-case targeted intervention, the effect on Vector's financeability could be more significant. As this analysis shows directionally, the lower the level of reliance limit the EA considers to be appropriate in its targeted intervention, the higher the strain on Vector's financeability would be. The greater the constraints put on Vector's ability to recover its costs through upfront charges, the more likely the financeability metrics would breach the thresholds [✂].

4.62 This assessment also evidences the coordination required between the connection charges reform and the allowed revenues for price paths set by the NZCC, to ensure that the EA's proposals do not impair the outcomes of the NZCC's input methodologies review.

### 4.3.3 Risk associated with favouring the deferral of revenues

4.63 As discussed above, a mechanistic enforcement of the balance point would prevent networks with historically shallow charging regimes, such as Vector, from retaining a deeper regime (as is currently the case). This would force them to defer a larger portion of revenue from connection charges to ongoing charges. Beyond making users' bills more volatile when accounting for forecast risk, we note that the deferral of revenues itself carries risk for the distributor, for two reasons:

- It pushes recovery further into the future, amplifying uncertainty due to general forecast risk, as well as regulatory risk regarding how the price control regime might evolve over the long term;
- It encourages the distributor to increase leverage to meet near-term cash-flow requirements.

4.64 In effect, as we have explored previously in response to the NZCC's consultation on DPP4, the NZCC has considered the effect of deferring revenues within and beyond price control periods.[141] We highlight that revenue deferral introduces or increases at least the following types of risks:

- **regulatory risk**, as regulators cannot offer binding commitments that their successors will honour in full any pledges that they make today regarding expected future returns; [142]
- **systematic interest rate risk**, as the NPV of a longer-duration stream of cash flows is more sensitive to changes in interest rates than that for shorter-duration streams;
- **financeability risk**, as remuneration for costs incurred today is deferred further into the future, the business must borrow or raise equity capital to meet its short-term cash-flow needs. If leverage increases, the business may eventually face financeability issues, as higher leverage can limit its ability to raise additional capital (see section 4.3.2).

### 4.3.4 The EA is unable to compensate distributors for the risk its proposal introduces

4.65 As noted earlier, while it remains unclear how the EA expects the balance-point principle to be specifically implemented in practice, the practical impact of the EA proposal appears to effectively allow for its imposition of a cap on connection charges, within its proposed targeted intervention regime. As also discussed above, the introduction of interim restraints with respect to the balance-point principle for the connections charging methodology may add new risks or emphasise existing ones to distributors, such as forecast, regulatory and financeability risk.

4.66 It follows that, if the EA's proposal introduces additional risk relative to the status quo, the distributor allowances would

[141] Oxera (2024), 'Response to the New Zealand Commerce Commission consultation on the financeability of electricity distribution services in the fourth default price-quality path (DPP4)', 15 March, section 4.
[142] Ibid., section 4.4.

need to reflect this through an appropriate adjustment to the return allowance when determining allowed revenue.[143]

4.67 However, we understand that setting such allowances is the responsibility of the NZCC under Part 4 of the Commerce Act, not the EA.[144] Accordingly, it is essential for the EA to coordinate closely with the NZCC and align with its price control framework, rather than implementing an independent interim solution before the next price control review.

4.68 As noted in an article by Professor Franks, who is part of the project team for this report, the academic literature observes a potential consumer detriment that can arise when risk-adjusted returns to investors in essential utilities are not correctly calibrated. We note that if the NZCC were unwilling to adjust the allowed return of networks to account for additional risks, this would ultimately harm the consumer: when the actual WACC exceeds the regulator-set WACC, utilities scale back investment because projects become unprofitable.[145] Consumers are then exposed to rationing rather than efficient price signals, leading to allocative inefficiency, as projects valued above the network's actual cost of capital are not undertaken.

4.69 Finally, we note that the EA has not undertaken empirical analysis as regards the precise impact(s) that its proposed targeted intervention(s) based on the balance-point principle would have on the distributors' price path—essentially diverting the issue to the NZCC:

> For some distributors, the amendment may also prompt an adjustment to capital management policy or to shareholder distributions (ie, as more earnings are retained in the near-term to put toward funding connections). Whether this is the case depends on the distributor and the Commerce Commission's assessment of whether and how the revenue path should be amended.[146]

[143] Ibid., section 4.4.
[144] The EA acknowledges the NZCC's role in setting the price path in its most recent consultation. See EA Consultation, p. 15
[145] Brealey, R. and Franks, J. (2009), 'Indexation, Investment, and Utility Prices', *Oxford Review of Economic Policy*, **25:**3, p. 437.
[146] EA Consultation, para. 9.20.

Whether revenue paths provide sufficient returns to support investment is a matter for the Commerce Commission (and the owners of distribution businesses – ie, to the extent that scale, access to capital markets or balance sheet management are factors that contribute to financeability challenges).[147]

4.70 As we explore below, we find that the illustrative impact assessment which the EA has performed on Vector is not sufficient to assess the actual impact the proposed measure would have across the industry. This is because the analysis is based on an illustrative reduction in connection charges and performed for only one distributor: Vector.

### 4.4 It is unclear how these risks have been weighted against the potential benefits from the EA's proposal

4.71 In sections 8 and 9 of its Consultation, the EA discusses its illustrative impact assessment to support its conclusion that the targeted intervention measure is preferable to alternative measures, including relying on the fast-track measures introduced in the July Decision until the full reform can be introduced for the next price control period.[148] To achieve this, the EA considers an indicative scenario that reduces Vector's connection charges to illustrate how new and existing connections may be affected by the targeted intervention.[149] Below, we assess the extent to which this analysis falls short of providing a robust empirical basis for evaluating the effectiveness and cost-benefit of the proposed measure.

4.72 We find that the EA's impact assessment of the targeted intervention is incomplete and fails to adequately account for the full range of risks that the balance-point principle introduces.[150]

4.73 As discussed in section 3.1.2, while the EA dedicates a brief section to the qualitative evaluation of interim interventions based on three criteria (effectiveness, cost and risk), the actual

[147] EA Consultation, para. 10.8 (c).
[148] The EA concludes, in part based on its impact assessment, that: 'it is expected the alternative options are less cost-effective at addressing inefficiently high connection charges.' EA Consultation, sections 8 and 9, and paras 9.26–9.29.
[149] The EA's impact analysis applies an indicative scenario that reduces Vector's connection charges by 25% in 2028/29 and 35% in 2029/30, broadly equivalent to holding charges at 2026/27 levels. We explore below how this assumption is not grounded in any empirical analysis. EA Consultation, para. 8.2.
[150] EA Consultation, sections 8 and 9.

evaluation is limited (fewer than three pages) and remains high-level. Moreover, the EA provides an impact analysis for its preferred option only (the targeted intervention) out of the four proposed interim measures, and specifically undertakes this impact analysis only for Vector.

4.74 Furthermore, the EA's impact assessment of the targeted intervention does not include a thorough quantitative analysis—its impact assessment summary presents only illustrative or qualitative considerations, see Table 4.5 below.

Table 4.5 EA's summary of impacts of the targeted approach

| Impact | Comment | Quantification |
|---|---|---|
| Administrative costs | Includes examining pricing, developing directions, and implementing pricing changes (including revenue path reconsideration) for a subset of distributors. | Dependent on scope of re-forecast and reconsideration required |
| Financing task | Impacted distributor has to finance a larger regulatory asset base | Indicative scenario impact on RAB and RAB per connection |
| Lines charges | Reduction in portion of shared costs shifted to access seekers. | Indicative scenario impact on MAR and MAR per connection |
| Connection charges | Reduction in connection charges | Indicative scenario impact on charge per connection and estimate per household |

Source: Excerpt from the EA Consultation, Table 8.1.

4.75 As regards the quality of the EA's impact assessment, we furthermore note that it has:

- neither quantified nor fully captured the potential administrative and wider implementation costs of its proposed approach;
- presented an indicative impact scenario that is not supported by empirical evidence. The EA assumes a reduction in one distributor's connection charges which achieves an arbitrary reliance ratio, without justification for the chosen level of reduction. The EA also abstracts away from the real-world implications by not modelling the complexity of network costs with delayed cost recovery as per its proposed balance-point principle;
- failed to assess the impact of its proposal on its policy objectives. The EA's approach can be distilled to asserting, by

design, that connection charges are lower if they are assumed to be lower, and that spreading the costs currently borne by a small number of new connections (via connection charges) across all existing connections (via ongoing charges) reduces the per-customer impact than recovering these solely from new connections. This conclusion holds by construct, and does not balance trade-offs in policy objectives. For example, [✂] it would not be equitable to revert to a shallower charging regime to the extent that existing users are required to cross-subsidise new connections, while the (future) new connections—encouraged also by new distributor obligations to connect—will face relatively inefficient price entry signals in a shallower regime. These are trade-offs in policy design, with respect to the wider design of the electricity market in New Zealand.

4.76 We discuss these points in more detail below.

### 4.4.1 Administrative and broader implementation costs

4.77 As noted in the EA's summary table (above), its impact assessment has not quantified the administrative costs associated with the targeted intervention, finding that these would depend on the scope of 're-forecast and reconsideration required'.[151] The EA qualitatively highlights that distributors' costs would include developing and implementing an amended connection pricing methodology.[152]

4.78 We note that the balance point itself is associated with high implementation costs, as are the solutions to address its limitations. Notable implementation costs are:

- the administrative burden of distributors checking compliance with the balance point (discussed in paragraph 4.31);
- the administrative burden of the EA scanning the market and investigating specific charging methodologies for compliance with the balance-point principle (discussed in paragraph 3.26);
- increased complexity if compliance with the balance point is to be ensured and verified ex post (discussed in paragraph 4.31).

4.79 For completeness, we also note that some of the policies that the EA's advisers have proactively suggested to address known problems and/or higher levels of complexity with the

[151] EA Consultation, section 8.
[152] EA Consultation, para. 9.19.

implementation of the balance-point principle are likely to, in turn, be infeasible and/or entail higher administrative costs. For example:

- we note that CEPA has suggested that one way to address potential stranding risk of pre-emptive disconnections (discussed in paragraph 4.25) would be to request bank guarantees or cancellation fees from new connections. Such measures would also increase costs for connectees associated with connecting and for the distributor associated with processing them;
- CEPA has also (implicitly) recognised the competition concern advanced by Vector that if there are limits to its upfront charging relative to third parties, it will offer lower prices than it currently does, for installing connections.[153] This would tend to benefit its market position relative to third parties, in delivering the installation of connections. Accordingly, CEPA has suggested this issue could be mitigated by offering upfront compensatory payments to third-party installers, to enable them also to reduce the upfront price of installing a connection.[154] However, this is not practical, as it entails distributors financing the upfront payment to third-party connection installers. This would place additional pressure on networks' financeability, as they would have to fund the cash required at the time of connection while only recovering these costs from consumers over the long term. This would also introduce additional administrative burden.

### 4.4.2 The indicative impact assessment is based on an arbitrary connection cost reduction of one distributor

4.80 In the EA's summary table (above), the results of its illustrative impact assessment appear indicative and high-level; thereby, it does not provide a robust basis for assessing the likely effects of its proposal.

4.81 In particular, the analysis is based on a hypothetical reduction in connection charges that is not supported by empirical evidence. The EA introduces the scenario under the premise of reducing Vector's connection charges by 25% in 2028/29 and 35% in 2029/30 (compared to the company's latest projections)—

[153] July Decision, pp. 69 and 184.
[154] Its solution involved distributors upfront paying third-party installers the 'amount equal to the difference between the present-value of the on-going revenue and the ongoing costs'. See July Decision, p. 187.

broadly equivalent to holding connection charges at 2026/27 levels.[155]

4.82 The EA then notes that this reduction in connection charges would bring Vector's reliance level down to around 90% for the two adjusted years, compared to forecast levels.[156] It is unclear why this ratio would be preferable over the actual forecast ratio beyond simply being lower than it. We highlight that the EA noted in its Consultation that reliance limits are an imperfect proxy for efficient pricing and should therefore not be used to determine the right connection charge.[157]

### 4.4.3 Impact on policy objective remains unclear

4.83 Finally, the EA has not assessed how the balance point would achieve its policy objectives, which themselves are to an extent unclear (as discussed in section 3.1.2). Specifically, it has not quantified the expected reduction in connection charges across networks, nor has it demonstrated how such reductions would advance its broader aims of supporting housing development, business growth, and electrification.

4.84 We consider the omission of (empirically) linking the proposed measure's effectiveness back to the EA's policy objectives in the impact assessment to be partly due to the weak empirical basis for the need for intervention in the first place (as discussed in section 3.2).

### 4.4.4 Conclusion of the substance review of the EA Consultation

4.85 We conclude that the EA has not evaluated all relevant risks, and where analysis has been undertaken, it has not provided sufficient empirical evidence to demonstrate either the cost-benefit, or effectiveness, of addressing its policy concerns.

[155] EA Consultation, para. 8.2.
[156] EA Consultation, para. 8.23.
[157] EA Consultation, para. 6.18.

# 5 Conclusions

To summarise, the takeaways from our review of the form and the substance of the EA Consultation are as follows.

While the EA Consultation has similarities with comparable international processes that we have assessed, we observe that the Consultation differs from good regulatory practice we have identified in international precedent with respect to aspects of its timeframe, clarity of the theory of harm and policy objectives, and assessment of the proposed remedy.

We also find that: first, the EA's case for intervention is not robustly underpinned by empirical analysis; second, the proposed targeted intervention regime is being introduced prematurely from a policy perspective, not least as the EA itself acknowledges that a limited evidence base is inhibiting its full reform agenda being implemented at this stage; and, third, that the EA's guidance on cost allocation is insufficient to provide clarity and guidance to networks, which are seeking to mitigate the risks and costs of an ex post intervention.

Practically, there are also significant implementation challenges as regards the EA's proposed balance-point methodology. It is unclear whether the balance-point principle is intended to be applied in a static (ex ante) or dynamic (ex post) way. Irrespective of this detail regarding the implementation approach, we find that the principle would be ineffective at achieving the EA's objectives of each user contributing similarly to the shared cost if it is applied in a static way, and would be impractical if it is applied in a dynamic way.

Finally, we highlight that there are pros and cons of deep and shallow regimes, and the policy and regulatory context in which they are set is important. As a result, the EA's proposed constraints on distributors changing between shallow and deep regimes may not be optimal in the current circumstances. In particular, we note that there is high uncertainty as regards future electricity demand pathways in New Zealand, up to 2050. We find that a shallow regime would be associated with greater forecast risk and bills volatility, potential financeability challenges and higher risks of revenue deferrals. Moreover, any such change to the charging regime needs to be coordinated with the NZCC's price-quality path regulation.

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