# Distribution connection pricing Code amendment

Decision paper

18 July 2025

ELECTRICITY AUTHORITY
TE MANA HIKO

# Executive summary

Connecting to distribution networks is an essential part of developing new housing, electrifying our energy use and growing the New Zealand economy. Without the right rules in place, we risk higher-up front costs, more inefficiencies, less investment, fewer developments – and all New Zealanders losing out in the long run.

To date, distributors have largely set their own policies and processes when connecting businesses, housing, industrial plant, public transport and other critical services to the network. This has produced a wide range of practices across New Zealand's 29 distributors.

Late last year, the Electricity Authority Te Mana Hiko (the Authority) launched two consultations in parallel, proposing rule changes for connecting to the network – one on pricing methodologies and the other on the application process. Recognising the scale, complexity and impact on distributors of full reform, in both cases we proposed a staged approach.

We have now made decisions on both sets of proposals and are seeking technical feedback on the detailed drafting of the rules, set out in the Electricity Industry Participation Code 2010 (the Code). This paper details our decisions on pricing methodologies, feedback from submitters, our response, and draft Code changes for technical feedback.

Our *Network connections project: stage one decision paper* focuses on removing barriers and creating efficiencies for distributed generation and large loads connecting to distribution networks and should be reviewed alongside decisions on pricing methodologies.

**We are progressing with four of the five proposed measures to improve pricing methodologies for connecting to the network**

The four pricing methodologies we are proceeding with are: connection enhancement cost allocation requirement, capacity costing requirement, pioneer scheme pricing methodology requirement and connection charge reconciliation methodology requirement.

These new requirements for distributors are a significant step towards more efficient connection pricing, making it easier to develop new housing, electrify energy use and grow the economy. Importantly, these changes will reduce overall investment costs and enable New Zealanders to enjoy the benefit of these investments sooner.

We have decided not to proceed with the remaining proposal at this time, being to introduce 'reliance limits', which aimed to restrain the overall share of costs each distributor could recover from up-front connection charges. This proposal attracted criticism from the majority of submitters. Some distributors were particularly concerned about the financial implications given the related consultation paper included a proposal that distributors would be obliged to approve all applications to connect that met certain criteria. We have decided to further consider this proposal at a later time.

We continue to consider that inefficiently high up-front costs can deter connection activity. It is therefore appropriate to put in place guardrails – in some form – to prevent already high connection charges from rising further. However, there is scope to improve both proposals to ensure they do not (in combination) impose unduly onerous obligations or invite unintended consequences. We will further consider these matters and consult again later this year.

**More efficient connection pricing methodologies benefit distributors, those connecting to the network, and all New Zealanders more broadly**

We are improving connection pricing methodologies so they are more efficient and have greater consistency across distributors. This aligns with our main statutory objective 'to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers' and, where it applies, our additional statutory objective to 'protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers'.

Our rule changes support more efficient connection pricing by ensuring:

- improved clarity and consistency – someone wanting to connect today will find the way their connection is priced depends on where they are. Distributors vary in how well they document their pricing, the language they use, and how they set their pricing. Lifting the quality and consistency of methodologies will make pricing more predictable and easier to understand
- efficient allocation of costs – new connections should at least meet their own costs, rather than expecting a subsidy from existing users. Pricing should also be non-discriminatory, so a particular type of connection is treated the same as others like it, and new connections make a similar contribution to older connections. These are basic principles that ensure everyone benefits from the cost-spreading effects of connection growth
- improved coordination – pricing should avoid position-in-queue dynamics, where a 'first-mover' or 'last-straw'[1] connection bears a disproportionate cost. This improves coordination by removing the need to jockey for position in the queue to avoid unaffordable charges
- better cost reflectivity – the way prices are determined should encourage those who want to connect to make efficient design choices. This includes choices about the capacity of their connection, any enhancements, the ability to be flexible in their security and availability requirements, and, for some remote locations, whether to connect at all.

The outcome is that connection activity covers its costs while not being inefficiently deterred, and pricing encourages efficient investment in connections and upstream capacity and network development. Consumers will benefit through more connections, a reduction in overall investment costs and the benefits that flow through to housing development, electrification and business growth.

**We have decided on four new connection pricing requirements**

From 1 April 2026, distributors will be required to apply three new requirements when setting connection charges. A fourth requirement will apply from 1 April 2027. Aligning these new requirements with the start of the next two pricing years provides distributors the opportunity to coordinate changes in connection pricing with their other annual pricing processes.

The three requirements for connection applications received from 1 April 2026 are:

- *connection enhancement cost allocation* – distributors must set prices with reference to a 'minimum scheme' and any enhancement costs are paid by whichever party required it

[1] A 'first mover' connection is one that provides up-front funding for a network extension that will serve other connections in future. A 'last straw' connection is one that provides up-front funding for a capacify upgrade that will serve other connections in future.

(distributor or customer). The ‘minimum scheme’ is determined by the distributor with reference to their connection and operating standards. In addition, the customer may request consideration of a lower-cost flexible connection. This improves cost reflectivity and safeguards against misallocating enhancement costs.

- *pioneer scheme policy* – distributors must develop and publish a policy for establishing ‘pioneer schemes’. Pioneer schemes ensure the applicant who funds a network extension receive rebates from those who follow and utilise the same network. This helps address the ‘first-mover‘ disadvantage problem.
- *connection charge reconciliation* – distributors must prepare a reconciliation that breaks down their quoted connection charge into incremental cost, incremental revenue and network cost components. This improves transparency of how costs are allocated to new connections. It will also build an information base to support further reform.

The fourth requirement, for connection applications received from 1 April 2027 is:

- *capacity costing* – if a distributor chooses to allocate upstream capacity costs, they must do so using published rates that allocate costs as capacity is consumed –not when it is built. This enhances predictability and removes ‘last-straw’ pricing. The timeframe for this requirement to apply allows distributors to trial capacity costing (which is used in charge reconciliations) before using it to set charges.[2]

The new requirements are also supported by a dispute resolution process. These processes do not override a distributor’s ability to determine how prices are set consistent with the new pricing requirements but provide an avenue for ensuring the new pricing requirements are applied.

**All requirements have had minor changes from what was originally proposed**

We have made refinements to these proposals based on stakeholder submissions and further analysis:

- *hybrid connections* – we’ve provided clearer direction on how to price connections that serve both load and generation. Consistent with the incremental pricing approach that applies to generation, we’ve set out that the load component should be priced first and the generation component treated as incremental
- *secondary networks* – we’ve expanded our proposed exclusion of smaller embedded networks to apply to all secondary networks. We will consider further whether connection pricing requirements should extend to at least some of these networks (for example, in ports and airports)
- *extension-like upgrades* – we’ve added a further exemption to the capacity costing requirement for upgrades that substantially serve the needs of a single customer. These types of upgrades are often best treated as extensions
- *transmission costs* – we’ve clarified that incremental transmission works can be treated like extensions. This means enhancement cost allocation requirements and pioneer scheme requirements apply

[2] The capacity costing requirement applies for reconciliation purposes for connection applications received from 1 April 2026.

- *transmission charges* – we've added a requirement to break incremental revenue down into transmission and distribution components. This makes it clearer what portion of the annual charges paid by a customer contributes to meeting shared transmission costs
- *real estate developments* – we've decided distributors are not required to establish pioneer schemes for real estate developments given the additional complexities involved in such investments. However, we plan to revisit this issue in future.

**Support to get ready for the new requirements**

Implementing the first set of requirements is an important step in a longer reform process.

These new requirements don't fully displace existing pricing practices, but they do introduce new common elements as to how connection pricing is determined across New Zealand. We think this presents an opportunity for distributors to work together on implementation. This would support a customer-focused step toward greater consistency – not through identical prices, but through common language, methods and processes across all distributors – and reduce implementation costs for distributors.

We encourage distributors to work together on developing:

- standardised material for use in pricing methodology documents
- customer communication resources, including information sheets to explain charge reconciliation
- internal resources, including business processes and calculation sheets.

We also encourage distributors to start bringing materials on connection pricing methodologies together into one document, covering capital and in-kind (ie, vested asset) contributions, posted rates and charges, fees, pioneer scheme policy and locations of active pioneer schemes.

We recognise we also have a role to play in helping distributors adopt these new requirements. For our part, we have developed:

- worked examples that illustrate how the new requirements apply to a range of scenarios. We expect this will be a useful resource as distributors get ready to put the new requirements into practice
- a capacity costing demonstration that steps through the engineering and cost estimation analysis involved in deriving capacity costing rates. All distributors will need rates for their network because they are used in the charge reconciliation. The demonstration calculations should reduce the size of this task and promote a consistent approach
- a reconciliation worksheet that provides a tool for calculating reconciliations ready for sharing with connection applicants and the Authority.

We have also extended the term of the Distribution Connection Pricing Technical Group and advertised for new members. The Group has provided invaluable technical expertise and worked alongside us to our timeframes. The decisions in this paper have been made independently by the Authority and do not represent the Group members' individual views. The Group will continue to provide various perspectives as we support distributors to implement these new requirements, further consider options to prevent already high connection charges from rising further, and work toward further reform.

# Contents

# 1. Purpose

1.1. This paper sets out the Authority's decision to amend the Code to introduce new requirements for electricity distributors to apply when determining pricing for electricity distribution network connections and connection upgrades. It explains the Authority's rationale, including how the Authority has considered submissions on earlier proposals.

1.2. The paper also:

(a) seeks technical feedback on Code drafting, and

(b) outlines intended next steps.

# 2. Background

2.1. The Authority published the paper *Distribution connection pricing proposed Code amendment: Consultation paper* (**consultation paper**) on 25 October 2024 and invited submissions and cross-submissions. The written consultation process closed on 24 January 2025.

2.2. The consultation paper proposed Code amendments to introduce five connection pricing requirements for effect from 1 April 2026. The paper discussed the context and rationale for the proposals, along with policy analysis and impact assessment.

2.3. The consultation paper described a pathway toward more complete reform, with the five requirements to be implemented as "fast-track" elements.

2.4. The consultation paper followed earlier papers, including:

(a) *More efficient distribution network pricing – principles and practice: Decision paper*, June 2019.[3] The Authority published amended distribution pricing principles as part of its work to guide the sector toward more cost-reflective pricing. The paper also introduced a new "scorecard" monitoring framework and an introductory "practice note"

(b) *Targeted reform of distribution pricing: Issues paper*, July 2023.[4] Four years later, the Authority sought input on connection pricing as one of five focus areas. The paper surveyed the current situation, problem definition, preferred pricing practices and intervention options

(c) *Distribution pricing reform: Next steps*, May 2024.[5] Having considered submissions and gathered further evidence, the Authority provided an updated survey of connection pricing and set out its plan to develop a Code amendment proposal.

2.5. The consultation paper focussed on pricing for load connections and outlined a staged approach to regulatory reform. The focus on load recognises there are

[3] Electricity Authority. More efficient distribution network pricing - principles and practice: Decision paper. June 2019.

[4] Electricity Authority. Targeted Reform of Distribution: Issues paper. July 2023.

[5] Electricity Authority. Distribution Pricing Reform: Next steps. May 2024.

existing pricing requirements in place for generation.[6] While there may be scope to improve the arrangements for generation, the starting base (in terms of regulatory oversight and consistency of practices) is lower for load. The staged approach reflects a concern that inefficient connection pricing has a pervasive negative impact on connection and upstream investment, while recognising that full reform is impactful and complex to design and implement.

2.6. We consulted on connection pricing for load in parallel with consultation on proposed non-price distribution network access arrangements for large (>69kVA) load connections, just ahead of analysis of issues with distributed generation pricing, and a decision by the Commerce Commission to set revenue limits for distributors:

(a) *Network connections project: stage one amendments: Consultation paper*, October 2024.[7] Parallel consultation on proposal to introduce network access requirements for distribution network connections for larger (>69 kVA) loads. The Authority since published a decision paper alongside this paper.

(b) *Distributed generation pricing principles: Issues paper*, February 2025.[8] The Authority has separately sought submissions on its analysis of issues with connection pricing requirements for distributed generation. The Authority is currently analysing submissions and considering next steps.

(c) *Default price-quality paths for electricity distribution businesses from 1 April 2025 – Final decision: Reasons paper*, November 2024.[9] The Commerce Commission decided on revenue limits and quality standards applying to 16 of New Zealand's 29 distribution businesses from 2025 to 2030.[10] The revenue limits apply to revenue excluding connection charges.[11]

6 Pricing requirements for distributed generation were introduced in the Electricity Governance (Connection of Distributed Generation) Regulations 2007 and transferred into the Code from 2010.

7 Electricity Authority. Network connections project: stage one amendments. October 2024.

8 Electricity Authority. Distributed generation pricing principles. February 2025.

9 Commerce Commission. Default price-quality paths for electricity distribution businesses from 1 April 2025 - Final decision - Reasons paper. November 2024

10 There are 16 price-quality regulated electricity distribution businesses. The Default price-quality paths set the quality standard for all 16 and revenue limits for 15. Revenue limits for Aurora were separately determined as they on a customised price path (CPP).

11 The revenue limits don't include connection charges to the extent these are recognised as "capital contributions" in accordance with the Commerce Commission Input Methodologies requirements. In broad terms, connection fees, capital and in-kind contributions are excluded from revenue limits. Revenue limits are set at a level that will recover (over time) costs not recovered from connection applicants through up-front contributions. This means the level at which revenue limits are set is influenced by connection pricing settings.

# 3. Decision summary

3.1. The Authority has decided to proceed with three new requirements that will apply to distribution connection pricing for load for applications received from 1 April 2026, and a fourth new requirement that will apply for applications received from 1 April 2027.

3.2. As a package, these decisions will benefit consumers by improving the efficiency of investment in connections by distributors and access seekers. The pricing requirements will support distributors to set efficient connection charges and increase the transparency of charges for access seekers. The pricing methodologies will also ensure network connections are efficiently designed and charges are structured to mitigate co-ordination challenges and position in queue dynamics that create first and last mover disadvantages.

3.3. For reliance limits, the Authority has decided not to proceed with this proposal at this time and will further consider this proposal at a later time. Table 3.1 provides a summary of these decisions.

**Table 3.1 – The Authority has decided to proceed with four connection pricing requirements (and associated arrangements)**

| Element | Description | Decision |
|---|---|---|
| **Fast-track** | **Introduce fast-track requirements to apply to quotes for applications received from 1 April 2026** | **Proceed with four of the five proposed fast-track requirements.**<br>**Defer implementation of capacity costing requirement for quotes for applications received from 1 April 2027**<br>**Further consider reliance limits (and alternatives).** |
| • Enhancement cost allocation requirement | Prices determined with reference to "relevant minimum scheme", with enhancement costs (if any) allocated to selecting party. | Proceed, with minor modifications. |
| • Capacity costing requirement | If upstream costs allocated to access seekers, use published rates to allocate costs as capacity headroom is consumed (not as it is built). | Proceed, with minor modifications.<br>Implement for applications received from 1 April 2027, though reflected in reconciliations for applications received from 1 April 2026. |
| • Pioneer scheme policy requirement | Provide rebates to extension--funding "pioneers" as subsequent parties connect. | Proceed, with minor modifications. |

| Element | Description | Decision |
|---|---|---|
| • Connection charge reconciliation requirement | Prepare standardised breakdown of connection charge into incremental and network cost components. | Proceed, with minor modifications. |
| Dispute resolution | For participants, extend the dispute resolution provisions that apply to distributed generation. For non-participants, enhance Code breach complaint process. | Proceed. |
| Exemption guidelines | Update existing exemption guidelines to address interaction with Commerce Commission reconsideration process. | Consider further if required. |
| **Reliance limits** | **Limit capital contributions as portion of growth capex.** | **Consider reliance limits further, including alternative approaches.**<br>**Expect to further consult later in 2025.** |
| **Full reform** | **Work toward more comprehensive requirements, building on "neutral point" and "balance point" concepts.** | **Target full reform for quotes from 1 April 2030 (ie, the start of the next revenue control period) or earlier if necessary.** |

3.4. The following sections provide detail on these decisions, including how and why the Authority has modified earlier proposals.

3.5. Decisions in this paper are subject to any changes that result from the technical consultation on drafting discussed below. If any changes do result, we will publish an addendum to this decision paper to explain what the changes are and the reason for them. We anticipate that any changes will be minor, considering the technical nature of the consultation which is focussed on the workability of the drafting only.

## The Authority invites technical submissions on drafting

3.6. The Authority invites technical submissions on the Code amendment drafting that will give effect to its decisions on four fast track measures (and associated arrangements). We are not seeking further submissions on the decisions or their supporting rationale.

3.7. While the Authority is not required to undertake further technical consultation of this kind, we think it is prudent in these circumstances to provide this opportunity for affected parties given the complexity of the drafting, the minor modifications we have made to earlier proposals, and that submissions mostly focused on the policy issues rather than detailed feedback on the draft Code.

3.8. We have prepared updated Code amendment drafting to give effect to the decisions in this paper.

3.9. The proposed Code amendment drafting is attached:

(a) Appendix A – amendment drafting (clean)

(b) Appendix B – amendment drafting (tracked changes from the version previously consulted on).

## How to make a technical submission

3.10. The Authority's preference is to receive technical submissions in electronic format (Microsoft Word). Submissions in electronic form should be emailed to connection.feedback@ea.govt.nz with 'Connection pricing Code drafting' in the subject line.

3.11. Submitters may wish to provide:

(a) suggested mark ups (as tracked changes)

(b) in-line comments (using the commenting function)

(c) written cover letter, email or table of suggestions.

3.12. If you cannot send your submissions electronically, please contact the Authority on connection.feedback@ea.govt.nz or 04 460 8860 to discuss alternative arrangements.

3.13. Please note the Authority intends to publish all submissions it receives. If you consider that the Authority should not publish any part of your submission, please:

(a) indicate which part should not be published and explain why you consider we should not publish that part, and

(b) provide a version of your submission the Authority can publish (if we agree not to publish your full submission).

3.14. If you indicate part of your submission should not be published, the Authority will discuss this with you before deciding whether to not publish that part of your submission.

3.15. However, please note all submissions received by the Authority, including any parts that the Authority does not publish, can be requested under the Official Information Act 1982. This means the Authority would be required to release material not published unless good reason existed under the Official Information Act to withhold it. The Authority would normally consult with you before releasing any material that you said should not be published.

## When to provide technical submissions

3.16. Please deliver your technical submission by 5pm, **Friday 1 August 2025.**

3.17. Authority staff will acknowledge receipt of all submissions electronically. Please contact the Authority at connection.feedback@ea.govt.nz or on 04 460 8860 if you do not receive electronic acknowledgement of your submission within two business days.

# 4. Overview of submissions

4.1. The Authority received 64 primary submissions and 17 cross-submissions on the consultation paper from a total of 67 parties. Table 4.1 summarises who submitted and full submissions are available on the Authority's website.[12]

**Table 4.1 – 67 parties provided submissions or cross-submissions**

| Group | Including |
|---|---|
| Distributor | 20 EDBs, 11 trusts (distribution businesses' owners) and two peak bodies[13] |
| Generator-retailer | Two generators and three generator-retailers[14] |
| Access seeker | Seven network users and two peak bodies |
| Other industry participants | Three peak bodies, a network management company and Transpower |
| Other | 15 other submitters, including two government organisations, a consultant, a research organisation and 11 individuals |

4.2. The Authority received five consultant reports from submitters:

(a) Incenta for Unison and Powerco

(b) HoustonKemp for Vector

(c) Axiom Economics for Vector

(d) Sapere for Drive Electric

(e) Frontier Economics for Electricity Networks Aotearoa.

4.3. HoustonKemp and Axiom Economics also provided cross-submission reports.

4.4. The Authority recognises and appreciates the considerable effort and investment that submitters made through the consultation process. Submitters provided a range of perspectives and raised useful suggestions that have contributed to the robustness of the Code amendment process.

4.5. Overall themes across submissions on the consultation paper include:

(a) submitters had diverging views on most topics, including on the merits of intervention and the suitable form and pace for intervention

(b) criticism was strongest and most consistent with respect to "reliance limits" that were proposed to constrain the upward trend in costs allocated to connections

(c) views on other matters were generally more balanced or muted

12 https://www.ea.govt.nz/projects/all/distribution-connection-pricing-reform/consultation/distribution-connection-pricing-proposed-code-amendment/

13 Peak bodies Electricity Network Aotearoa (ENA) and Energy Trust New Zealand (ETNZ)

14 Meridian submitted from their perspective as an access seeker and is included in that group.

(d) most submitters focussed on policy or practical matters, and very few provided technical feedback on proposed Code amendment drafting

(e) some submitters found the proposals complex and difficult to understand, or misunderstood aspects of the proposals.

4.6. The following sections provide more detail on the Authority's decision on the overall case for intervention, then each decision element. For each section we recap what we proposed and why, set out the Authority's decision, summarise submissions and explain how submissions have influenced the Authority's decisions.

# 5. Case for intervention

5.1. This section provides more detail on the Authority's decision to introduce requirements for distribution connection pricing methodologies for load customers.

5.2. In summary, distributors have market power over connections because they control access to services that have strong monopoly characteristics. The current light-touch regulatory regime has led to poor quality and consistency of pricing methodologies, patchy uptake of efficient connection pricing settings, and limited information on the allocation outcomes driven by distributors' pricing settings.

5.3. Introducing connection pricing requirements will improve consistency, increase use of efficient connection pricing settings, and provide enhanced information on allocation outcomes. These benefits will in turn promote more efficient investment in connections and upstream capacity.

## Introduction to case for intervention

5.4. Electricity distribution is an essential service, with strong monopoly characteristics. As such, the supply of these services is subject to regulatory oversight that aims to promote the long-term benefit of electricity consumers. This includes:

(a) the Commerce Commission requires distributors to prepare and publicly disclose a range of (more or less) standardised information intended to enable interested persons to assess performance

(b) the Commerce Commission also requires distributors, other than those exempted due to consumer ownership,[15] to comply with revenue limits and high-level service quality requirements

(c) the Authority administers an enforceable industry Code that includes provisions relating to electricity network access, including pricing methodologies

(d) the functions of the Authority also include market monitoring and market facilitation measures, which can include providing guidelines, information and model arrangements for distribution services.

5.5. For distribution network access and pricing, the current scope of the Authority's oversight includes:

(a) access terms (including pricing requirements) for distributed generation in Part 6 of the Code. The Authority has decided to introduce access terms for larger (>69 kVA) load connections and is considering further extension and refinements[16]

(b) additional distribution pricing principles against which distributors are required (by the Commerce Commission) to assess the alignment of their pricing methodologies for ongoing (monthly) charges. The Authority also provides

[15] Some consumer-owned distributors are price-quality regulated as they do not meet certain requirements for exemption under the Commerce Act.

[16] Network connections project (stage one): Decision paper

practice guidance and prepares pricing assessments (including public scorecards)[17]

(c) a requirement in Part 12A of the Code to distribute settlement residual allocations received from Transpower to customers.

5.6. In addition, of relevance:

(a) the Commerce Commission's information disclosure rules include requirements for distributors to publish:

(i) capital contribution policies. Capital contributions are a form of up-front contribution, so relevant to connection pricing (which encompasses all up-front contributions)

(ii) capital contribution amounts (forecast and actual), broken down into seven categories (consumer connections, system growth and various other categories)

(iii) consideration paid for assets constructed by others and "vested" to a distributor. This provides partial information on in-kind contributions (ie, another type of up-front contribution)

(b) revenue limits set by the Commerce Commission do not include amounts recognised as either capital or in-kind contributions, as these are separately accounted for in the revenue limit setting process.[18]

5.7. With this set of arrangements in place, the current state of connection pricing is that:

(a) information on distributor connection pricing methodologies and allocation outcomes is incomplete and of variable quality

(b) there is wide variation in connection pricing methodologies across New Zealand's 29 distribution businesses. This variation spans from low level matters (such as terminology and layout), through to pricing approaches, features and overall outcomes

(c) some distributors have been (or are planning to) increase their reliance on capital contributions – in absolute terms, and as a portion of their overall investment in connections and system growth. This is occurring concurrently with:

(i) some distributors highlighting challenges financing investment costs not recovered through up-front contributions (such as connection charges)[19]

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17 Distribution pricing | Electricity Authority

18 Capital expenditure allowances and regulatory asset base values are net of capital contributions. Vested assets enter a distributor's regulatory asset base at the value of any consideration paid by the distributor (consistent with accounting standards).

19 Some distributors made the case in submissions on the Commerce Commission's 2023 review of input methodologies (ie, the up-front rules used to regulate distribution services, including revenue limits). For example, see Unison-Submission-on-IM-Review-2023-Draft-Decisions-19-July-2023.pdf pg.15, Wellington-Electricity-Submission-on-IM-Review-2023-Draft-Decisions-19-July-2023.pdf pg. 10

(ii) the early stages of a major wave of electrification.[20] Connection investment is an enabler for many electrification investments, and the economics of electrification is sensitive to cost allocation (how much the connecting party pays overall) and structure (how much they pay up-front). Electrification is expected to play a major role in cost-effective emissions reduction, alongside delivering other economic and energy security benefits

(iii) connection pricing having a pervasive impact on investment activity across the economy, including for housing and business growth (ie, because network connections are an essential input for almost all new housing and business premises)

(iv) connection pricing influencing the efficiency of connection investment, and upstream capacity investment.

5.8. Given these factors, the Authority proposed introducing new requirements for connection pricing methodologies for load.

5.9. The Authority proposed a staged approach, with some fast-track measures implemented while full reform is further developed.

5.10. The Authority proposed four pricing methodology requirements for fast-track implementation, plus a fifth requirement that would restrain increases in overall reliance on capital contributions until such time as a more complete set of requirements is in place.

5.11. A staged approach recognises that some improvements should be achievable quickly but full reform will take time due to:

(a) the scope of matters to traverse in terms of policy development, sector engagement and drafting

(b) limitations in the capacity of distributors to quickly implement change given the complexity and impacts of connection pricing reform, and

(c) the need to address interactions between connection pricing and revenue limits – especially where reform may entail rebalancing (for some firms) to lower up-front recovery and increased over-time recovery.

5.12. The Electricity Authority considered that this staged intervention approach would:

(a) promote its main statutory objective, which is to "…promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers", and

(b) be consistent with its additional statutory objective, which is to "…protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers", noting this objective only applies in relation to "…the dealings of industry participants with domestic consumers and small business consumers". In this case, the dealings in question relate to

[20] For example, refer October 2024 Statement of Government Policy to the Electricity Authority. https://www.beehive.govt.nz/sites/default/files/2024-10/Government%20Policy%20Statement%20on%20Electricity%20-%20October%202024.pdf

those between distributors and domestic and small business consumers connecting to their networks.

5.13. The ways in which intervention would support these objectives are by:

(a) lifting the quality, completeness and consistency of connection pricing methodologies such that access seekers can better understand how connections will be (and have been) priced

(b) increasing the adoption of pricing features that promote efficient investment in connections and upstream capacity

(c) ensuring efficient cost allocation to newcomers, including allocation that is subsidy-free and non-discriminatory (over time and as between like connections)

(d) promoting efficient allocation of the financing burden relating to connection works (including upstream capacity).

5.14. The Authority proposed that requirements would not apply to embedded networks, at least initially.

5.15. The Authority proposed extension of dispute resolution provisions currently available for distributed generation connections to encompass load connections, plus improved access to enforcement provisions for non-participants.[21] These measures would enable disagreements over the application of pricing requirements to be resolved but would not extend to determining connection charges or charge components other than where necessary and desirable to resolve the dispute, and only by applying the requirements.

## Decision on case for intervention

5.16. The Authority has decided:

(a) introducing requirements for connection pricing methodologies will promote the Authority's main statutory objective, and is consistent with the Authority's additional objective

(b) a staged approach is desirable to deliver early gains while accommodating limitations in sector capacity and managing transition costs and risks

(c) three new pricing methodology requirements should be reflected in connection pricing quotes for connection applications received from 1 April 2026. These requirements are implementable within that timeframe and will improve efficiency of connection pricing and hence connection (and upstream) investment. These are:

(i) connection enhancement cost allocation – connections priced with reference to an applicable "minimum scheme", with enhancement costs allocated to the selecting party (ie, customer or distributor). This provides cost-reflectivity with respect to connection design choices

[21] Certain types of electricity suppliers, service providers and users are required to register with the Authority as participants. Participants must comply with the Code and can access dispute resolution services. Generators are participants, but many load connection applicants are not – hence the need to adapt and extend dispute resolution arrangements to suit load connections.

(ii) pioneer scheme – distributors to publish a pioneer scheme policy and establish schemes for eligible network extensions and ‘extension-like’ upgrades. Schemes provide rebates to ‘pioneers’ funded by later connections. This mitigates the “first mover disadvantage” coordination challenge

(iii) connection charge reconciliation – distributors to prepare breakdown of connection charges into standardised components for incremental cost, incremental revenue and network costs. Information to be provided to applicants and the Electricity Authority (both on request). This improves information on how distributors are allocating costs to newcomers

(d) a fourth new pricing methodology requirement should be reflected in connection pricing quotes for connection applications received from 1 April 2027:

(i) capacity costing – charges for upstream capacity (if any) to be determined and allocated using publicly available rates that charge for capacity consumption (rather than capacity additions). This improves predictability and consistency and avoids coordination challenges associated with ‘last-straw’ pricing

(e) the extended timeframe for capacity costing to apply is appropriate because it allows distributors to gain experience as part of charge reconciliation before implementing into quotes. This extra time will assist with learning, refining, and assessing financial impacts

(f) while there is a case for interim restraint on costs allocated to connections, the reliance limits as proposed have a number of weaknesses. On balance, it is desirable to take time to consider whether the proposal can be improved to apply a more effective restraint over a potential transition period from 1 April 2027 to 31 March 2030. This also enables us to present distributors with an integrated view of pricing constraints and non-price connection obligations

(g) 1 April 2030 is an appropriate target date for more complete connection pricing requirements to flow into quotes, as this aligns with the main revenue-setting cycle. This implies decision-making by 30 June 2027 to flow into regulatory planning and review cycles. This timing may be adjusted (including brought forward) based on information, analysis and sector performance in the interim[22]

(h) the four new pricing requirements will initially only apply to primary networks (ie, exclude embedded and other secondary networks). The Authority may consult on extending requirements to (at least some) secondary networks ahead of full reform.

[22] April 2030 is the least disruptive date for changes that materially alter the structure of cost recovery (as between up-front and over time) for revenue-controlled distributors. An earlier date may be appropriate if there is evidence that the incremental disruption is worthwhile (in terms of reduced harms or earlier benefits). An earlier date may also be appropriate for matters that don’t materially impact revenue-controlled distributors – such as extending requirements to (some) secondary networks, or refining requirements.

## Submissions on case for intervention and our assessment

5.17. Below we summarise key themes from submissions, focussing on the overall case for intervention. Submissions on specific requirements, such as reliance limits or charge reconciliation, are addressed later in this paper.

5.18. Many distributors pushed back on the case for intervention and the pace and complexity of change, while some other submitters (including some distributors) acknowledged or welcomed the potential benefits of intervention.

### The Authority presented analysis and evidence that was proportionate to the extent of regulatory intervention proposed

5.19. A common challenge was whether there is sufficient empirical evidence of a problem to justify intervention. For example, Network Waitaki submitted that it was concerned about "…a fast-paced and heavy-handed regulatory approach proposed for a 'problem' that is not quantified and not supported by evidence or through case studies of problematic practices". Vector submitted that "…absent from every aspect of the Authority's problem definition is empirical evidence of any inefficiency, ie, that new connections are inefficiently high or low."

5.20. Submitters also challenged specific elements of the Authority's analysis. For example, Waitaki Power Trust submitted that they "… do not agree that variation in practices contribute to a range of problems, rather it reflects the uniqueness of companies and the parameters in which they operate".

5.21. Electricity Networks Aotearoa (ENA) submitted that:

> *"…the Authority itself has identified connection growth and higher financing costs as key drivers of the observed increases. To the extent these factors are driving higher capital contributions it is not correct to suggest that capital contributions are too high. These are factors that reflect economic realities rather than inefficiencies."*

5.22. Several access seekers provided views on challenges they encounter with connection pricing. For example, Rewiring Aotearoa submitted that:

> "…*we regularly hear examples of the challenges businesses and farms face with seemingly unfair charges for connection, and a lack of transparency over where of [sic] the costs come from. Too often the costs stop business and farms from electrifying their fossil fuel use".*

5.23. Meridian Energy submitted that "…variation in costs incurred to connect to electricity networks is a significant barrier to the Government's decarbonisation and electrification goals, especially for public EV charger deployment".

5.24. Some submitters challenged the Authority's economic framework for connection pricing. For example, Vector submitted that:

> *"…the Authority's connection pricing framework is ostensibly, but not in substance, focussed on the promotion of efficient connection" and that "although distributors are natural monopolies, this is not always the case for connection services, which have the potential to be provided in a competitive environment".*

5.25. Several submitters challenged whether costs and benefits had been adequately assessed. For example, Aurora Energy submitted that "…additional costs of the proposed changes need to be justified by quantifiable benefits. The impact to consumers is too significant to rely on a qualitative assessment based on economic theory".

5.26. In contrast, several submitters were more supportive of the economic framework or of some level of intervention. Unison and Powerco jointly submitted that "The Electricity Authority and its advisers, CEPA, present a very good discussion of the relevant economic and other principles in relation to the appropriate levels of connection charges".

5.27. MEUG submitted that "…action is needed to improve distribution connection pricing" and "…supports the majority of the 'fast track' proposals".

5.28. CentrePort submitted that it "…generally supports the Electricity Authority's proposed Code amendment for Distribution Connection Pricing" and ENA submitted that "…we broadly support the Authority's initiative to establish a more robust and consistent approach to connection charging".

5.29. Many parties provided conditional support for some level of intervention. For example, Unison submitted that "…a selective and cohesive set of proposals can achieve the Authority's objectives with foreseeable and balanced impacts".

**Response**

5.30. The Authority's view is that connection pricing clearly impacts the efficiency of investment outcomes, including in connections and upstream capacity. This means there is strong line of sight between the quality of connection pricing methodologies and the Authority's statutory objectives.

5.31. There are multiple dimensions to pricing methodology quality, including:

(a) clarity and completeness of pricing information, including for parties contemplating investment, and in terms of consistency across networks

(b) use of features that efficiently mitigate coordination challenges, or signal costs and align incentives

(c) efficiency of overall cost burden allocated to newcomers, including whether allocation is subsidy-free and whether it is consistent over time and between similar connections

(d) efficiency of the structure of cost recovery (in terms of up-front versus ongoing charges), including as this impacts allocation of the financing burden for connection and upstream assets.

5.32. The Authority considers that the status quo has weaknesses in these areas, and there is little prospect that competitive pressures or facilitation measures will drive significant improvement. Reasons for this include that:

(a) distribution services have strong monopoly characteristics, such that competition cannot be relied upon to effectively promote outcomes consistent with the long-term benefit of consumers. This is the case even though the extension component of connection works is contestable to some degree in

some networks, because distributors control the connection process – including determining whether an extension may be connected and livened – and because all connections also involve non-contestable services related to livening and provision of upstream capacity[23]

(b) changes to connection pricing have a financial impact on distributors – impacting financing task allocation (as between newcomers and the distributor) and regulatory treatment of expenditure (for non-exempt distributors). This influences how connection pricing has evolved and means that guidance alone is unlikely to be effective.[24]

5.33. As such, regulatory intervention is necessary to ensure connection pricing reform will improve outcomes for the long-term benefit of consumers.

5.34. We do not accept that further empirical evidence is required to support this conclusion. Gathering further evidence about the extent to which distribution network connection pricing has deterred or slowed investment is unrealistic because:

(a) distributors do not produce information that would help systematically distinguish between costs and pricing as drivers for high charges.[25] The charge reconciliation requirement will provide enhanced information of this nature

(b) information about the extent to which parties have not connected will always be incomplete. The most feasible information to gather is where an applicant has received a quote and then decided not to proceed. However, the impact of connection charges would extend to cases where:

(i) a prospective applicant with an awareness of charges (eg, from their engineering advisers) does not proceed as far as applying for a connection

(ii) an awareness of prevailing charges is enough to deter activity

(iii) the impact of connection charges flows through to price levels (for goods or services where connection is an input cost) and dampens demand (and hence investment in growing supply).

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23 Many distributors have also historically recovered extension costs through a mix of up-front and ongoing charges. This means that enabling full contestability for extension work requires either transfers from the distributor to the supplier of the extension (which is appropriate but means there is still a monopoly services pricing element involved in connection pricing) or a change in approach to full up-front recovery of extension costs (which raises costs for newcomers relative to existing customers, unless newcomers pay ongoing charges on a different basis to existing customers).

24 Reforming connection pricing has a more direct financial impact on distributors than reforming the structure of ongoing charges (where the Authority has initially favoured a less intrusive approach).

25 For example, this means we cannot draw firm conclusions from information provided by charge point operators regarding variations they observe in connection quotes. Some of this variation will be due to differences in the underlying cost of establishing a connection at each site, and some is due to differences in connection pricing (ie, how costs are allocated to the connection applicant).

5.35. The Authority is supported by CEPA,[26] who state:

> *"While acknowledging that the Authority could do more to document evidence of a problem, we consider that many of the specific demands for evidence set out in the expert reports go too far.*
>
> *In other words, these respondents would require that the Authority prove the existence of desirable connections that did not happen. The problem here is that identifying potentially desirable connections that did not happen is likely to be impossible.*
>
> *Where there is found to be substantial market power there is typically a presumption that there is a need for some form of regulation. We do not consider that the Authority should be required to demonstrate the existence of services which potentially rely on access to the distribution network, and which are socially valuable, and which did not occur."*

5.36. Several submitters also supported the case for intervention. For example, Powerco submitted:

> *"We support the Authority's intent to ensure connection prices are efficient and equitable. Because EDBs are monopoly providers in their areas, it's important they maintain open access networks, this ensures all customers can connect and have the same access rights to available network capacity resulting in lower costs to customers over time as infrastructure costs are shared, leading to more affordable services."*

5.37. WEL Networks supported the intent of the consultation paper, submitting that "WEL believes that EDB's should be enabling growth and electrification by ensuring their connection pricing delivers fair and efficient customer outcomes."

5.38. Firstlight supported the intent of improving connection pricing and agreed that

> *"…improvements are possible through addressing inefficiencies, moving towards more consistent pricing approaches, and increasing transparency. Most of the suggestions in the Authority's consultation paper are in principle welcomed and we support."*

5.39. Rewiring Aotearoa submitted that:

> *"Rewiring is supportive of the work the Electricity Authority (the Authority) is doing on distribution pricing to ensure connection costs for new and expanded connections are fair and reflective of the underlying cost to connect customers…It is necessary to safeguard against inefficiently high upfront connection charges to make sure electrification investment is not hampered. Enabling more connections means distribution costs can be shared across more parties which can help to reduce each customer's cost."*

[26] CEPA report attached in Appendix C.

### The Authority is acting within the statutory framework for determining pricing methodologies

5.40. Some submitters questioned whether the Authority could legally impose some of the proposed requirements. For example, Horizon Networks submitted that

> *"…proposed reliance limits abuse the Electricity Authority's power to set pricing methodologies, by setting a cap on EDB connection revenue. If implemented reliance limits would contradict the price paths set by the Commerce Commission…".*

5.41. Other submitters questioned whether pricing methodologies were the best way to address issues. For example, Vector submitted that

> *"…if the 'root cause' of the alleged problem is the incentives provided via the Part 4 price paths, one might expect the optimal solution to be found in addressing the issue via the Commission's input methodologies (IMs) or reset methodology".*

**Response**

5.42. Having analysed submissions, the Authority considers that staged intervention will promote its statutory objectives.

5.43. Setting pricing methodologies for distributors is explicitly within the scope of matters that may be addressed in the Code, along with setting "quality or information requirements for…distributors, in relation to access to…distribution networks".[27] We therefore do not agree with submitters that our proposals fall outside the Authority's Code making jurisdiction or trespass on the Commerce Commission's power to regulate electricity lines services, which includes distribution services, under Part 4 of the Commerce Act 1986.

5.44. Further, we have consulted the Commerce Commission on the Code proposals in accordance with section 54V of the Commerce Act 1986, and its feedback has been considered in refining the proposals to ensure workability across the regimes. We have also had regard to how connection pricing is currently regulated under the Commerce Act regime in determining the need for interventions under the Code and their form.

### Connection pricing has a fundamental role in electrification and network access

5.45. A number of parties commented on links between connection pricing and electrification. For example, Powerco submitted that "…the problem definition underpinning the reform is wider than just efficient network investment, it's about delivering timely electrification at the lowest cost to consumers", Rewiring Aotearoa submitted that "…it is necessary to safeguard against inefficiently high upfront connection charges to make sure electrification investment is not hampered" and ENA submitted that "in the context of the anticipated increased electrification of the economy, fostering greater efficiency in network connections has the potential to deliver substantial welfare benefits".

[27] Refer sections 32(4)(a) and (b) of the Electricity Industry Act 2010.

5.46. Some submitters[28] queried whether the proposals were targeting a subset of access seekers such as electric vehicle charge point operators (EV CPOs). For example, Electra Trust was "…concerned that the proposed changes are designed to favor a small number of connecting parties over others and that these changes will result in increased charges and risk to existing customers."

5.47. Unison and Centralines jointly recommended that:

> *"…the Authority limits focus on the issues arising from CPOs and solar generation projects and target the problem proportionately. This is less likely to risk unintended adverse outcomes for existing connection customers, which can be carefully considered through targeted proposals."*

**Response**

5.48. The Authority does not agree that connection pricing reform should target a subset of access seekers. Connection pricing has a pervasive impact across the economy and the case for intervention is relevant to all types of access seeker.

5.49. However, we do agree that electrification is important context for reform, including because the potential harm from inefficient pricing is amplified when demand for new and upgraded connections is high and that demand (as is the case for many electrification projects) is:

(a) price-sensitive, and so may be deterred by high prices

(b) flexible (in terms of both siting and sizing) such that there is scope for efficient pricing (that is cost-reflective and designed to enhance coordination) to help optimise investment.

### Staged reform will improve the efficiency of investment outcomes

5.50. Some submitters considered the Authority was moving too quickly, or without sufficient engagement. For example, ENA submitted that it has "…concerns with consultation timelines, the lack of clarity in what is proposed, and the implementation timeframes".

5.51. ETNZ submitted:

> *"Firstly, and most importantly, we urge the EA to slow down this process. It is being implemented with undue haste. Mistakes and missteps will only be borne by our existing customers in the form of higher prices and increased risk".*

5.52. In contrast, Tenco submitted that they "…commend the Electricity Authority for its consultative approach and commitment to long-term reform, and we look forward to the successful implementation of these critical measures".

5.53. Some submitters argued the Authority should focus on facilitation and guidance. For example, Firstlight Network submitted that

> *"…while we support the direction of reform, we are concerned with the use of code changes to mandate approaches where opportunities exist for the Authority to work collaboratively with industry. We appreciate the need to*

[28] For example, PowerNet, ETNZ, Trust Horizon, Northern Energy Group

*move at pace, but successful reform needs to ensure there is a balance to achieve durable and efficient outcomes".*

**Response**

5.54. The Authority has decided that three requirements will apply to pricing quotes for connection applications received from 1 April 2026, with a fourth (capacity costing) applying to quotes received from 1 April 2027. The Authority had proposed that all requirements would apply to all quotes from 1 April 2026. The revised implementation:

(a) extends (slightly) the implementation window for distributors for the first three requirements, and more substantially for the fourth requirement

(b) allows distributors to incorporate additional information gathering into application requirements

(c) avoids changing the basis for pricing part-way through live application processes

(d) leaves scope for distributors to introduce new approaches earlier if they prefer.

5.55. The Authority has decided to take more time to consider and possibly refine the reliance limit proposal. The reliance limit requirement attracted the most opposition from submitters and has the biggest potential financial impact on distributors. We discuss reliance limits in more depth in Chapter 10.

### Complexity of the proposals reflects the interlinked and nuanced nature of the issues

5.56. A number of parties commented on the complexity of the Authority's analysis or proposed interventions. For example, Drive Electric submitted that "…after carefully going through the Authority's distribution connection pricing proposal we are not clear on exactly what the Authority is proposing" and Meridian Energy submitted that "…as we found the consultation paper relatively complex and confusing, it's unclear whether the proposed Code changes will deliver the outcomes envisaged by the Authority's proposals".

5.57. In contrast, Unison and Powerco jointly submitted that "The Electricity Authority and its advisers, CEPA, present a very good discussion of the relevant economic and other principles in relation to the appropriate levels of connection charges".

**Response**

5.58. These submissions reinforce the Authority's view that reforming connection pricing is a complex undertaking such that it is necessary to balance:

(a) timely delivery of the gains expected to flow from improved connection pricing, against

(b) the capacity of the sector (and the Authority) to implement change, and the cost and risks associated with moving too quickly.

5.59. The submissions also reinforce the relative immaturity of the current state of connection pricing across New Zealand, in that there is not a base of concepts, language and pricing approaches that are widely and consistently used and

understood. The new pricing requirements will provide a useful advance in this respect.

### The requirements do not apply to secondary networks at this stage of reform

5.60. Several submitters argued that embedded networks should not be excluded. For example, Retyna submitted that:

> *"…many freight and other transport sector fleet operators have depots with electricity network connections through embedded networks at places like airports, inland ports and seaports.*
>
> *It is, therefore, vital that embedded networks that serve transport hubs are included in the fast-track process at this critical time for accelerating heavy EV uptake."*

5.61. Aurora Energy submitted that "…the fast-track methodologies need to be applied consistently to all networks to avoid the risk of distorting competition". Air New Zealand submitted that "…embedded networks serving transport hubs (any integrated area with multiple customers operating commercial activities involving transport) should be included in the fast-track process".

5.62. In contrast, Tenco submitted that "…the issues that these regulatory changes are trying to address don't exist in embedded networks".

5.63. UDL pointed out that the Authority should be clear on how requirements apply to all types of secondary networks, submitting that:

> *"…the term 'distributor,' as used in the Act, Regulations, Code or EA guidelines, now applies to both local networks and secondary networks. While the EA has established a threshold for embedded networks in the pricing guideline, the other two types of secondary networks – customer networks and network extensions – are not specifically addressed".*

**Response**

5.64. The Authority will take more time to consider what requirements (if any) should apply to secondary networks (including embedded networks). This reflects a range of considerations, including:

(a) there is comparatively little information available on secondary networks

(b) secondary networks are diverse – ranging from small within-building reticulation to subdivision-sized and large infrastructure site networks (including many ports and airports). Network access and pricing considerations may vary in salience and substance across these network types

(c) the regulatory context for secondary networks differs from primary networks, which may also have implications for connection pricing.

### Pricing for large connection contracts (LCCs) is subject to charge reconciliation only

5.65. There were mixed views on the proposal that pricing requirements should apply to large connection contracts (LCCs). Distributors and energy trusts disagreed with the proposal and other submitters expressed at least some support.

5.66. Those who disagreed with the proposal were generally of the view that LCCs are between parties that have the expertise and bargaining power to negotiate appropriate pricing terms, that large connections are unique and complex, and require flexibility.

5.67. For example, Powerco submitted that:

> *"The regulatory intent behind LCCs is precisely to avoid regulation where both parties agree. We do not anticipate many instances where EDBs will enter into them but where they do there should be no need to constrain how they chose to – parties could opt to apply regulated terms if they can't agree bilaterally."*

5.68. Aurora Energy disagreed because:

> *"LCC contracts are subject to negotiation between the connecting party and the distributor and will likely include a bespoke non-standard lines charge. We anticipate that these agreements will involve a direct trade-off between upfront connection costs and ongoing lines charges. For example, a connecting party with access to low cost financing may well prefer to fully fund the cost of connection in lieu of reduced ongoing lines charges."*

5.69. Orion also submitted that there is no consistency around the threshold of a LCC or the definition of 'large'.

5.70. Some submitters[29] supported application of the pricing methodologies to LCCs to establish an information baseline and improve transparency while maintaining an equitable balance between regulatory oversight and commercial negotiations.

**Response**

5.71. The Commerce Commission introduced the LCC mechanism from 1 April 2025 to allow a distributor and an applicant to agree to progress very large connection investments outside of usual revenue control arrangements.[30]

5.72. The Authority agrees it is consistent with the intent of the mechanism that LCCs should not be subject to the enhancement cost allocation, capacity costing and pioneer scheme obligations. However, we note that:

(a) LCCs are by mutual agreement and we expect, in practice, most applicants would request a non-LCC quote against which they can compare LCC terms and pricing

(b) the requirements include provisions designed to accommodate large non-LCC connections, such as the ability for parties to agree to waive the requirement to design a minimum scheme or to agree to an alternative allocation of extension costs.

29 For example, Contact Energy, Manawa Energy, Tenco and CentrePort

30 For more information, refer Chapter 8 of the Commerce Commission's decision paper on CPP and in-period adjustment mechanisms. https://comcom.govt.nz/__data/assets/pdf_file/0024/337614/Part-4-IM-Review-2023-Final-decision-CPPs-and-In-period-adjustments-topic-paper-13-December-2023.pdf

5.73. We do not agree that LCCs should be exempt from charge reconciliation requirements.[31] This is because charge reconciliations provide a standardised method for assessing the impact of an LCC on other customers – including by indicating whether the LCC is subsidised (ie, has a negative network cost contribution) and by allowing comparison of network cost contribution against other consumer groups (and distributors).

[31] LCC reconciliations would be provided to the connection applicant and the Authority on request. There is no requirement to publish the LCC reconciliations.

# 6. Connection enhancement cost allocation

6.1. This section provides more information on the Authority's decision to introduce enhancement cost allocation requirements for distribution connection pricing quotes for applications received from 1 April 2026.

6.2. In summary, having analysed submissions, our view is the connection enhancement cost allocation requirement will improve the consistency and efficiency of distribution connection pricing by:

(a) improving consistency of terminology and approaches across distributors

(b) ensuring costs for extensions are allocated in a way that is cost-reflective and efficiently aligns incentives with respect to enhancements and flexibility

(c) accommodating low-cost implementation approach for high-volume, low-value connection types.

## Introduction to connection enhancement cost allocation

6.3. The design solution for a connection can have a significant bearing on its cost and capability. As such, it is desirable for connection pricing to provide a cost-reflective signal with respect to choices between:

(a) standard and flexible connections (which may have less firm access to capacity or security)

(b) least-cost and enhanced solutions (which may deliver additional benefits at additional cost).[32]

6.4. Informed by similar arrangements in the United Kingdom and Australia, the Authority proposed a requirement that distributors must:

(a) design and cost the least-cost technically acceptable solution for connecting each customer (the "minimum scheme")

(b) fully allocate the cost of any customer-selected enhancements to the customer, for example, opting for undergrounding, alternative routing or redundant capacity

(c) not allocate any of the costs of distributor-selected enhancements to the customer, for example, bundling associated works, reconfiguring the network to suit future development, or building anticipatory capacity (to accommodate future connections).

6.5. To future-proof the requirement, we also proposed customers may request that the distributor consider whether it can provide a lower cost "flexi" scheme. A flexi scheme may incorporate load control or other operating arrangements that reduce extension costs (eg, enable use of a smaller transformer) or upstream capacity costs (eg, by ensuring the connection doesn't contribute to peak demand).

[32] This also aligns with the Authority's distribution pricing principles – specifically that prices should signal the economic costs of service provision and allow negotiation to enable price/quality trade-offs.

6.6. To ensure the enhancement cost allocation requirement is not too onerous, we also proposed that:

(a) a distributor and applicant may opt-out of the requirement to price and cost a minimum scheme in accordance with this methodology if both parties agree

(b) distributors are not required to re-cost the minimum scheme for each connection that uses posted charges (ie, published standard connection charges).

6.7. Finally, to provide flexibility we proposed that a distributor and applicant may agree to an alternative allocation of enhancement costs in accordance with this methodology – for example, where an enhancement benefits both parties.

6.8. These requirements:

(a) promote improved alignment of terminology, concepts and practices

(b) ensure transparency for connection applicants

(c) provide cost-reflectivity and aligned incentives

(d) safeguard applicants from distributor-selected enhancement costs, and existing customers from customer-selected enhancement costs.

## Decision on connection enhancement cost allocation

6.9. The Authority has decided to proceed with connection enhancement cost allocation requirements, with minor amendments (summarised in Table 6.1).

6.10. The requirement applies to quotes for distribution network connections for load for applications received from 1 April 2026.

6.11. The Authority considers that implementing the requirement in quotes for applications received from 1 April 2026 strikes a reasonable balance, noting:

(a) for many distributors and connections, the requirement will amount to clarifying and standardising existing practice, with no change in financial outcome

(b) there is scope for the sector to collaborate on drafting boilerplate material for connection pricing methodologies, and the Authority is preparing worked examples that will provide additional implementation support[33]

(c) the minimum scheme and minimum flexible scheme obligations link to a distributor's network policies and standards. This link may drive a need for some distributors to review or formalise elements of their asset management, but this does not support deferring the pricing requirement sector wide.

6.12. Table 6.1 summarises modifications to proposed connection enhancement cost allocation requirements. At the end of this section, Table 6.2 provides a more detailed guide to updated Code amendment drafting relating to enhancement cost allocation.

[33] Worked examples will also make it clearer how the reduced cost of a flexi scheme flows through to extension and capacity costs, and how this may interact with lines tariffs.

**Table 6.1 – Modifications to connection enhancement cost allocation requirements**

| Element of proposal | Description of modification |
|---|---|
| Flexible scheme | Clarify the obligation to consider a flexible scheme by:<br>• making it clearer that offering a flexible connection is not always practical, but a distributor must make a reasonable effort<br>• referring to a distributor's "connection and operation standards" rather than "good electricity industry practice" |
| Large connection contracts | Clarify that enhancement cost allocation requirements do not apply to connections that use the large connection contracts (LCC) mechanism, other than with respect to charge reconciliation. |

## Submissions on connection enhancement cost allocation and our assessment

6.13. Below we summarise key themes from submissions on connection enhancement cost allocation.

6.14. Submitters broadly supported the intent of the requirements, with some submitters expressing concern regarding administrative costs or raising queries about limitations on obligations to offer low-cost or flexible design solutions.

### Broad support for intent of proposal

6.15. There was reasonably good support across submitters for the proposal. For example, WEL Networks "…support the use of a minimum scheme to provide customer choice and efficiency of pricing".

6.16. Orion submitted that they:

> *"…agree that connection applicants will have better visibility of the least-cost connection options: including flexible connection alternatives. Transparency in pricing and the availability of flexible options will allow applicants to make more informed decisions, potentially leading to more cost-effective solutions and encouraging the uptake of flexible connection choices."*

6.17. Unison and Centralines jointly submitted in support because "…the proposed minimum scheme and minimum flexible schemes will give consumers access to lower-cost solutions and will result in customers only paying for necessary enhancements." Genesis Energy supported the proposal as it "…will give customers greater optionality and information as to the costs associated with their proposed connection and could help to lower costs and help achieve efficiencies when funding network growth."

6.18. Some submitters supported the intent of the proposal but had concerns around the level of discretion that distributors retained. For example, Meridian "…supports the fast-track proposal to provide minimum cost designs and flexible option…" but was "…unclear whether this change will lead to reduced costs for applicants."

6.19. Drive Electric submitted that:

> *"…despite the wording that any connection works must be the minimum relevant scheme cost, as the EDBs still determine what those connection*

*works are and the minimum relevant scheme design is at their discretion, this is a meaningless addition."*

6.20. In contrast, Waipa Networks did not support the proposal, submitting that connection enhancement costs "…should be based on actual costs to enhance the network and not on "averages", which will not reflect the actual costs incurred as not all new connections are the same".

**Response**

6.21. The Authority considers enhancement cost allocation requirements will improve connection pricing, even though they do not directly provide regulatory oversight of the reasonableness of distributor connection and operating standards.

6.22. We note that, aside from the network capacity component (if any), customer-selected enhancement costs should be based on connection-specific costs, not network (or costing zone) averages.

### Use of standard charges and rates can balance administration and transaction and search costs

6.23. Powerco raised concerns about transaction and search costs for smaller customers and recommended use of standard capacity rates. They also suggested that the Authority "…agree flexible minimum scheme is only for larger access seekers and terms should be fixed for a number of years that relates to forecast network augmentation."

6.24. Westpower submitted that:

*"Having to determine set connection prices will require some level of risk to be factored into the pricing so ultimately will increase the pricing. There is also an administrative cost for preparing these posted connection prices and the cost of doing so will ultimately be passed onto Consumers."*

**Response**

6.25. The new connection pricing requirements are designed to accommodate use of "posted" charges and extension rates where a distributor considers this provides an appropriate trade-off between accuracy and administration costs.[34] In contrast to the capacity costing requirements, distributors are not required to use posted rates for extension costing.

6.26. Where a distributor does choose to use posted charges for high-volume, low-cost connection types, they will not need to re-determine the minimum scheme for each connection.

6.27. As proposed, the obligation to apply a pricing methodology to price a flexible connection was limited to where the distributor "can supply it". We have decided to amend this to where the distributor "can reasonably supply it".

[34] A posted charge is a standard, published charge for eligible connections (on a dollar per connection basis). A posted extension rate is a standard published rate for the extension component of a connection – for example, a cost per metre for a single-phase low voltage overhead line.

6.28. This may have the effect, at least for some distributors, of restricting availability to large connections. However, the pricing requirements are designed to accommodate the possibility that some (if not all) distributors may offer flexible connections (in future, if not today) as a prudent way to manage investment costs.

### Flexible connections do not override network connection and operation standards

6.29. A few parties commented that it was important that distributors have the ability to decline a non-firm or flexible connection if it will impact on the supply of others or if not feasible. For example, Unison and Centralines jointly "…recommend that distributors retain some control over circumstances/ conditions offered to applicant" to avoid unintended consequences. ENA indicated that distributors were "…supportive of flexible connections where practical" but were concerned how the application would work in practice.

6.30. Further, Wellington Electricity raised concerns that:

> *"…a connection that is requested by a customer which will likely impact an EDBs*['] *quality targets under Part 4 needs to be excluded from the regulatory quality path to avoid the EDB being penalized, simply as a result of being required by these regulations to accept a customer's request for a lower level of security that doesn't comply with a network's security policies."*

6.31. Orion queried how to price a minimum flexible scheme and welcomed:

> *"…further clarification on how the cost of a minimum flexible scheme should be determined, including any methodology for calculating the discount or adjustment to the posted connection charges under the relevant minimum scheme."*

6.32. Wellington Electricity raised concerns about the potential for the minimum scheme to override a distributor's connection and operation standards, submitting "…that it should be clear that a minimum scheme would still need to meet minimum technical standards, including a security standard that is appropriate for the size and type of connection being sought". ENA shared this view, submitting that the relevant scheme "…should be in reference to the EDB's network connection standards and equipment procurement policies".

**Response**

6.33. In response to concerns that the flexible scheme obligation could be interpreted as more onerous than intended, the Authority has decided to amend the Code drafting by:

(a) (as noted earlier) inserting "reasonably" into the definition of relevant minimum scheme. This helps calibrate expectations – ie, an applicant can request a flexible connection and the distributor must consider the request but is not obliged to supply a flexible connection if it cannot reasonably do so

(b) amending the definition of minimum scheme to link it to the distributor's connection and operation standards, rather than good electricity industry practice.

6.34. Distributors have an existing (long-standing) obligation under Part 6 of the Code to publish "connection and operation standards" relating to distributed generation. These are required to reflect, or be consistent with, "reasonable and prudent operating practice", which in turn includes using "reasonable and prudent measures to enable connection". In its parallel work on network access, the Authority has decided to extend these obligations to load.

6.35. The pricing requirements do not ensure distributors will adopt efficient standards, but they do provide a framework for accommodating flexibility within connection pricing.

### Trade-off between up-front costs and lifetime cost and performance

6.36. Some submitters noted that the relevant minimum scheme may not meet the needs of subsequent connecting parties. WEL Networks submitted that they:

> *"…would like the Authority to be aware that whilst the connecting party accepted the minimum scheme (e.g. a developer) the next customer on that property may not and this would need to be considered as an upgraded connection which may not lead to an efficient process".*

6.37. PowerNet noted that "Sometimes the least cost, technically acceptable solution, may not be in the best long-term interest of the customer or the network, resulting in inefficient outcomes long term".

6.38. Counties Energy submitted that "Developers may opt for the 'relevant minimum scheme' or the lowest-cost option even if it doesn't fully address the needs of either the initial or future users…" and recommended "…that appropriate provisions be made in the Registry to ensure that the conditions of this choice are clearly documented and visible to all affected parties".[35]

### Response

6.39. The minimum scheme must meet the distributor's connection and operation standards, which should in turn address lifetime cost optimisation (alongside other asset management considerations, such as worker and public safety), unless both parties agree to some lesser standard. Similarly, the design and availability of flexible schemes should reflect the distributor's consideration of relevant factors.

6.40. We note that, where a customer with a flexi connection wishes to convert to a non-flexible connection, this would be a connection upgrade and connection pricing requirements would apply accordingly. This could result in charges for upgrades to dedicated assets, and consumption of additional network capacity.[36]

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[35] View also shared by BusinessNZ Energy Council

[36] For example, a flexi connection may have been established with load control that ensures it does not impact peak demand at zone substation (or higher) level and have been allocated no capacity cost for those tiers. If the customer at that site subsequently wished to change from a flexi to a firm connection (with no load control) they would be allocated zone substation (and higher tier) capacity costs based on their design demand at those levels.

### Updated Code amendment drafting

6.41. Table 6.2 highlights key updates to Code amendment drafting in relation to enhancement cost allocation requirements.

**Table 6.2 – Updated Code amendment drafting (connection enhancement cost allocation)**

| Updated drafting | Comment |
|---|---|
| **relevant minimum scheme** means a **minimum scheme** or, if a **connection applicant** requests it and the **distributor** can reasonably supply it, a **minimum flexi scheme** | Improve calibration of the obligation to consider flexi connections. |
| **minimum scheme** means the least-cost solution for any **connection works** provided by a **distributor**, including for security and firmness of capacity, in accordance with ~~**good electricity industry practice**~~ the **distributor's connection and operation standards** or a lower standard if agreed to in writing between the **connection applicant** and the **distributor** | Link minimum scheme to a distributor's connection and operation standards, which are in turn required to reflect, or be consistent with reasonable and prudent operating practice. |
| **6B.3 Distributors must comply with mandatory connection pricing methodologies**<br>(3) Despite subclause (1), a distributor is—<br>…<br>(b) in respect of any **connection** covered by a large connection contract as defined in the **EDB IMs**, other than the **connection charge reconciliation methodology requirements** only | LCCs provide for large connections to negotiate bespoke arrangements. Reconciliation provides transparency as to impact on other customers. |

# 7. Capacity costing

7.1. This section provides more information on the Authority's decision to introduce capacity costing requirements for distribution connection pricing quotes from 1 April 2027.

7.2. In summary, having analysed submissions, our view is the capacity costing requirement will improve the consistency and efficiency of distribution connection pricing by:

(a) improving consistency of terminology and approaches across distributors

(b) ensuring costs for upstream capacity are allocated in a way that is cost-reflective and efficiently aligns incentives with respect to sizing and flexibility

(c) enhancing predictability and mitigating the coordination challenge associated with 'last-straw' pricing.

## Introduction to capacity costing

7.3. As network demand grows over time, the capacity built into a network when it was first established is consumed and, eventually, capacity upgrades are needed to maintain security or avoid congestion.

7.4. New and upgraded connections are a driver of demand growth, alongside growth in demand from existing connections – for example, as households add appliances, swimming or spa pools, electric heating, air conditioning or electric vehicles.[37]

7.5. As such, it is efficient to allocate the connection-driven component of capacity upgrade costs to connections. This provides cost-reflectivity and helps to avoid existing consumers subsidising connection growth.

7.6. However, there are potential pitfalls including:

(a) separating capacity upgrade costs from other costs. For example, a project for which the primary trigger was a need to upgrade capacity may encompass other works and deliver other benefits

(b) separating the impact of connection growth from "organic" growth (that is, increases in peak demand from existing connections outside of increases associated with connection upgrades)

(c) avoiding adverse coordination impacts associated with unpredictable pricing and position-in-queue dynamics.[38]

7.7. Informed by similar arrangements in Australia, we proposed that:

(a) distributors must calculate and publish rates that represent the average cost of adding network capacity at each of five "network tiers" (sub-transmission

[37] Peak demand growth can also occur due to changes in the timing of demand – for example, if the effectiveness, use of, or participation in, hot water or other demand control declines over time.

[38] These problems are associated with 'last straw' pricing – where upgrade costs are allocated to the party that triggers the need for an upgrade. This can discourage the unlucky applicant altogether or encourage them to wait until some other party triggers and pays for an upgrade.

line, zone substation, high voltage feeder, distribution substation and low voltage mains)

(b) if a distributor allocates upstream capacity costs to connecting parties, it must do so using the applicable published rates (for the connection tier and above) and connection-specific capacity demand values.[39]

7.8. This requirement means capacity costs are recovered progressively as headroom is consumed, rather than from the connection that triggers an upgrade. This approach removes position-in-queue dynamics and makes the capacity component of connection pricing more predictable.

7.9. We proposed a number of additional features, to:

(a) avoid excessive averaging, distributors may:

(i) define “costing zones” for different parts of their network with different upgrade costs. For example, a distributor may choose to define urban and rural costing zones

(ii) for connections at a location where capacity costs are much higher than the costing zone average, the distributor may use a bespoke rate

(iii) for connections that consume a very large capacity increment, the distributor may use estimated project costs in place of capacity rates

(b) avoid over-signalling, a distributor may adopt zero rates for any part of their network (zone and tier) where they do not foresee any future need for capacity upgrades

(c) support predictability, the distributor must publish rates for the current and four future years and cannot revise rates for the first two of those five years (ie, provide a five-year horizon with a two-year lock).

## Decision on capacity costing

7.10. The Authority has decided to proceed with the capacity costing requirements, with minor amendments (summarised in Table 7.1).

7.11. The capacity costing requirement applies for reconciliation purposes from 1 April 2026. The requirement applies to quotes for distribution network connections for load for applications received from 1 April 2027.

7.12. The Authority considers that these implementation dates strike a reasonable balance, noting:

(a) the earlier charge reconciliation implementation date means distributors will gain a working familiarity with capacity costing prior to being required to incorporate it into pricing

(b) there is scope for the sector to collaborate on drafting boilerplate material for connection pricing methodologies, and to develop detailed capacity costing

[39] These values consider the size of the connection, and factors such as demand diversity and coincidence with the relevant (ie, network planning) demand peak(s).

methodologies. The Authority is also preparing demonstration calculations that will provide additional implementation support

(c) distributors have the option to implement capacity costing into quotes earlier if they wish.

7.13. Table 7.1 summarises modifications to proposed capacity costing requirements. At the end of this section, Table 7.2 provides a more detailed guide to updated Code amendment drafting relating to capacity costing.

**Table 7.1 – Modifications to capacity costing requirements**

| Element of proposal | Description of modification |
|---|---|
| Posted capacity rate | Clarify that posted capacity rates can be revised to correct errors, and revise drafting to clarify requirement to publish rates. |
| Extension-like upgrades | Clarify that the cost of "extension-like" upgrades to shared assets may be treated as a network extension. |
| Symmetric limits on rates | Clarify that distributor may also use estimated rate if it is less than 80% of the posted rate. |
| Large connection contracts | Clarify that capacity costing requirements do not apply to connections that use the large connection contracts (LCC) mechanism, other than with respect to charge reconciliation. |

## Submissions on capacity costing and our assessment

7.14. Below we summarise key themes from submissions on the network capacity costing methodology.

7.15. Submitters had mixed views on the network capacity costing requirement. Overall:

(a) access seekers tended to support the proposal, but some were concerned that distributors retained too much discretion in determining capacity rates

(b) distributors tended to support or partially support the requirement but noted the potential complexity and cost of determining capacity rates for different costing zones and tiers.

### Diversity and coincidence are addressed through capacity assumptions

7.16. Some submitters commented that connection applicants overestimate their actual capacity requirements. For example, Northpower submitted that:

> *"…posted rates represent costs for diversified load, whereas connection applications are based on undiversified demand. This mismatch requires applying a diversity factor, which can vary significantly depending on customer type and network location. This may lead to inconsistencies in capacity costing for access seekers with similar demand."*

7.17. WEL Networks indicated that "…many applicants of larger connections (>110 KVA) grossly overestimate their actual capacity requirements and the ability for an EDB to apply a reasonable diversity factor would be appropriate."

**Response**

7.18. Capacity rates are not adjusted for diversity or coincidence, because these considerations are factored into the demand estimate for each connection. This is a more transparent and flexible approach than adjusting the published rates.

7.19. We note it would be reasonable for distributors to establish default demand assumptions for each tier for each consumer group. This would further improve predictability and reduce administrative effort.

7.20. For larger connections, capacity costing provides cost reflectivity with respect to upstream costs. As such, it should enhance incentives for applicants to size their connection efficiently (including by opting for a flexible connection if available).

### Costing approach is fit for purpose

7.21. One of the critiques raised in submissions was the use of historical investment costs to calculate rates. For example, Aurora Energy submitted that our proposal:

> *"…appears to suggest the use of historic investment costs as the basis for calculating capacity costing rates. This is a departure from the cost reflective pricing approach that distributors are being encouraged to use for setting distribution tariffs. For example, distributors are increasingly using long-run marginal costs based on future upgrade costs to set peak Time-of-Use tariffs."*

7.22. In contrast, Drive Electric suggested that:

> *"…basing network capacity costs on historical data relating to actual increments of supply, common costs, and forecast level of capacity headroom down to the level of resolution proposed by the Authority will give more efficient connection charges overall."*

**Response**

7.23. We consider that the design of the requirement with respect to its costing approach is appropriate.

7.24. The rates are based on historical costs but adjusted for input cost escalation and any other factors that affect construction costs (such as changes in design standards). This is consistent with good practice cost estimation for long-term expenditure forecasting, so there should be consistency between asset management plan build ups and capacity costing rates in that respect.

7.25. Deriving long-run marginal cost (LRMC) estimates as an input to cost-reflective peak signals in ongoing tariffs is a different exercise. Capacity costing allocates the cost of capacity to connections based on their design demand, while LRMC signals the cost consequences of usage.

7.26. Both approaches are forward-looking, but in different ways:

(a) signalling the cost-consequences of usage – LRMC signals the deferral benefit of peak demand reductions (or cost of increases). LRMC is sensitive to how far into the future an upgrade is required, and how quickly demand is

growing.[40] It is intended to encourage efficient usage decisions, including end consumer appliance choices

(b) allocating the cost of capacity – capacity costing allocates the cost of capacity to customers as they connect (or upgrade). The costing is based on a forward-looking assessment of the cost of adding capacity to an existing network (not the cost of the existing capacity). It is intended to encourage efficient connection sizing decisions, and to allocate costs efficiently.

7.27. Notwithstanding their differing purposes and estimation methodologies, there should be consistency in the cost estimation inputs used for LRMC calculations and capacity costing rates. These inputs typically include costing elements derived from analysis of historical projects, and adjustment factors for input cost escalation.

### Extension-like upgrades are not subject to the capacity costing requirement

7.28. Network Tasman and Network Tasman Trust raised concern that the network capacity costing requirement assumes all network capacity upgrades will be used, which is not always the case for rural areas or areas of low load growth. For example:

> *"The capacity costing requirements assume that all incremental network capacity upgrades will be used. If material amounts of upgraded network capacity remain unused, the costs of those unused increments of capacity will be socialised across all consumers on the network. In these circumstances, existing consumers will bear incremental costs associated with new connections rather than the new connections themselves. These costs can be significant and introduce material inefficiencies to the connection process."*

7.29. Network Tasman provided a case study on the Maruia feeder and EV charging station at Springs Junction. Springs Junction is a significant but remote node on the highway network between the top of the South Island, Canterbury and the West Coast. Upgrading the Maruia feeder to accommodate EV chargers was estimated at $3 million to $4 million. Under Network Tasman's existing connection charging policy, new loads must fully fund network upgrade costs triggered by their connection.

7.30. Network Tasman submitted that:

> *"Had the Authority's proposed methodology been in place, CPOs would have only been required to [pay] a portion of the upgrade costs to connect to the network and likely triggered a feeder upgrade. With load growth flat, most of the upgrade costs would have been passed on to existing consumers. For example, if a CPO required only 15% of the new capacity added to supply them, the remaining 85%—about $3 million (based on a project cost of $3.5m)—would have fallen on existing consumers, equating to approximately $70 per connection on our network. This is a significant cost for existing consumers to pay."*

[40] If demand growth is slow, then a small demand decrease may push the need date for a capacity increase by many years (hence LRMC is high) and vice versa.

7.31. Network Tasman also submitted that the proposed requirements do not create sufficient incentives for connections to minimise the incremental costs of their connection through technology innovation.

**Response**

7.32. The proposed requirements draw a distinction between:

(a) network extension – construction of new network-owned assets that tie a new point of connection back to the existing communal network; and

(b) capacity upgrade – work to upgrade the capacity of existing, upstream, shared network assets.

7.33. While this distinction generally holds, submissions highlight there can be cases where an upgrade to upstream shared assets is better treated as being "extension-like".

7.34. This could arise, for example, where:

(a) a large load at a remote location triggers the need to replace a low-voltage (LV) line with a high-voltage (HV) line

(b) the new HV line will serve existing connections as well as the new connection but would not be required but for the new large connection.

(c) while the (minimally-sized) HV line may have ample capacity to accommodate further connections (or organic demand growth) there is unlikely to be any such growth.

7.35. In this scenario:

(a) treating the HV line as a capacity upgrade would materially under-allocate costs to the connecting party

(b) the distributor would be reluctant to treat the upgrade as a network development cost, because the new capacity is unlikely to be taken up by further growth

(c) treating the new line as an extension cost would provide an appropriately cost-reflective signal to the applicant – supporting their evaluation of choices such as the location of their demand, their opportunities to reduce the capacity they need from the electricity distribution network, and whether a flexi-connection may better balance cost and quality.

7.36. To enable flexibility to address such scenarios, we have decided to include a mechanism for classifying certain capacity upgrade work as "extension-like". Extension-like upgrades would:

(a) not be subject to the capacity costing requirement

(b) remain subject to the enhancement cost allocation requirement

(c) be eligible (depending on their value) for a pioneer scheme.

7.37. The definition of an "extension-like" upgrade is that it:

(a) would otherwise be treated as capacity upgrade work

(b) substantially benefits only the connection applicant, and this likely to remain the case

(c) not subject to the "large increment" capacity costing exemption.[41]

### Administration costs are reasonable

7.38. A few parties raised concerns around the administration costs of the capacity costing requirement. For example, Wellington Electricity is of the view that "…the costing by network tier and costing zone would be difficult and costly to determine and administer, particularly with a highly meshed network such as we have in Wellington." As such, "…it is unclear what the benefit of the proposal would be given the additional administration costs it would impose on EDBs."

7.39. Waitaki Power Trust questioned "…whether it is necessary to go to this level of complexity" as consumers would bear the cost of an expert consultant or independent engineer to help them determine rates.

7.40. Powerco raised concerns around transaction and search costs for smaller customers and proposed that "…standard capacity rates for smaller connections are based on the average group of connections with similar costs."

**Response**

7.41. The Authority considers the cost of implementing and operating network capacity costing is reasonable, noting:

(a) there is scope for the sector to collaborate on developing detailed methodologies for deriving capacity rates and the explanation of and publication of this material. The Authority is also preparing demonstration rate calculations that will provide additional implementation support

(b) capacity costing rates are also needed for the charge reconciliation requirement. This applies for all distributors, regardless of whether they actually allocate capacity costs to connection applicants

(c) distributors have options for managing administrative effort, including developing posted charges[42] or deriving default demand values for each consumer group or customer type[43]

(d) the financial impact on individual distributors will depend on their existing approach to capacity cost recovery and the profile of their connection and capacity upgrade activity. The number of cases where distributor finances are

41 The large increment exemption applies where a connection will use more than 80% of the nominal capacity increment for an upgrade. Where this exemption applies, capacity cost is allocated based on (the capacity upgrade component of) the specific upgrade project.

42 Posted charges are where a distributor applies a standard charge for all connections of a given type that meet certain eligibility criteria – such as location, extension length, or construction conditions. Posted charges can improve predictability and reduce administrative costs for high-volume connection types with relatively low and uniform costs.

43 This is particularly relevant for smaller connections, where using consumer-group values would often make more sense than considering the connection applicant's specific intended use.

materially adversely impacted is likely to be small (and to coincide with examples of strong benefits from the new requirements)[44]

(e) the requirement is designed to accommodate connection size and cost outliers by allowing use of bespoke values for large or high-cost upgrades. These mechanisms mitigate financial impacts on distributors

(f) there are regulatory mechanisms available to address residual outliers – ie, the Authority can consider exemption applications,[45] and the Commerce Commission can consider change events.[46]

7.42. The granularity of network capacity costing (ie, the number and size of costing zones) is at a distributor's discretion – allowing each distributor to trade-off between pricing accuracy (more zones) and administrative cost (fewer zones).

7.43. In practice, we expect the effort involved in reviewing and updating capacity costing rates will be relatively modest compared to setting them up initially.[47] We encourage distributors to work together on the initial setup to reduce individual effort.

### Limiting frequency of changes to rates enhances predictability

7.44. Some submitters[48] considered there should be more flexibility to amend rates. For example, Unison and Centralines submitted that "…distributors should be able to revise rates annually…to reflect significant changes in input costs (e.g. material or labour price inflation)." Westpower suggested that "…having to predict what actual costs might be in 4 years' time will require some additional risk premium to be included in the pricing".

7.45. Orion queried the rationale, asking:

> *"What is the reasoning for not being allowed to revise the posted capacity rates and nominal capacity increments for the first 2 years, and having to publish 5 years of rates, when we update our asset management plan and pricing on a yearly cycle?"*

**Response**

7.46. We proposed that distributors should not be able to amend published rates for the first two years (ie, current and following). In other words, we proposed a two year "rate lock".

7.47. The reason for the proposed rate lock is to enhance predictability for connection applicants. Limiting the lock to two years recognises a trade-off between

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44 This could include where a distributor otherwise over allocates capacity costs to connections or had intended to use 'last straw' pricing to allocate disproportionate costs.

45 Section 11 of the Electricity Industry Act 2011 empowers the Authority to provide exemptions. For guidelines on Code exemptions, refer: https://www.ea.govt.nz/documents/4852/Guidelines_on_Code_exemptions.pdf

46 Refer clause 5.6.7 of *Electricity Distribution Services Input Methodologies Determination 2012*. https://comcom.govt.nz/__data/assets/pdf_file/0017/60542/electricity-distribution-services-input-methodologies-determination-2012-consolidated-as-of-23-april-2024.pdf

47 Distributors may wish to review rates as often as annually (ie, to identify whether they wish to update the unlocked rates) and update for any significant new input cost or network planning information. This should align with, and be incremental to, other planning and asset management cycles.

48 For example, Waipa Networks, Firstlight Network, ENA

predictability (favouring a long lock) and accuracy (favouring a short lock, or no lock).

7.48. Since capacity costs will typically be allocated over many years (or decades) as headroom is gradually consumed, a two-year lock leaves ample space to adjust rates over time.

7.49. However, we consider it would be prudent to relax the lock:

(a) where needed to correct an error, and

(b) for the pricing year ending March 2028 – ie, the first year in which rates are required to be used in pricing. This provides an opportunity for distributors to embed insights from their initial use of rates in charge reconciliation.

7.50. We also identified that the Code amendment for consultation did not make the requirement to publish posted capacity rates clear and have amended the drafting accordingly.

### Symmetry of exemption thresholds

7.51. EECA suggested the ability for distributors to apply a bespoke rate if costs for an upgrade project needed to accommodate a connection are estimated to be lower than average. They submitted that the 150% exemption threshold for higher-than-average costs "…should be symmetrical for lower-than-average costs".

**Response**

7.52. We agree it is reasonable to allow for bespoke rates when estimated unit costs are much lower than the posted rate. This improves symmetry and narrows the cost band for which averaging applies.

7.53. We have amended the drafting so that a distributor may use a bespoke rate if cost per unit of capacity is less than 80% of the applicable posted capacity rate. An 80% threshold:

(a) recognises that the distribution of costs is typically asymmetric about the mean (ie, there is more scope for a project to significantly exceed the average costs than to fall significantly below)

(b) predictability is less important for lower-than-expected quotes than for higher-than-expected quotes.

## Updated Code amendment drafting

7.54. Table 7.2 highlights key updates to Code amendment drafting in relation to capacity costing requirements.

**Table 7.2 – Updated Code amendment drafting (capacity costing)**

| Updated drafting | Comment |
|---|---|
| **6B.5 Capacity costing requirements**<br>(1) If a distributor intends to include or includes network capacity costs (in whole or in part) in the charges payable by a connection applicant for or in respect of any connection works, it must— | Clarify that partial allocation of network capacity costs is permitted |
| **6B.5 Capacity costing requirements**<br>…<br>(1)(b) not revise the **posted capacity rates** and **nominal capacity increments published** under paragraph (a) for the current **disclosure year** and the following **disclosure year**, except to correct errors; and | Clarify that rate lock may be relaxed to correct errors. |
| …<br>(3) If the **distributor** determines that the estimated cost per unit to add capacity at a network tier is more than 150% or less than 80% of the applicable **posted capacity rate** for that network tier, the **distributor** may use the estimated rate instead of the **posted capacity rate** in the calculation under subclause (1)(d). | Provide that distributor may also use estimated rate if it is materially *lower* than the posted rate. |
| …<br>(4) This clause does not apply to any **connection application** received by a distributor prior to 1 April 2027.<br>(5) Subclause (1)(b) does not apply with respect to **posted capacity rates** and **nominal capacity increments** for the **disclosure year** ending 31 March 2028. | Capacity costing does not apply to quotes for applications received prior to 1 April 2027.<br>Rate lock does not apply with respect to first year of operation. |
| **posted capacity rate** means the estimated average cost per capacity unit that is **published** by a **distributor** for a… | Clearly state obligation to publish and align drafting with other posted rates and charges. |

| | |
|---|---|
| **extension** means—<br>(a) works or operating arrangements to provide a **connection** of, or to increase the security or capacity of or at, a **point of connection** or of any assets owned or operated by a **distributor** that do not increase the capacity of the **shared network**; or<br>(b) an **extension-like upgrade**; or<br>(c) **incremental transmission works**; but<br>(d) does not include works or operating arrangements associated with **customer-owned assets** or work covered by a **connection fee**<br>**extension-like upgrade** means a **network capacity upgrade** that—<br>(a) substantially benefits only the **connection applicant**, and this is likely to remain the case; and<br>(b) does not meet the threshold to use an estimate in clause 6B.5(2)<br>**network capacity cost** means the cost of consuming or adding capacity in the **shared network** (other than **extension-like upgrade** costs)<br>**network capacity upgrade** means works—<br>(a) works or operating arrangements to provide a **connection** of, or to increase the security or capacity of or at, a **point of connection** or of any assets owned or operated by a **distributor** that increase the capacity of the **shared network**; and<br>(b) for the avoidance of doubt, includes:<br>(i) operational changes made by the **distributor** that are required to provide the **connection** or to increase security or capacity:<br>(ii) allocation of additional network security or capacity to the **connection**, even where this does not involve physical works or a change to a person's right to capacity on a **distributor's distribution network**; but<br>(c) does not include:<br>(i) **extension-like upgrades**; or | Define "extension-like upgrades" and treat as extensions (rather than capacity upgrades). |

| Updated drafting | Comment |
| --- | --- |
| (ii) works or operating arrangements associated with **customer-owned assets** or work covered by a **connection fee** | |

# 8. Pioneer scheme

8.1. This section provides more information on the Authority's decision to mandate pioneer scheme requirements for distribution connection applications received from 1 April 2026.

8.2. In summary, having analysed submissions, our view is that a pioneer scheme pricing methodology will improve the consistency and efficiency of distribution connection pricing by:

(a) improving consistency of terminology and approaches across distributors

(b) setting a regulatory backstop for the scope and design of arrangements to mitigate first mover disadvantage.

## Introduction to pioneer scheme

8.3. The minimum scheme for a given connection (or connection upgrade) will sometimes provide surplus capacity that can be used to accommodate additional connections (or connection upgrades) in future.

8.4. The initial cost of an extension is often relatively high, with a relatively low incremental cost for adding connections. Under this scenario, the average cost per connection may decline steeply as more parties connect.

8.5. This cost structure can present a deterrent to the "first mover" or "pioneer" connection if they are allocated the full cost of an extension. The pioneer may not connect at all or may wait for some other party to trigger the extension first – ie, this is another example of a position-in-queue coordination problem.

8.6. There are two key approaches a distributor may adopt to mitigate this problem:

(a) the distributor may elect to fund extension works. They may then allocate those costs to parties as they connect (through up-front or ongoing charges) or recover them through network-wide lines charges.[49] This removes first-mover disadvantage, but leaves existing consumers exposed to the risk of carrying excess (or stranded) costs if parties do not later connect[50]

(b) the distributor may allocate costs to the pioneer initially but operate a scheme for recovering costs from later connections and transferring them to the pioneer. This approach allocates costs and connection uptake risk to the pioneer.

[49] Socialising network development costs across all customers is simpler and may be appropriate where development costs are low relative to overall network value.

[50] Risks generally fall to existing customers because distributors can recover the cost of assets through their lines charges, even if they are under-utilised or stranded. Risk can fall to the distributor's owner(s) if, say, the cost is too large to practically recover from existing customers. This outcome is most likely for smaller networks, where development costs may be large relative to overall network value.

8.7. Borrowing from similar arrangements in the United Kingdom and Australia, the Authority proposed a requirement that:

(a) distributors must develop a pioneer scheme policy setting out how they will operate pioneer schemes for extensions with a large up-front funding contribution

(b) pioneer scheme policies provide for pioneer schemes to:

(i) be established for extensions costing more than $30,000 (in 2025 dollars) and be published to ensure potential connection applicants are made aware of the scheme. The original pioneer may opt out if they wish, in which case no scheme is established

(ii) recognise original and subsequent funders as pioneers (with a $10,000 entry threshold for second and subsequent pioneers)

(iii) operate for 10 years, with the value of original contribution depreciated using a 20-year straight-line rate

(iv) require the distributor to collect contributions from parties connecting to a scheme and transfer them to pioneers, provided the assessed contribution is not less than $1,000 (in 2025 dollars)

(v) require contribution amounts to reflect distance (along an extension) and capacity

(c) distributors publish their pioneer scheme policy, and the details of each pioneer scheme on their network (including its location and value parameters).

8.8. We also proposed that pioneer schemes would not require transfers between parties located within the boundary of a real estate development.

8.9. The requirement would not displace contractual obligations a distributor may have established for existing network extensions, but the new policies would apply for eligible connection applications from 1 April 2026.

8.10. These requirements:

(a) expand the prevalence of arrangements to mitigate first mover disadvantage (for cases where a distributor has not elected to fund network extension)[51]

(b) promote greater consistency of terminology, coverage and operation of pioneer schemes

(c) aim to balance the investment coordination benefits to mitigating first mover disadvantage with the administrative costs of establishing and operating pioneer schemes

(d) complement the capacity costing requirements, which deliver coordination benefits with respect to capacity upgrades.

[51] Pioneer schemes do not eliminate first-mover disadvantage, because the first-mover carries costs until other parties connect and is exposed to risk around the volume and timing of subsequent connections. However, they do reduce the risk and weaken incentives to jockey for position (ie, to be fast follower).

## Decision on pioneer scheme

8.11. The Authority has decided to proceed with pioneer scheme requirements, with several minor modifications (summarised in Table 8.1).

8.12. Distributors will be required to develop and publish a pioneer scheme policy that applies to connection applications received from 1 April 2026.

8.13. The Authority considers that requiring pioneer scheme policies to be in place by 1 April 2026 strikes a reasonable balance, noting:

(a) many distributors already operate similar schemes

(b) there is scope for the sector to collaborate on preparing boilerplate pioneer scheme policies, scheme records and contribution worksheets. The Authority is also preparing worked examples to provide additional implementation support

(c) the regulatory pioneer scheme has thresholds intended to balance the benefits of improved investment coordination with the cost of administration

(d) the first regulatory pioneer schemes will not be operational for some time after policy introduction

(e) pioneer schemes do not alter distributors' costs and funding, other than through their impact on connection applicant decision making and the net cost of administration (after fees).

8.14. Table 8.1 summarises modifications to proposed pioneer scheme requirements. At the end of this section, Table 8.2 provides a more detailed guide to updated Code amendment drafting relating to pioneer scheme requirements.

**Table 8.1 – Modifications to pioneer scheme requirements**

| Element of proposal | Description of modification |
|---|---|
| Definitions | Clarify that "extension works" exclude network capacity upgrades.<br>Clarify that "pioneering connection works" refers to extension works, including incremental transmission works (if any). |
| Transmission | As well as bringing incremental transmission costs into the definition of extension works and pioneering connection works, require pioneer scheme policies to address allocation of funded asset rebates. |
| Establishment threshold | Clarify that the threshold for establishing a pioneer scheme is based on the portion of the pioneering connection costs met by the pioneer up-front (rather than the total pioneering connection costs). |
| Administration fee | Allow distributors to deduct a reasonable administration fee |
| Pioneer scheme contribution | Clarify that the contribution threshold is assessed after deducting an administration fee.<br>Clarify that distributors may set a lower threshold if they wish (thereby expanding rebate eligibility). |

| Element of proposal | Description of modification |
|---|---|
| Level and framing of *de minimis* thresholds | Amend thresholds to reduce number of pioneer schemes required while clarifying that distributors may adopt lower thresholds (thereby expanding scheme eligibility):<br>• pioneer schemes only required where portion of pioneering connection cost initially met by a connection applicant exceeds $50,000 in December 2025 dollars, or a lower amount specified by the distributor<br>• subsequent parties connecting to a pioneer scheme only become a pioneer if their contribution exceeds $25,000 in December 2025 dollars, or a lower amount specified by the distributor. |
| Duration of scheme | To align with financial accounting and record keeping practices, reduce pioneer scheme duration from 10 years to not less than 7 years from the date of the original funder's first contribution. |
| Publishing requirements | Shift some publication requirements from individual pioneer schemes to pioneer scheme policy. |
| Real estate developments | Provide that distributors are not required to establish pioneer schemes for real estate developments (but may elect to do so). |
| Large connection contracts | Clarify that pioneer scheme requirements do not apply to connections that use the large connection contracts (LCC) mechanism. |

## Submissions on pioneer scheme and our assessment

8.15. Below we summarise key themes from submissions on pioneer schemes.

8.16. Submitters generally supported use of pioneer schemes, though some challenged whether the scope should be narrowed to reduce the number of schemes and achieve a better balance of costs and benefits.

### Adjusted parameters balance administrative burden with benefits for higher value extensions

8.17. Many submitters, including distributors, supported the Authority's intent to mitigate first-mover disadvantage.[52]

8.18. A key critique of the proposal was the potential administrative burden and complexity associated with establishing multiple pioneer schemes, tracking pioneers over time, and ensuring payments are administered to the appropriate party. Distributors who already administer pioneer-type schemes were concerned that the proposal was overly complex compared to their existing scheme.[53]

8.19. Given this, several submitters[54] questioned whether the pioneer scheme requirement would result in a net benefit to consumers. For example, Unison and

[52] For example, Westpower, WEL Networks, Powerco, Tenco, ENA, Electra, Genesis Energy, ERANZ, Air New Zealand, Firstlight, Counties Energy

[53] For example, Waitaki Power Trust, Network Waitaki

[54] For example, WEL Networks, Unison and Centralines, Wellington Electricity, ETNZ, Aurora Energy

Powerco jointly thought that "…the Authority may have overstated the potential benefits of these schemes" because:

> *"…pioneer schemes are likely to have a non-trivial cost to operate, as the ad hoc nature of the projects to which they apply means that administration is likely to involve largely manual processes. In addition, pioneer schemes change the nature of the connection transaction from a transaction that occurs at a single point in time to one that must be monitored, executed and enforced over an extended period."*

8.20. Horizon Energy considered that:

> *"…there will be significant additional administrative overhead in publishing information regarding all of the pioneer schemes running on the network and keeping this information up to date. This will increase the timeframes and costs associated with managing new connections".*

8.21. Aurora Energy submitted that:

> *"In practice, pioneer schemes are complex to administer because:*
>
> - *it is often difficult to identify when a rebate may be applicable. This requires detailed record keeping and cross-referencing GIS locations against historic connection dates.*
> - *it can be difficult to contact the correct recipient of the rebate. This is especially true if the original connecting party has on-sold the property.*
> - *the calculation of the payment itself is complex and requires a detailed understanding of the individual connection characteristics."*

8.22. Several submissions[55] suggested that distributors deduct an administrative fee to offset the cost of operating the pioneer scheme. For example, ENA submitted that:

> *"…there will be material costs expected to establish new systems and processes to administer this scheme. Distributors should be allowed to deduct an administration fee from the rebate to recover such costs, making them cost-reflective."*

8.23. Submitters suggested other changes to mitigate the administrative burden, including shortening the duration of the scheme. For example, Northpower:

> *"…believe the proposed 10-year duration is unreasonable. It exceeds the standard accounting/tax record-keeping requirement of 7 years… We suggest aligning the pioneer scheme duration with the existing requirements for distributed generation (36 months) or, at a minimum, limiting it to 7 years."*

8.24. Orion also proposed "…a 7-year timeframe instead of 10, aligning with other jurisdictions, and accepted record keeping timeframes for financial records."

[55] For example, PowerNet, Northpower, Aurora Energy, Firstlight, ENA

8.25. Several distributors raised concern around the proposed *de minimis* thresholds and suggested increased flexibility to manage administrative requirements. For example, ENA recommended that:

> *"…EDBs should be provided the ability to set the de minimis threshold for the use of pioneer schemes on the network. EDBs are best placed to determine the right balance between fairness for their customers and the administrative costs that will ultimately be borne by consumers."*

**Response**

8.26. In response to submissions regarding administrative cost and practicalities, the Authority has decided to:

(a) increase thresholds (to reduce the number of eligible schemes and contributions) while clarifying that distributors may elect to adopt lower thresholds – ie, the regulatory thresholds are a backstop

(b) permit distributors to deduct reasonable administrative fees when handling pioneer scheme transfer payments

(c) reduce required scheme duration from 10 to 7 years, while clarifying a distributor may opt to operate schemes for longer if they wish

(d) shift some publication obligations from individual schemes to the distributor's pioneer scheme policy.

8.27. These modifications will reduce the administrative burden on distributors, while retaining the benefit of pioneer schemes for higher value extensions (where first mover disadvantage is likely to be most acute). Distributors may opt to operate pioneer schemes more broadly, and the Authority may decide to adjust thresholds in future once initial settings have had time to bed in.

### Pioneer schemes are not required for connections serving real estate developments

8.28. Numerous submissions queried the eligibility and treatment of real estate developers. For example, Counties Energy Trust submitted that "A developer may request a connection but significant time could go by before a consumer(s) takes supply and even then, it may not be at the extent of the built capacity." ENA noted that "The connecting party is often not the ongoing customer, including when developers establish the initial connection and then the ongoing relationship is with the eventual homeowners."

8.29. Orion questioned whether "…an extension to be constructed to higher standards or greater capacity than required by a typical real estate developer…still fall under the pioneer scheme".

8.30. Counties Energy suggested that for developers "…because electricity reticulation costs are 1% of the final sale price, EDB connection charges are not a material consideration."

8.31. Unison and Powerco jointly noted that in Australia, new residential subdivision developments are excluded from pioneer schemes.

**Response**

8.32. The Authority has decided not to require pioneer schemes for connections serving real estate developments. Real estate developments include residential subdivisions, business parks and new towns where a developer is establishing a new multi-property development for on sale (or lease).

8.33. Operating a pioneer scheme for a real estate development can be challenging because:

(a) to achieve its intended effect, the prospect of rebates needs to improve the willingness of a developer to be a pioneer (ie, to fund a network extension that may also benefit other parties), however

(b) developers often don't expect to have an enduring relationship with a development once complete and on-sold

(c) in theory, an entitlement to rebates that attaches to developed lots would work by improving their sale price, but this is likely to be difficult for buyers to value (and requires some method of allocating rebates amongst the lots within a development). As such, this approach may not be effective

(d) alternatively, attaching rebate entitlements to the developer only works if the developer is a permanent entity (or is able to transfer their entitlement to another entity with the same beneficial owners).

8.34. The Authority intends to consider these matters further and, in the interim, permit distributors to exclude real estate developments from their pioneer scheme policies. We note that:

(a) this does not prevent distributors from opting to include real estate developments, and we would encourage them to do so where this will help address first mover hesitance

(b) we may decide to expand the scope of pioneer scheme requirements after the initial requirements has bedded in, which could be ahead of full reform.

### Pioneer schemes are established based on up-front contribution to extension works

8.35. A few submitters highlighted that the Code drafting should clarify that the pioneer scheme applies to network extensions rather than upstream capacity upgrades. For example, Meridian Energy proposed that:

> *"…the Authority replace the term "connection works" with "network extension" to ensure that the scheme does not include upstream capacity upgrade costs when charging applicants for connections to the network."*

8.36. Powerco submitted that:

> *"…the Code amendment should define "connection works cost" as "customer contribution towards connection works" to avoid the perverse result that the first subsequent pioneer pays proportionately less towards the connection than other applicants."*

**Response**

8.37. The Authority agrees with submissions that the threshold for creating a pioneer scheme should depend on the value of the pioneer's up-front contribution to extension works, not the total value of the works.

8.38. In reviewing drafting for this matter, we identified related opportunities to improve the proposed drafting by:

(a) introducing a definition of incremental transmission works that picks up drafting from the earlier definition of incremental transmission costs (used for charge reconciliation). This captures work to alter a transmission connection (when needed to accommodate a distribution connection) as well as specified transmission repricing events[56]

(b) introducing a definition of "extension" (as well as extension works and extension costs), meaning connection works other than network capacity upgrades

(c) amending the definition of pioneering connection works to encompass extensions (which, in turn, include incremental transmission works)

(d) clarifying that pioneering connection works excludes extensions that use posted connection charges.[57]

8.39. These modifications make the drafting clearer and bring incremental transmission costs into pioneer scheme policies. This covers a scenario where:

(a) to enable a connection, a distributor needs to modify its connection to the transmission network – eg, by funding a grid exit point modification, connection line upgrade, or a new point of connection

(b) the distributor elects to pass the associated transmission costs onto the connection applicant[58]

(c) the new transmission capacity improves the ability for the distributor to serve other connections in future.

8.40. This scenario is relevant where incremental transmission costs relate to physical works, but not where they relate to re-pricing. As such, we have provided that the portion of incremental transmission costs relating to transmission re-pricing events are excluded from pioneer schemes.

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56 The transmission pricing methodology includes mechanisms for reallocating the costs of benefit-based investments in the event of defined step changes, which can include connection of large new embedded loads, substantial sustained changes in demand or point of connection changes. These events are included in the definition, even though they don't include physical "works".

57 Noting that such connections are highly likely to fall below the pioneer scheme threshold in any event.

58 This is equally applicable in a scenario where the connection upgrade involves Transpower also electing to invest in anticipatory capacity that it then allocates using the applicable transmission pricing methodology mechanisms.

8.41. Finally, we have added a requirement for pioneer scheme policies to address funded asset rebates:

(a) a funded asset rebate is a payment from Transpower under its equivalent of a pioneer scheme – ie, it is a transfer from a connecting party to the pioneer(s) who funded a transmission asset

(b) it is possible for a distribution pioneer to pay a distribution connection charges that fund new transmission assets that become eligible for funded asset rebates (from Transpower to the distributor)

(c) in such cases, we would expect the distributor to pass any funded asset rebates on to the pioneer.[59]

### Updated Code amendment drafting

8.42. Table 8.2 highlights key updates to Code amendment drafting in relation to pioneer scheme requirements.

**Table 8.2 – Updated Code amendment drafting (pioneer scheme)**

| Updated drafting | Comment |
|---|---|
| **incremental transmission works** means, in relation to a **connection** works to establish a new **grid** connection, increase security or capacity of **grid** connection assets or otherwise alter **grid** connection **assets** to accommodate a new or altered **connection**<br><br>**incremental transmission cost** means an estimate of the cost of **incremental transmission works** including—<br>(a) a change in transmission charges due to a benefit-based charge adjustment event under paragraph 81(1)(e), (g), (h), (i) or (l) of the **transmission pricing methodology**; or<br>(b) new transmission charges relating to a high-value post-2019 BBI (as those terms are defined in the **transmission pricing methodology**) | Shift balance of definition between incremental transmission costs and works.<br><br>Add transmission re-pricing event. |
| **connection works** means an **extension** or a **network capacity upgrade** | Clarify that incremental transmission works are included in the definition of connection works |

[59] Whether a funded asset rebate should be passed on in full would depend on the portion of the transmission work funded by the pioneer.

| Updated drafting | Comment |
|---|---|
| **extension** means—<br>(a) works or operating arrangements to provide a **connection** of, or to increase the security or capacity of or at, a **point of connection** or of any assets owned or operated by a **distributor** that do not increase the capacity of the **shared network**; or<br>(b) an **extension-like upgrade**; or<br>(c) **incremental transmission works**; but<br>(d) does not include works or operating arrangements associated with **customer-owned assets** or work covered by a **connection fee**<br>**network capacity upgrade** means—<br>(a) works or operating arrangements to provide a **connection** of, or to increase the security or capacity of or at, a **point of connection** or of any assets owned or operated by a **distributor** that increase the capacity of the **shared network**; and<br>(b) for the avoidance of doubt, includes:<br>(i) operational changes made by the **distributor** that are required to provide the **connection** or to increase security or capacity:<br>(ii) allocation of additional network security or capacity to the **connection**, even where this does not involve physical works or a change to a person's right to capacity on a **distributor's distribution network**; but<br>(c) does not include:<br>(i) **extension-like upgrades**; or<br>(ii) works or operating arrangements associated with **customer-owned assets** or work covered by a **connection fee** | Clarify that incremental transmission works and extension-like upgrades are treated as extensions, and are included in the definition of connection works. |

| Updated drafting | Comment |
|---|---|
| **pioneering connection works** means an **extension** where—<br>(a) the portion of the **extension cost** initially met by a **connection applicant** is more than the amount of $50,000 ~~$30,000~~ in December 2025 dollar terms, adjusted each year by the **CPI movement**, or a lower amount specified by the **distributor**; and<br>…<br>(d) excludes an **extension** where the **extension costs** are established using **posted connection charges**; and<br>(e) excludes any portion of **extension cost** relating to a **benefit-based charge adjustment event**.<br>**pioneer** means—<br>(a) the **connection applicant** referred to in paragraph (a) of the definition of **pioneering connection works** (the **first pioneer**); and<br>(b) any **connection applicant** who subsequently **connects** to the **pioneering connection works** (a **subsequent pioneer**) and—<br>(i) who makes a **pioneer scheme contribution** of more than the amount of $25,000 ~~$10,000~~ in December 2025 dollar terms, adjusted each year by the **CPI movement**, or a lower amount specified by the **distributor**; and<br>…<br>**pioneer scheme** means—<br>(a) an arrangement that covers any part of a **distributor's network** or the **distributor's grid** connections that comprises **pioneering connection works**, and includes an **acquired pioneer scheme**; and<br>… | Clarified that establishment threshold relates to the value of the pioneer's contribution, and the distributor may adopt a lower threshold if they wish.<br>Adjusted default thresholds to higher values.<br>Exclude transmission repricing event costs. |
| **6B.3 Distributors must comply with mandatory connection pricing methodologies**<br>(3) Despite subclause (1), a **distributor** is—<br>(a) not required to apply the **pioneer scheme pricing methodology requirements** in respect of **real estate developments**; and | Exclude real estate developments from mandatory pioneer scheme requirement. |

| Updated drafting | Comment |
|---|---|
| **6B.8 Determining connection charges, contributions and rebates for pioneer schemes**<br>…<br>(2)(d) the **distributor** must determine the costs of any **vested pioneering works** in accordance with subclause (4)(a) | Clarify that the cost of vested asset works may be estimated. |
| **…**<br>(4)(d) **pioneer scheme contributions** must not be collected if the **pioneer scheme contribution** would be less than the amount of $1,000 in December 2025 terms adjusted each year by the **CPI movement** after deducting any fee to cover the reasonable costs of administering the scheme, or a lower amount specified by the **distributor** | Clarify that threshold may be assessed after deducting a fee. |
| (5) The rebate due to a **pioneer** must be determined in a way that shares any **pioneer scheme contribution** received by a **distributor** among all **pioneers** who are connected to a **pioneer scheme** proportionate to the extent to which each **pioneer** has met the costs of the **pioneering connection works** or the **vested pioneering works** and after deducting any fee to cover the reasonable costs of administering the scheme. | Clarify that a distributor may deduct a fee to cover reasonable administrative costs. |
| (6) This clause does not apply to a **pioneer scheme** entered into before 1 April 2026. | Clarify that this clause does not apply to pioneer-type schemes established prior to these requirements coming into effect |
| **6B.9 Distributors must publish information on pioneer schemes**<br>Each distributor must—<br>(a) **publish** its **pioneer scheme policy**, which must include:<br>(i) how **pioneer scheme contributions** are to be determined:<br>(ii) how it will administer and collect **pioneer scheme contributions**; and<br>(iii) how it will determine **rebates**:<br>(iv) how it will determine which **connection** applicants are eligible for **rebates**: | Relocate some publication requirements from individual schemes to pioneer scheme policy. |

| Updated drafting | Comment |
|---|---|
| …<br>(v) how it will distribute **funded asset** rebates it receives in accordance with clause 29 of the **transmission pricing methodology** relating to **incremental transmission works** to pioneers | Add requirement for pioneer scheme policies to address distribution of funded asset rebates received from Transpower. |
| …<br>(c) **publish** the details of each pioneer scheme it administers, applying the requirements in clause 6B.7, including the following information:<br>(i) the location of the pioneer scheme on its network<br>(ii) the start date of the pioneer scheme<br>(iii) the expiry date of the pioneer scheme<br>(iv) the relevant opening value(s) of the **pioneer scheme**<br>~~(iv) how pioneer scheme contributions are to be determined~~<br>~~(v) how it will administer and collect **pioneer scheme contributions**; and~~<br>~~(vi) how it will determine **rebates**:~~<br>~~(vii) how it will determine which **connection** applicants are eligible for **rebates**:~~ | Relocate some publication requirements from individual schemes to pioneer scheme policy. |

# 9. Connection charge reconciliation

9.1. This section provides more information on the Authority's decision to introduce connection charge reconciliation requirements for distribution connection applications received from 1 April 2026.

9.2. In summary, having analysed submissions, our view is the connection charge reconciliation requirement will improve the consistency and efficiency of distribution connection pricing by:

(a) improving consistency of terminology and approaches across distributors

(b) generating information that will facilitate:

(i) clearer understanding of the drivers for variation in connection charges, including as between pricing methodologies versus underlying costs

(ii) comparison of pricing between connections, consumer groups and distributors

(iii) identification of inefficiently low connection charges

(iv) analysis of the extent to which pricing changes drive increases in connection charges over time

(v) more informed negotiation between distributors and large connection applicants.

## Introduction to connection charge reconciliation

9.3. A key challenge for assessing connection pricing is a lack of consistent information, including for:

(a) customers when presented with connection pricing quotes

(b) distributors in comparing outcomes between connections, consumer groups and networks

(c) interested parties, including the Electricity Authority and policy makers.

9.4. Absent good information, it is challenging to:

(a) distinguish variations in costs versus cost allocation

(b) establish whether allocations are subsidy-free

(c) identify whether allocations are non-discriminatory, including as between similar connections and between cohorts (ie, similar parties connecting at different times)

(d) assess how costs are allocated between consumer groups.

9.5. To begin improving the information base, the Authority proposed that distributors:

(a) prepare a standardised reconciliation for each connection quote, showing how the charge breaks down into incremental cost, incremental revenue and network cost components

(b) supply the reconciliation to connection applicants on request

(c) supply reconciliation information to the Electricity Authority on request.

9.6. The Authority proposed an overall reconciliation equation as follows:

$$CC = (IC - IR) + NC$$

Where:

CC = connection charge (excluding fees and pioneer scheme contributions)

IC = incremental cost of the connection

IR = incremental revenue from the connection (ie, from annual charges)

NC = contribution to network costs

9.7. For determining the incremental cost component, we proposed that distributors use the enhancement cost allocation and capacity costing rules. This would require distributors to assess capacity consumption costs, even if they do not do so for charge setting purposes. We also proposed that distributors treat step changes in transmission as incremental costs but not changes in allocation of residual charges.[60]

9.8. For determining the incremental revenue component, we proposed a methodology that involves projecting a stream of ongoing charges and discounting them to the present year. We proposed that the reconciliation assume default revenue-generating lives of 30 years for residential consumers and 15 years for non-residential.

9.9. The structure of the reconciliation calculation aligns with economic theory, including recognising that:

(a) a new connection generates both up-front and ongoing revenue

(b) the net incremental cost of a new connection is equal to its incremental cost, less expected incremental (ie, ongoing annual) revenue

(c) if connection charges match net incremental cost, then the new connection is subsidy-free. In other words, other customers are made no worse off (but also no better off) by the new connection. We described this as "neutral point" pricing[61]

(d) any contribution beyond net incremental cost is a contribution to "network costs" – including the cost of shared assets, shared operating costs and renewal of older connections.

60 Residual charges are a component of transmission charges. In contrast to other transmission charge components, they are designed with the aim of avoiding any influence on investment choices.

61 This result is true in present value terms – ie, when considering outcomes over the lifetime of a connection. In a given year, a connection with neutral point pricing may generate net revenue or a net cost. Also, connections that have a longer revenue-generating life than assumed will make existing users better off.

9.10. The Authority also shared some thinking on how this type of analysis may feed into full reform of distribution pricing in future. In particular, the Authority:

(a) defined (in conceptual terms) “balance point” pricing, where the contribution to network costs for newcomers is similar to the contribution from existing customers of the same type (ie, in the same consumer group)

(b) noted that balance point pricing is non-discriminatory as between cohorts – ie, that newcomers are allocated a similar share of network costs to existing consumers

(c) postulated that full reform may involve requiring distributors to price between neutral and balance points, noting:

(i) neutral point pricing minimises costs allocated to newcomers, so is least likely to deter subsidy-free connection activity

(ii) balance point pricing carries a higher risk of deterring some economic connections but is non-discriminatory, reduces the financing burden for distributors, and is likely more durable (since it ensures all parties benefit from connection growth)

(iii) pricing above balance point is discriminatory (as between cohorts) and carries a higher risk of deterring efficient connection activity.

9.11. The Authority also noted that:

(a) Connection charge reconciliation is an information requirement only. It introduces a common economic framework and consistent calculations but does not directly constrain how much cost a distributor can allocate to newcomers

(b) for large connections with special pricing, connection pricing is a two-part process. The first step is to decide how much cost to allocate to the applicant (particularly, how much network contribution) and the second step is to decide how to structure recovery between up-front and ongoing charges.[62]

## Decision on connection charge reconciliation

9.12. The Authority has decided to proceed with charge reconciliation requirements, with several minor modifications (summarised in Table 9.1).

9.13. Distributors will be required to prepare connection charge reconciliations for all connection pricing quotes for applications received from 1 April 2026.

9.14. The Authority considers that implementing the requirement for quotes produced for applications received from 1 April 2026 strikes a reasonable balance, noting:

(a) there is scope for the sector to collaborate on preparing boilerplate worksheets for connection charge reconciliations. The Authority is also preparing demonstration reconciliations that provide additional implementation support

[62] This contrasts with connections that will be assigned to posted tariffs. For those connections, the ongoing revenue is fixed so both cost allocation and revenue structure are determined through the sizing of the connection charge.

(b) distributors that allocate capacity costs will need to implement network costing for processing applications from 1 April 2026

(c) preparing reconciliations is relatively straightforward for connections quoted using posted charges, or where consumer group default values can be used (eg, for revenue and capacity demand assumptions)

(d) reconciliation reporting will provide essential information to support full reform and may take time to mature (including as distributors develop consistent and repeatable processes).

9.15. Table 9.1 summarises modifications to proposed connection charge reconciliation requirements. At the end of this section, Table 9.2 provides a more detailed guide to updated Code amendment drafting relating to connection charge reconciliation.

**Table 9.1 – Modifications to connection charge reconciliation requirements**

| Element of proposal | Description of modification |
|---|---|
| Disclosure years | Clarify that incremental revenue should be assessed using disclosure years (rather than bespoke 12-month periods) with the first year pro-rated if necessary. |
| Incremental opex | Instead of adjusting incremental revenue by 90% to account for incremental opex, prescribe methodology for distributor-specific revenue adjustment values.<br>For connections with special pricing, allow an alternative approach of applying an opex cost loading (instead of scaling revenue). |
| Connection charges definition | Modify definition of connection charges to exclude connection fees and pioneer scheme contributions (rather than deducting these amounts in the reconciliation calculation). |
| Customer-selected enhancement costs | Clarify that network capacity costs associated with customer-selected enhancements are included as part of the customer-selected enhancement cost term (not as part of the network capacity cost term). |
| Localised historical cost recovery | Add term to incremental costs to allow for scenario where distributor implements a cost recovery scheme for historical distributor-selected enhancement or network development costs. |
| Incremental transmission costs | Add subclause (h) of paragraph 81 of the transmission pricing methodology (relating to new points of connection) to the list of benefit-based charge adjustment events that may be treated as incremental transmission costs. |
| Transmission component of incremental revenue | Add requirement to break out the transmission component of incremental revenue. |

## Submissions on connection charge reconciliation and our assessment

9.16. Below we summarise key themes from submissions on connection charge reconciliation. We note that many submissions focussed on matters beyond the reconciliation requirement itself, including:

(a) the prospect that neutral and balance points may be used as connection pricing guardrails when full reform is implemented in future

(b) the impact of a strict requirement to price at the neutral point (which was not proposed for fast-track or full reform).

9.17. Many submitters provided at least in-principle support for increasing transparency through standardised reporting. Some submitters queried or challenged the economic framework underpinning the proposed charge reconciliation or expressed concerns about various allocation settings.

### Mixed views on intent of proposal

9.18. There was some in-principle support[63] for the charge reconciliation methodology to increase transparency, accountability, and fairness in pricing. For example, Orion submitted that the proposal:

> *"…may help to reduce instances of overcharging or undercharging and may help to develop a more equitable process for all parties involved. Additionally, the information provided through the reconciliation would likely support better decision-making in some cases by policymakers, distributors and customers."*

9.19. Genesis Energy supported the proposal because "…requiring standardisation in the way incremental cost and revenue is calculated…will improve transparency and reduce barriers for prospective connection projects." PowerNet supported "…the transparency of a reconciliation methodology and consistency of approach and support the on demand only requirement." MEUG supported the proposal as "…a standardised approach…will greatly assist our members who operate across multiple networks."

9.20. In contrast, other submitters[64] suggested that the charge reconciliation be deferred until full reform because the methodology may result in unintended outcomes. For example, Counties Energy recommended that the methodology "…should either be removed or deferred until there is clarity on all input parameters, such as balance point and bypass point calculations/formulas" and Waipa Networks "…does not believe the Code should be amended to include a cost reconciliation methodology. The staged approach taken will lead to confusion for customers as some parameters will not be defined until the full reform stage."

63 For example, Unison and Centralines, Powerco, MEUG, Tenco, Aurora Energy, Fonterra, Meridian Energy, Genesis Energy, UDL, Firstlight, ERANZ, ChargeNet

64 For example, Waipa Networks, Network Waitaki, Waitaki Power Trust, Horizon Energy, Network Tasman and Network Tasman Trust

9.21. While some submitters recommended deferring the reconciliation methodology until full reform, others were concerned that the methodology would become the requirement at full reform. For example, Vector submitted that they:

> *"…have significant concerns about the potential for the reconciliation pricing methodology to become a requirement for connection pricing at full reform. We consider distributors should retain flexibility in how they charge for connections to ensure they can meet customer and network needs."*

**Response**

9.22. The Authority considers that introducing connection charge reconciliation as an information-only requirement at this time is appropriate. Connection charge reconciliation should deliver immediate benefits, while also building capability and information ahead of further reform.

### Economic framework underpinning the connection charge reconciliation requirement is based on conventional economic theory

9.23. Many submitters commented on the Authority's economic framework, assessing it against concepts presented in economic literature for utility pricing.

**Validity of neutral and balance point concepts**

9.24. While most submitters agreed that prices below the neutral point and above the bypass point are inefficient, they queried the terminology and validity of the neutral and balance point concepts. For example, ENA submitted that:

> *"…the reference to the balance point should, at best, be a reference to fairness. The balance point does not have any association with economic efficiency. ENA does not support the use of the Authority's balance point theory and instead believes EDBs should be left to determine what outcome, within a range, is fair for their new and existing customers."*

9.25. Similarly, Wellington Electricity submitted that "The balance point, however, reflects an equity consideration rather than an efficient pricing consideration and therefore should not be considered as part of regulation."

9.26. Contact Energy considered that "…the concept of a 'balance point' may lead to confusion about what the appropriate connection costs are" and that the concept should be removed. Counties Energy Trust did "…not consider that the Authority's "neutral point" is a genuine pricing level where existing consumers would be indifferent to new connections."

9.27. In contrast, Unison and Powerco jointly submitted that they "…agree with how the Authority has sought to summarise key equity outcomes of a particular connection charging method" by describing the concepts of neutral point and balance point. They also stated that:

> *"Whilst the concept of equity is much broader than economic efficiency… achieving outcomes that are broadly equitable between vintages of customers is typically seen as a key design principle of utility pricing – and connection prices in particular – and so the Authority should be given credit for the prominence it has provided to equity issues."*

9.28. Network Tasman strongly disagreed with the concept of the neutral point, submitting that it has not been previously discussed in economic literature and that "Pricing at the neutral point allows newcomers to avoid shared network costs, transferring those costs to existing users."

**Opportunity cost vs bypass point**

9.29. Some submitters assessed the Authority's conceptual framework against the three dimensions of economic efficiency, stating that the proposals were most closely related to allocative efficiency. For example, Vector submitted that:

> *"…the Authority's connection pricing framework is ostensibly (although not in substance) focussed on efficient connection, which is most closely related to allocative efficiency. Allocative efficiency is promoted where prices are set…no more than the opportunity cost of the connection service to a customer, whether through bypassing the connection service, obtaining an alternative source of energy or ceasing its economic activity.*
>
> *…price discrimination may promote allocative efficiency by ensuring that customers who can contribute to common costs are able to access the service."*

9.30. Vector agreed that connection charges that are too high - that is, above the opportunity cost for the access seeker - can be inefficient. However, they submitted that "The balance point is not defined by reference to the willingness to pay or the opportunity cost of members of that consumer group."

**Desirability of pricing between neutral and balance points**

9.31. There were mixed views on the desirability of pricing between the neutral and balance point. Some submitters also either interpreted the Authority's proposals as advocating for pricing at the neutral point or themselves advocated for pricing at the neutral point. For example, Counties Energy Trust submitted that their "…concerns about the Authority's view on capital contributions are exacerbated by the Authority's 'theoretical' view that it would be desirable for new connections to only pay their incremental cost."

9.32. ENA agreed "…with much of the Authority's economic assessment of the reference points for connection pricing" but disagreed with the Authority's position that connection charges between the neutral and balance point are beneficial to existing users, without inefficiently penalising connection applicants. They submitted that:

> *"…a price above the neutral point up to the balance point, risks discouraging efficient connections proceeding. This is because the price would be above the costs directly caused by the connection, which are the incremental costs, and so contribute to sunk cost recovery."*

9.33. Aurora Energy submitted that they:

> *"…disagree with the Authority's view…that connection charges between the 'balance point' and the 'bypass point' can be inefficient. We consider that connection charges in this range are economically efficient, albeit they potentially lead to inequities between existing customers and new connecting parties."*

9.34. Contact Energy submitted that:

> *"We are concerned that the concept of the 'balancing point' may provide justification of "deep-plus" charging. We want to avoid capital contributions greater than the full incremental costs. We do not consider that this would be an economically, socially, or environmentally efficient outcome."*

9.35. Vector submitted that:

> *"…there is no sound economic basis for the Authority's conclusion that prices between the 'neutral point' and 'balance point' are likely efficient. It also found no economic basis for any general conclusion that prices above or below a 'balance point' are more or less efficient than the other, let alone inefficient or efficient."*

**Connection as a distinct service**

9.36. Some submitters were of the view that connection services are distinct from lines services. For example, Vector submitted that:

> *"The Authority's approach to efficient pricing through the lens of the neutral point results in its lower bound for connection charges being below the incremental cost of connection services. This is because the Authority's approach to the neutral point bundles distribution and connection services together."*

9.37. Vector also noted that:

> *"The incremental revenue makes no allowance that it is revenue related to the distribution service (not the connection service) and will always be larger than the costs of the distribution service as it includes a return allowance."*

9.38. Some submitters were also concerned that the proposal did not allow distributors to adequately recover costs. For example, ENA submitted that the proposal:

> *"…does not adequately allow for the new connection customer to contribute to cost recovery. It does not provide for the new customer to share in the cost of the shared assets that provide the service they are paying for, namely the cost to finance and replace assets."*

9.39. This was echoed by Horizon Energy who submitted that "New connections do not result in incremental revenue for P-Q [price-quality] regulated EDBs" and that "…future shared costs are not considered by the connection charge reconciliation methodology".

**Impact on contestability**

9.40. There were some concerns that the reconciliation methodology, if adopted for full reform to determine connection prices, would lessen or undermine competition in the market for contestable connection services. Vector submitted that "This has potential implications under section 36 of the Commerce Act, and harming consumer benefit more broadly."

9.41. Vector also submitted that:

> *"Because the Authority's approach bundles the connection and distribution service together, it results in pricing connection services at less than incremental cost. This will effectively eliminate the potential for competition in connection services."*

9.42. Horizon Energy, referring to the Authority's observation[65] that applying the proposed fast-track measures to connection works that include in-kind contributions may result in a negative charge, submitted that this "…indicates that to support contestability EDBs should be making payments to the applicant (or their contractor). Paying parties to connect will incentivise uneconomic connections and inhibit competition."

**Response**

9.43. The Authority is satisfied that, while the "neutral point" terminology may be novel, the economic concepts and principles – that net incremental cost should provide a subsidy-free "floor" on network pricing – are well established and appropriate in this context.

9.44. Comments on other pricing points – balance, bypass and opportunity cost – are relevant to the Authority's thinking on full reform, rather than the introduction of charge reconciliation requirements. The charge reconciliation requirement does not have the effect of requiring distributors to set charges at the neutral point (or any other point). However, we note that the Authority:

(a) agrees that some applicants may have an opportunity cost that is lower than their bypass cost – ie, they would prefer not to precede, or to self-supply energy, rather than bear the cost of network bypass. Opportunity cost is relevant to discussion of the uppermost bound on cost allocation

(b) does not agree it should be indifferent to pricing levels that fall within the subsidy-free range

(c) considers the balance point provides a useful way of thinking about pricing that is non-discriminatory as between cohorts

(d) considers that constraining the ability of distributors to use their market power to discriminate between cohorts (and between like connections) may improve efficiency outcomes

(e) does not agree that settings that resulted in up-front connection charges being set below the up-front cost of extension works would prevent or hinder contestability, provided distributors put suitable arrangements in place.

9.45. The Authority is satisfied that the economic basis of the reconciliation calculations is appropriate and will generate useful information. In particular:

(a) the neutral point concept is sound, and is appropriately reflected in the charge reconciliation requirements

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65 Electricity Authority, *Distribution connection pricing proposed Code amendment: Consultation paper*, page 69, para 7.160(b)

(b) the treatment of incremental revenue is sound and accounts for stranding risk through the default revenue lives and flexibility for distributors to use shorter lives (where reasonable)

(c) the treatment of incremental costs is sound and accounts for the opportunity cost of capital (which includes the cost of providing a return on equity) through its use of discount factors to adjust for cashflow timing

(d) it is not necessary (or appropriate) to treat connection and distribution as ring-fenced services because a distributor that:

(i) enables contestable extension asset construction services would have associated extension asset costs excluded from its connection charges and its lines charges[66]

(ii) builds and charges for extension asset construction services would include associated costs in its connection and lines charges[67]

(iii) has an inconsistent approach between connections or over time may not have subsidy-free or non-discriminatory charges.

9.46. The Authority's view on these matters is supported by:

(a) analysis by CEPA of submitters' consultant reports included in submissions and cross-submissions.[68] For example, CEPA observe that "…the concept of the neutral point is directly based on one of the most fundamental concepts in regulatory theory…" and "…is widely used as a floor on distribution pricing in regulatory regimes around the world."

(b) the consultant report jointly submitted by Unison and Powerco.[69] For example, Incenta state that they:

*"…agree with the analytical framework the Authority has applied to assess the merits of different connection prices. In particular, the concepts of the "neutral point" price and "balancing point" price are a useful way of thinking about how changes to the connection pricing method may affect efficiency and/or equity"* and

*"…agree with the Authority's proposal to require EDBs to disclose the extent to which their connection prices result in a customer expecting to contribute more than the incremental cost of connecting and serving the customer, and so making a contribution to network common costs."*

(c) (in part) the consultant report submitted by ENA.[70] For example, Frontier state that "Broadly, we agree with much of the Authority's economic assessment of the reference points" and "We agree with the Authority that…prices below the neutral point (which are the net incremental costs, and so are incremental

66 Or may provide a contribution toward extension asset construction costs which would then be recovered through line charges.

67 With the mix between the two dependent on its overall approach to connection pricing.

68 CEPA's analysis is attached in Appendix C

69 Incenta Economic Consulting report for Unison and Powerco

70 Frontier Economics report for Electricity Networks Aotearoa

costs minus incremental revenues) are inefficient given they would imply a cross-subsidy exists."

9.47. Further, CEPA[71] provides analysis on Vector's view that connection services are distinct from distribution lines services:

> *"There is a widely accepted concept in regulatory economics that new customers to a regulated firm should normally provide additional or incremental revenue to the regulated firm that is at least as large as the incremental cost of serving those customers. We will refer to this principle as the "floor test".*
>
> *HoustonKemp is correct that the Authority's approach allows the connection charge to be materially below the incremental cost of providing the connection service.*
>
> *But this is not relevant for the application of the floor test. If connecting customers had an incentive to obtain connection assets in their own right (i.e., could use connection assets directly without requiring on-going services) HoustonKemp's point would be a legitimate concern. But end-customers do not receive value or utility from connection assets directly. Rather, connection assets are acquired as part of a bundle that is required in order to receive distribution services. End-customers pay for connection assets and then also pay for on-going distribution services. It is only the price of the bundle that matters for economic connection decisions, not the price of the individual components."*

### Standard connection revenue life assumptions are a starting point

9.48. Several submissions[72] were concerned that the proposed parameters for connection revenue life would increase risk for distributors. For example, ENA recommended that "…the reconciliation allows an EDB to provide for a shorter assumed revenue life where there is potential for the revenue life to be shorter than the currently proposed fixed expected revenue lives".

9.49. PowerNet suggested that distributors "…should retain the right to assess the risk profile of each project and apply a connection revenue life factor based on this assessment."

#### Response

9.50. We agree there may be instances where a different connection revenue life assumption should be used, and this was provided for in the proposed Code amendment.

9.51. The standard assumptions provide a starting point that assumes a higher risk for non-residential connections, plus flexibility to adopt a shorter revenue life assumption if the distributor reasonably believes the connection will have a shorter revenue-generating life.

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71 CEPA's analysis is attached in Appendix C

72 For example, Unison and Centralines, Vector, Network Waitaki, Wellington Electricity, PowerNet

9.52. Importantly, this is structured so that any decision to adopt a shorter assumed revenue life must be:

(a) reasonable – ie, the distributor should be able to explain the basis for their decision

(b) based on the revenue-generating life of the connection – that is, the physical assets in their built configuration rather than the initial distribution customer. The revenue risk associated with a connection would typically be much lower than the risk associated with any single customer's use of that connection.

### Calculation of incremental revenue and incremental cost adjusts for pass-through and recoverable costs

9.53. WEL Networks suggested treating transmission costs as 'banked capacity' like network capacity costing and passing it through to all connecting customers as they share the benefit of its utilisation, not just to 'large' or 'notional' customers.

9.54. Orion suggested that:

> *"…further clarity would be useful to confirm or otherwise that transmission charges and pass-through costs are to be excluded, so that only revenues from distribution charges are included in the calculation of incremental revenue".*

9.55. PowerNet suggested that "Consideration needs to be given to the elements that make up incremental revenue, Transpower and sub-transmission revenue should be deducted if the incremental costs only relate to the low voltage network."

9.56. Horizon Energy submitted that:

> *"…the incremental revenue does not account for depreciation or pass-through and transmission charges. There is the provision for including incremental transmission charges within the IC calculation, however very few connections are likely to trigger a notified increase in transmission charges."*

**Response**

9.57. Having analysed submissions on treatment of transmission charges, the Authority has decided:

(a) to add re-pricing under clause 81(h) of the transmission pricing methodology to the list of potential incremental transmission costs

(b) not to alter the treatment of transmission revenues (as part of incremental revenue) and transmission charges (as part of network costs)

(c) to add a requirement that reconciliations provide information on the transmission component of incremental revenue.

#### *Additional re-pricing event*

9.58. We have identified an additional benefit-based charge adjustment event that should be added to the list of potential incremental transmission costs.

9.59. Clause 81(h) of the transmission pricing methodology allows for re-pricing if a distributor becomes a customer at a new point of connection. This could conceivably form part of the minimum scheme (or customer-selected enhancement) for a large distribution connection, so it is appropriate to add this to the list of possible incremental transmission costs.

### *Presentation of transmission revenues and charges*

9.60. Transmission costs are treated in two ways as part of the reconciliation:

(a) step changes:[73]

(i) on the cost side, are presented as an incremental transmission cost

(ii) on the revenue side, appear as part of incremental revenue or connection charge terms (depending on how the distributor has agreed to structure its cost recovery)[74]

(b) non-step changes:

(i) on the cost side, must be presented as part of the network cost component

(ii) on the revenue side, would typically appear as part of incremental revenue.

9.61. This treatment reflects the dual nature of transmission charges:

(a) for most connections, transmission charges are an input cost that is more or less unaffected by connection growth

(b) for some connections, changes in transmission services are an essential part of the network design solution.

9.62. We acknowledge that residual charges do not always fall neatly into either category. To illustrate:

(a) the impact of a small connection on residual charge allocation is lagged and not material relative to other factors impacting residual charges[75] or compared to the value of incremental revenue. As such, treating residual charges as part of network costs is appropriate because new connections have a cost-spreading impact on transmission costs – that is, they tend to reduce the cost per connection

(b) for very large connections:

(i) they will have a material impact on their host distributor's residual charges. After a four-year grace period, residual charges will ramp up for four years before reaching a steady state

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73 Step changes include where a distribution connection directly triggers physical works in the transmission network (as part of the minimum scheme or a customer-selected enhancement) or triggers a benefit-based charge repricing mechanism.

74 Step changes in transmission costs are only relevant to large users, who are likely to have special pricing (rather than posted charges) – meaning the structure of cost recovery is tailored to each connection.

75 Including changes over time in network load, unmetered rooftop solar, and the size of Transpower's residual cost pool.

(ii) if the connection then exits, remaining customers will have an elevated residual cost per unit of demand for eight years

(iii) the cost of the increased residual charges, and the exit risk exposure, may be material relative to other costs and revenues

(iv) whether (and how) residual charge costs (or exit risk) is passed through may be a factor in whether the applicant connects to the distribution network or the transmission network.

9.63. We do not propose to set a threshold beyond which residual charges may be treated as a step change but acknowledge that distributors may wish to allocate residual charge impacts to large customers – eg, in special tariffs, by holding a bond or as a component of up-front charges.

### *Further breakdown of lines revenue*

9.64. While we are satisfied with the treatment of transmission costs, we consider it would be useful for distributors to present a further breakdown of the charge reconciliation with respect to transmission. This reflects that:

(a) distributors are already required (under Commerce Commission information disclosure requirements) to break lines charges and revenue into distribution and transmission components

(b) transmission is a material input cost for distribution services – and hence a material component of lines charges and network costs.

9.65. Accordingly, we have made a minor amendment to the connection charge reconciliation requirement to add disclosure of the transmission component of incremental revenue.

9.66. From an applicant point of view, this provides a better basis for understanding how annual transmission charges make up part of the applicant's contribution to network costs.

9.67. From a distributor's point of view, this means they can project distribution and transmission charge forward using different adjustment factors (eg, to reflect different revenue paths).

9.68. We are not proposing to add a requirement that distributors must disclose the transmission component of network costs. While this could typically be assumed to match the transmission component of incremental revenue, this may not always be the case. As such, we consider it is preferable at this stage to allow distributors to communicate the makeup of network costs as they see fit.

## A tailored incremental opex scaling factor reflects material variation across distributors

9.69. Tenco suggested that the 90% incremental opex adjustment "…is simple but unnecessarily inaccurate and unfairly disadvantages larger connections" and presented an alternative approach to calculating the adjustment factor.

9.70. Vector submitted that "The assumption that maintenance opex is 10% of revenue from prices is extremely broad-brush and simplistic and unlikely to be accurate in many instances."

9.71. ENA submitted that the adjustment factor "…does not account for the cost of owning and replacing network assets."

9.72. Several distributors suggested that the reconciliation methodology should adjust for all pass-through and recoverable costs and the costs of doing business. For example, Aurora Energy suggested that:

> *"…distributors should be able to adjust the incremental revenue component of the calculation for all pass-through and recoverable costs, not just transmission charges. This will provide a fairer reflection of distributors['] costs.*"

9.73. Counties Energy submitted that the calculation "…needs to include a fair proportion of EDB overhead costs as well as proportion of the infrastructure used and the O&M cost of this infrastructure."

**Response**

9.74. We proposed that the reconciliation calculation reduce incremental revenue by 10% to reflect that a portion of ongoing revenue is consumed by incremental operating costs. This figure was derived by considering the sector-wide value of selected opex categories as a portion of sector-wide lines charges across five years.[76]

9.75. Having considered submissions and further analysis, we have decided on two changes to the proposed treatment of incremental opex:

(a) rather than applying a 10% assumption for all distributors, we have decided to provide a methodology for distributors to derive their own values. This reflects that there appears to be material variation between distributors. In addition, we decided that local government rates and industry levies should be added to the selected opex categories

(b) for connections with special pricing, provide for an alternative approach where incremental opex is applied as an incremental cost term. This reflects the wide range of ways revenue can be structured for these connections (including, at one extreme, ongoing charges covering only incremental operating costs).

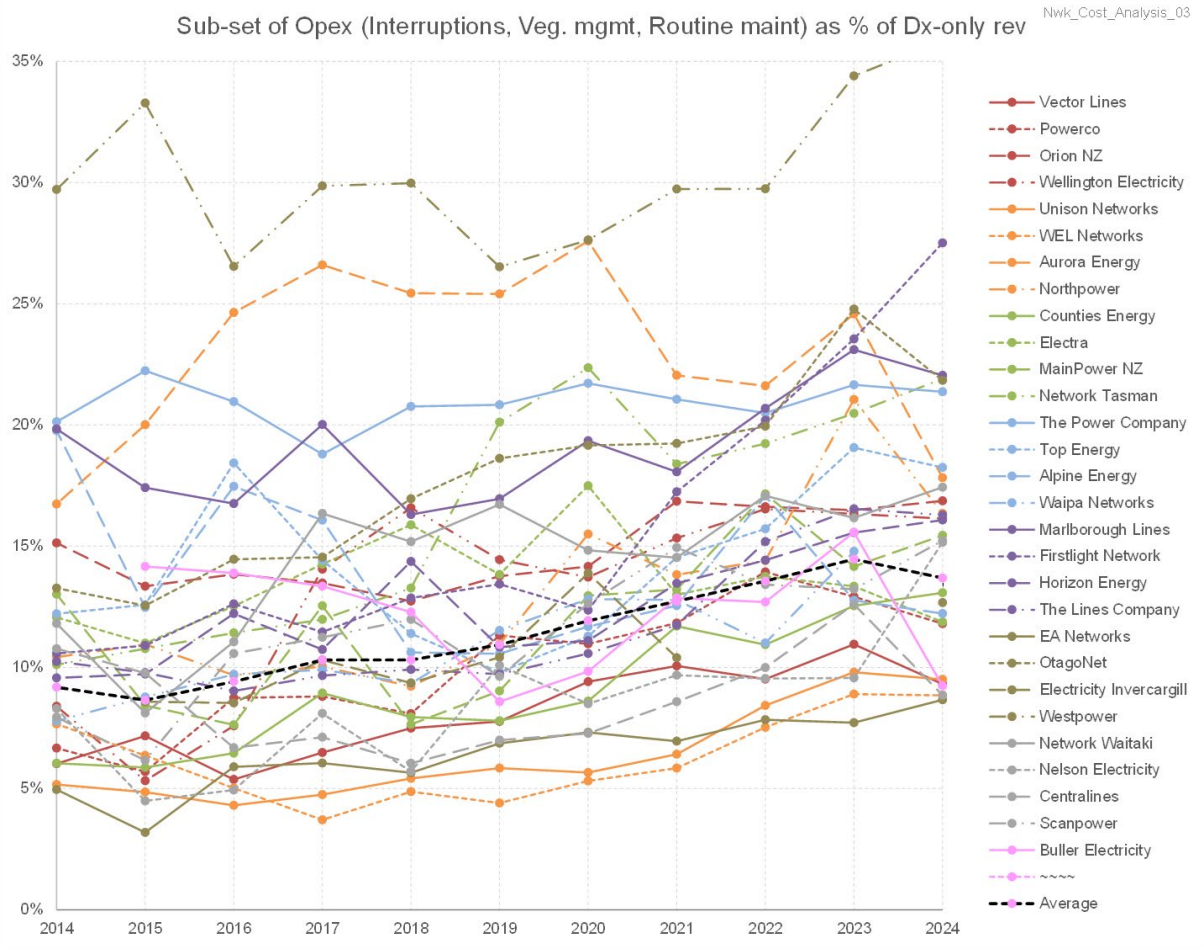
9.76. Figure 9.1 illustrates the variation between distributors in selected opex as a portion lines revenue, from which we can observe:

(a) there has been an upward trend since 2018 in the sector average, and for most distributors. This could reflect some combination of trends in input costs (eg, traffic management), activity levels (eg, tree trimming), drivers (eg, weather events) and accounting (eg, allocation of opex between categories)

(b) over the past five years, most distributors have had ratios in a band between 5% and 25%.

[76] The selected categories were 'service interruptions and emergencies', 'vegetation management' and 'routine and corrective maintenance and inspection' – ie, the types of expenditure likely to be most sensitive to network size.

**Figure 9.1 – There is wide variation in incremental opex as a portion of revenue**




9.77. Noting that incremental revenue will be a relatively large term for most reconciliations, we consider it is appropriate for distributors to use a tailored scaling factor rather than an industry-wide 90% factor. We note that updating scaling factors will be a relatively straightforward annual task that can be completed alongside other annual updates to reconciliation inputs.

9.78. We also considered submissions that:

(a) pass-through costs should be treated as incremental opex (ie, added to the list of selected opex categories)[77]

(b) incremental opex should be estimated using more accurate regression analysis.[78]

9.79. We agree that two types of pass-through cost – local government rates and industry levies – are sensitive to network size and should be added to the list of selected opex categories.[79]

77 For example, Orion, Aurora Energy, Counties Energy, Horizon Energy

78 For example, Tenco

79 These costs are identified in clause 3.1.2(2) of the input methodologies for electricity distribution services. https://comcom.govt.nz/__data/assets/pdf_file/0017/60542/electricity-distribution-services-input-methodologies-determination-2012-consolidated-as-of-23-april-2024.pdf

9.80. On balance, we decided that a relatively simple revenue scaling approach (albeit with tailored scaling factors) strikes a suitable balance between accuracy and complexity in light of the context of the reconciliation calculations and the scale of other uncertainties – noting also that a more sophisticated approach can be adopted for larger connections with special pricing (where an opex cost loading may be applied as an alternative to revenue scaling).

### The connection charge reconciliation requirement does not directly affect pricing

9.81. Distributors raised concerns that although the connection charge reconciliation is a disclosure requirement, the dispute resolution process may force distributors to set connection prices using the reconciliation methodology. For example, Horizon Energy submitted that:

> *"…regulating EDBs to calculate and report connection charges using a prescribed methodology, effectively requires EDBs to adopt the connection charge reconciliation methodology. Any EDB that does not adopt this methodology will be exposed to disputes in accordance with clauses 6B.14, and Schedule 6.3."*

9.82. Network Waitaki (and the ENA) recommended that the Authority:

> *"…make it clear that connection pricing remains at the electricity distributor's discretion to avoid the reconciliation methodology becoming the de facto connection pricing methodology enforced by the dispute resolution process."*

**Response**

9.83. The Authority agrees that the connection charge reconciliation requirement may, despite being a disclosure obligation only, influence pricing. In particular:

(a) the methodology is built on concepts that may influence how distributors and their customers think about pricing

(b) the reporting may identify outliers – including where allocation is very high, or where it is so low as to subsidise new connections

(c) reconciliations may influence negotiations between distributors and larger customers regarding network cost contribution and pricing structure.

9.84. However, the connection charge reconciliation requirement does not compel distributors to reduce costs allocated to new connections – either directly, or through dispute resolution – and it does not imply that a newcomer's contribution to network costs should be zero (or at any particular level).

### Updated Code amendment drafting

9.85. Table 9.2 highlights key updates to Code amendment drafting in relation to connection charge reconciliation requirements.

9.86. In addition to the matters discussed above we have made several minor modifications:

(a) modified the incremental revenue calculation so that revenue is consistently assessed for disclosure years (rather than 12 months following connection)

and adjusted for any part years. This simplifies implementation of revenue and tariff adjustments

(b) added an optional incremental cost term to allow for a scenario where a distributor proactively invests in part of its network and then applies a localised cost recovery scheme to allocate costs to future connections in that area. Adding this term allows for such costs to be presented as an incremental cost, rather than a network cost.[80] Scenarios where this could apply include where a distributor elects to:

  (i) invest in distributor-selected enhancements (eg, to future-proof capacity)

  (ii) treat works as network development rather than a customer extension[81]

(c) removed connection fees and pioneer scheme contributions from the definition of connection charges (rather than including them in the definition but removing them from the reconciliation)

(d) clarified that network capacity costs associated with customer-selected enhancements are included as part of the customer-selected enhancement term (rather than the capacity cost term).[82]

**Table 9.2 – Updated Code amendment drafting (connection charge reconciliation)**

| Updated drafting | Comment |
|---|---|
| **localised historical cost recovery** means an allocation of historical **distributor-selected enhancement** costs or historical network development costs to subsequent connections that benefit from those investments | New connection charge reconciliation term.<br>Allows recovery of specific distributor-allocated costs to be presented as an incremental cost (rather than network cost). |

80 Including this term does not have the effect of requiring distributors to implement cost-recovery schemes, just as omitting it would not prohibit such schemes.

81 In this scenario, a portion of the up-front cost would appear in the incremental cost for the first (triggering) connection as an allocation of historical costs – rather than the full amount appearing as an extension cost.

82 Capacity costs associated with the minimum scheme are presented as capacity costs, while extension and capacity components of customer-selected enhancement costs are grouped together.

| Updated drafting | Comment |
|---|---|
| **operating cost loading** means estimated incremental operating costs associated with a **connection**, where—<br>(a) zero if the customer or customers at the **connection** will pay posted tariffs; or<br>(b) if the customer or customers at the **connection** will not pay posted tariffs, based on a reasonable assessment of incremental operating costs associated with the **connection**—<br>(i) including costs associated with operating and maintaining new **assets**; and<br>(ii) excluding **transmission** charges; and<br>(iii) the estimate is expressed as the present value of future costs. | New connection charge reconciliation term.<br>Allows for an alternative approach to incremental operating costs in the case of connections with special pricing. |
| **6B.11 Connection charge reconciliation requirements**<br>(1) A **connection charge reconciliation** must show:<br>CC = (IC – IR) + NC<br>where<br>CC is the **connection charge** or **connection charges**~~, other than any **connection fee** or **pioneer scheme contribution**~~<br>**…** | Shifted exclusion of connection fees and pioneer scheme contributions to the connection charge definition. |
| (2) A **distributor** must assess the **incremental cost estimate** under subclause (1), and show this assessment in the **connection charge reconciliation**, in accordance with the following formula:<br>*IC = EC + CSE + NCC + ITC* + *LHCR + OCL*<br>where<br>…<br>NCC is the **network capacity cost** of the **relevant minimum scheme calculated in accordance with clause 6B.5** | Clarify that, when there is a customer-selected enhancement, capacity costs relating to the minimum scheme are recorded in the NCC term (and any additional capacity costs are recorded in the CSE term). |
| LHCR is the **localised historical cost recovery**, if any<br>OCL is the **operating cost loading**, if any | Add the two additional terms to the incremental cost build-up. |

| Updated drafting | Comment |
|---|---|
| (3) A **distributor** must assess the **incremental revenue estimate** under subclause (1), and show this assessment in the **connection charge reconciliation**, in accordance with the following formula:<br><br>*IR = IDR + ITR*<br><br>where<br><br>IDR is the incremental distribution revenue estimate<br><br>ITR is the incremental transmission revenue estimate<br><br>(4) A distributor must assess the **incremental distribution revenue** and **incremental transmission revenue** estimates, and show this assessment in the **connection charge reconciliation,** by—— | Require distributors to build-up the distribution and transmission components of incremental revenue separately. |
| (a) estimating revenue from **electricity lines services** (excluding **connection charges** and **connection fees**) the **distributor** will receive in respect of the **connection** in the first ~~12 months~~ **disclosure year** (or part disclosure year) following the **electrical connection** of the **connection** or the completion of the **connection works**, whichever is later; and<br><br>(b) estimating revenue for subsequent **disclosure years** by adjusting the estimate derived under paragraph (a) for——<br><br>(i) change from part-year to full-year, if applicable; and<br><br>… | Align revenue assessment with disclosure years (ie, pricing years) for workability. |
| (d) for incremental distribution revenue, multiplying the amount derived after application of paragraph (c) by the **distributor's** incremental opex scaling factor calculated in accordance with subclause (5) ~~0.9~~ to adjust for incremental operational expenditure costs, unless the **incremental cost estimate** includes an **operating cost loading**. | Provide for tailored opex scaling factors (if not using alternative cost loading approach). |

| Updated drafting | Comment |
|---|---|
| (5) A **distributor** must calculate its incremental opex scaling factor in accordance with the following formula:<br><br>$OSF = 1 - \frac{ASO}{AEDR}$<br><br>Where<br><br>OSF is the incremental opex scaling factor<br><br>ASO is the average selected opex, being the average value over the five most recent available disclosure years of the sum of a distributor's—<br><br>(a) service interruption and emergencies opex as defined in the **EDB ID determination**; and<br><br>(b) vegetation management opex as defined in the **EDB ID determination**; and<br><br>(c) routine and corrective maintenance and inspection opex as defined in the **EDB ID determination**; and<br><br>(d) any costs described in clause 3.1.2(1)(a) of the **EDB IMs**<br><br>AEDR is the average electricity distribution revenue, being the average value over the five most recent available **disclosure years** of a **distributor's** distribution line charge revenue (excluding revenue relating to pass through of electricity transmission costs) | Replace uniform 90% revenue scaling factor for opex with requirement for distributor to determine their own (each year).<br><br>Amended calculation to align with scaling factor being applied only to distribution component of line revenue. |

# 10. Reliance limits

10.1. This section provides more information on the Authority's decision to not proceed with the reliance limits methodology as proposed and to further consider potential modifications and alternative approaches later this year.

10.2. In summary, having analysed submissions, we:

(a) remain of the view that an interim measure to protect access seekers from further cost allocation increases is likely to be warranted

(b) agree we need to ensure reliance limits and connection process requirements do not combine to produce unduly onerous obligations on distributors

(c) consider there is scope to develop an improved proposal that is both better targeted and more effective.

## Introduction to reliance limits

10.3. Because connection pricing reform is complex and impactful, the Authority decided to adopt a staged approach. The initial package of four requirements are intended to improve:

(a) consistency across distributors, including in terms of terminology, concepts, information and some pricing features

(b) uptake of pricing approaches with desirable properties in terms of mitigating coordination challenges and providing cost-reflectivity that helps align incentives in a way that promotes efficient investment in connections and upstream infrastructure

(c) visibility of the extent to which connection prices are subsidy-free (ie, at or above the neutral point) and non-discriminatory (as between connections, consumer groups and cohorts).

10.4. As well as delivering immediate improvements to pricing practices, the initial package increases scrutiny and begins building an information base that can inform further reform.

10.5. The Authority expects full reform is likely to establish "bottom-up" restrictions on connection pricing – eg, by requiring distributors to set individual connection charges no higher than the balance point.

10.6. In contrast, the initial package does not prevent continuation of the observed upward trend in distributor reliance on capital contributions to fund growth capex – either further increases by distributors who have already increased their reliance level or increases by a wider set of distributors.

10.7. There are two key reasons why this upward trend may be inefficient:

(a) increasing connection charges increases the total cost allocated to newcomers. This is because most newcomers pay the same posted tariffs as

existing customers[83] – meaning they pay higher upfront charges than earlier cohorts while also contributing to the cost of connections from earlier cohorts (who paid lower upfront charges)[84]

(b) setting aside consistency between cohorts, high up-front charges:

(i) exacerbate investment coordination challenges

(ii) allocate a high portion of the asset financing task to access seekers, which may raise total costs and deter some efficient connections.[85]

10.8. The Authority is concerned that the upward trend may continue ahead of full reform despite the increased scrutiny associated with connection charge reconciliation because:

(a) the financial drivers and incentives to increase connection charges still exist and are in tension with the moderating effect of increased scrutiny

(b) some distributors have built an assumption of increasing reliance into the forecasts they supplied to the Commerce Commission for revenue setting. This makes it difficult for those distributors to reform their connection pricing ahead of the next revenue control period (from 2030) – especially if there is no regulatory change to trigger revenue path reconsideration mechanisms

(c) some distributors with increasing reliance levels strongly defend their pricing practices and oppose connection pricing reform.

10.9. Given this context, the Authority proposed "top-down" reliance limits to complement other pricing requirements:

(a) based on disclosures, we proposed a sector-wide reliance limit of 47%. This reflects an average of the four most recent disclosure years of capital contributions (for consumer connections and system growth) divided by capital expenditure (on consumer connections and system growth)

(b) distributors whose reported reliance level exceeds 47% instead have a limit based on their 2024 reported level, capped at 100%

(c) when making changes to connection pricing methodologies, distributors would be required to ensure their reliance level for load connections (ie, excluding distributed generation) would be unlikely to exceed the applicable limit in a year with typical connection activity.

10.10. We noted this requirement would trigger a statutory mechanism that allows the Authority to request that the Commerce Commission reconsider revenue paths,[86]

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83 The key exception to this dynamic is larger customers with special pricing. In theory, distributors could also adopt "cohort pricing" for mass market users – ie, different annual charges depending on the date a connection was established. However, this has significant practical challenges, and we are not aware of any distributor adopting this approach in practice.

84 If earlier cohorts paid a lower portion of their incremental cost up front, then a greater portion is funded by the distributor and recovered over time through annual charges – including those paid by newcomers.

85 This reflects that distributors have a relatively low cost of capital, and that the risk associated with financing a pool of connection assets is lower than the risk associated with financing one customer's use of a connection.

86 Section 54V(5) of the Commerce Act requires the Commerce Commission to reconsider a section 52P determination if requested by the Authority, and, to the extent that the Commission considers it

and that the Authority could consider using its statutory exemption powers to help facilitate the reconsideration process.[87]

## Decision on reliance limits

10.11. The Authority has considered the issues raised by submitters and has decided not to proceed with the reliance limits methodology as proposed. We recognise that the reliance limits as proposed were an imperfect proxy for connection pricing efficiency.

10.12. We will further consider potential modifications to the reliance limits as well as a range of other options and expect to further consult on this matter later this year alongside the related issue of distributors' obligation to connect.

10.13. This provides the opportunity to consider how proposals may be improved, whether alternative approaches are more fit-for-purpose, and to fully develop links between price and non-price access requirements (particularly, the extent of a distributor's obligation to connect). It is also an opportunity for the Authority to better understand any potential impacts the proposals may have on distributors and businesses.

## Submissions on reliance limits

10.14. Below we summarise key themes from submissions on reliance limits.

10.15. Most of the concern raised around reliance limits focused on the link between reliance levels and efficiency, impact of system growth capex and large connections on reliance levels, use of in-kind contributions, and interaction with the other proposed pricing methodologies. Some submissions also suggested modifications to improve the reliance limits.

### Link between reliance levels and efficiency

10.16. Many submitters considered the reliance limits to be arbitrary, and did not account for network specific circumstances. For example, Energy Trusts of New Zealand (and a few other energy trusts) submitted that:

> *"The use of an arbitrarily determined reliance limit set at an average value is not good practice… Network growth capex and customer contributions are not as tightly linked as implied in the consultation document."*

10.17. Counties Energy Trust submitted that "The 47% 'benchmark' is arbitrary and provides a 'one size fits all' type solution that fails to distinguish between the risk profile of low, medium and high growth electricity distributors."

10.18. Several distributors also shared the view that the reliance limits had no relationship to efficiency. For example, Vector submitted that:

> *"The reliance limit is not directed at the key elements of economically efficient pricing because…the upper bound that it places on connections*

necessary or desirable to do so, amend the determination. Alternatively, the Commerce Commission input methodologies also provide for reconsideration where suppliers are materially impacted by new regulatory requirements.

87 Under section 11 of the Act, a distributor may apply for an exemption from complying with certain provisions in the Code, providing time for engagement with the Commission on a modified price path if it cannot be completed in time to flow into quotes provided from 1 April 2026.

*charges has no relationship to either the standalone cost of facilitating a connection or the opportunity cost of a connection, rather it reflects concerns regarding equity as between existing users and new users of the network."*

10.19. Network Waitaki submitted that they "…cannot support a reliance limit that is not based on any substantive methodology for efficient pricing but on high level averages and trends." Waipa Networks submitted that "As currently drafted they are based on historic averages which have no relationship to forecast customer connections and system growth forecasts."

10.20. Wellington Electricity submitted that "The reliance limits appear to be arbitrary rather than based on sound economic principles." WEL Networks submitted that "…until each EDB completes the calculations on the proposed methodologies they will not know where their economically efficient reliance limit will sit."

10.21. Unison and Powerco jointly submitted that reliance levels are an imperfect proxy for connection pricing efficiency:

> *"…an EDB's "reliance" on capital contributions may be a poor indicator of whether (and to what extent) connection charges have moved relative to the neutral point, and so potentially affect efficiency and/or equity. This is because the level of capital contributions as a proportion of capital expenditure can change materially even where there has not been a change to the connection pricing method."*

### Impact of system growth profiles and large connections

10.22. Several submissions highlighted that reliance levels are impacted by 'lumpy' system growth profiles. During years of higher investment in system growth, reliance levels will appear low because there is not a one-to-one relationship between receipt of capital contributions and investment in the network. For example, Network Waitaki submitted that:

> *"The natural peaks and troughs in system growth and connection expenditure will create inconsistencies in connection charges overtime if Network Waitaki is to remain within the annual reliance limit. For example, Network Waitaki is currently making significant capital investments in a new Grid Exit Point (GXP) and lines infrastructure to get more energy into the network. The subsequent drop-off in this type of expenditure would mean that we'll be restricted in our ability going forward to earn connection revenue to avoid exceeding the reliance limit."*

10.23. Some submitters also noted large connections can result in volatile reliance outcomes, with inclusion of large connections subject to interpretation of 'typical activity'. For example, Counties Energy submitted that:

> *"…whilst the reliance limit for load as proposed is intended to apply to "typical connection activity", what constitutes 'typical' and 'atypical' connection activity is highly subjective. Recommend excluding large connections from the reliance limit regime (≥5MW and ≥ $2.5m). Thresholds are based on the LCC mechanism."*

10.24. Powerco cross-submitted that:

> *"… large connections should be excluded from the calculation of any reliance limit. Individual large customer connections can be highly distortionary within one reporting period and have customer-specific characteristics."*

### In-kind contributions are not captured

10.25. In-kind contributions (or vested assets) also affect reliance outcomes. For example, Unison and Powerco jointly submitted that:

> *"…the measured reliance of the EDBs on capital contributions only covers the assets the EDBs have installed themselves, and ignores any assets that are installed on behalf of customers that amount to in-kind (rather than cash) connection charge (these are referred to in New Zealand as "vested assets", and in Australia as "gifted assets"). Thus, the reliance statistic will understate the connection charges for the EDBs that make use of in-kind contributions, and any difference in the presence of in-kind contributions across EDBs will mean that the inconsistency of method across EDBs will be overstated."*

10.26. ENA submitted that:

> *"The proposed reliance limit also excludes the impact of vested assets and charges to connecting parties that are not classified as capital contributions. This creates a perverse incentive to continue using or move to the use of vested assets to remain within the limits."*

10.27. Horizon Energy submitted that:

> *"It is not feasible for reliance limits to consider vested assets. There are instances where the EDB does not have access to information regarding the value of the vested asset and associated works (this is a commercial arrangement between the customer and supplier).*
>
> *EDBs that are over their reliance limit may increase their reliance on vested assets to give the impression that connection charges are dropping. Where these vested assets are not directly for the new connection, this may be inefficient."*

### May promote adverse behaviours

10.28. Some submitters noted that in addition to increased use of in-kind contributions, the reliance limit could result in unintended consequences and adverse behaviours to avoid breaching the limit. For example, Waitaki Power Trust submitted that:

> *"Initiatives would be to find work arounds, either by reducing connection charges for access seekers in that year (or avoid connection until the following year) to stay under the "limit" and then increase the connection charge again the next year when system growth expenditure is expected to increase and capital contributions (at the higher rates) are within the reliance limit."*

10.29. ENA submitted that "EDBs may need to set connection pricing below efficient levels to allow for any fluctuations in the mix of connecting parties or to accommodate years where there is limited investment in capacity."

10.30. This was echoed by Horizon Energy who submitted that:

> *"The reliance limit does not address inefficient undercharging, where EDBs are funding new connections via connection CAPEX and socialising those costs across all consumers via the RAB. Undercharging connection parties is as undesirable as overcharging connecting parties."*

10.31. Transpower submitted that connection applicants may inefficiently bypass the distribution network if reliance limits were introduced. They submit that:

> *"Transpower have at times received inefficient requests to connect directly to the grid instead of to a distribution network, where the connection pricing was placing too much cost onto the applicant or developer who wanted to connect to the network. We broadly support connection pricing that balances developer and existing user benefits. However, we do not support introducing contribution caps arbitrarily as it will create other perverse incentives. Distributors face difference cost pressures depending on the areas in which they operate. Such caps could result in prospective new connections being discouraged to connect in certain areas or to specific distributors."*

### May conflict with other proposed requirements

10.32. The proposed pricing methodologies may increase or decrease connection charges, depending on different network factors. Some submitters were concerned that this could conflict with their reliance limit. For example, Horizon Energy submitted that:

> *"Under the three sets (min scheme, capacity costing, reconciliation) of prescriptive regulations, EDBs will be setting charges based on the cost to connect and the forecast costs associated with adding network capacity. If an EDB was to follow these three requirements, they could easily have a reliance limit of greater than 100% for a given year."*

## Response

10.33. Having analysed submissions, the Authority considers it should not proceed with the reliance limits methodology as proposed at this time. We will further consider modifications and other approaches and further consult alongside the related issue of distributor obligations to connect.

10.34. We think it is prudent to further consider reliance limits along with other options because:

(a) the aim of restraining upward movement in costs allocated to connection applicants in the period leading up to full reform is valid and it is worth continuing to explore whether this aim can be achieved

(b) the reliance limits as proposed may have gaps and weaknesses that could potentially be improved upon. Because the aim is valid, working through potential improvements is worthwhile

(c) reliance limits are a high-impact intervention for some distributors, so it is prudent to review whether proposals can be improved to ensure impacts are well targeted.

### Restraining upward trend

10.35. We recognise and agree that reliance levels are an imperfect proxy for connection pricing efficiency. However, an upward trend in reliance levels will usually indicate an increasing allocation of costs to newcomers. This means that restraining the upward trend is a valid goal, but we need to be wary of 'false positives' – ie, where increasing reliance is not an indicator of increasing allocation.

10.36. Cases where increasing reliance levels could provide a 'false positive' could include where an observed upward trend in reliance is due to:

(a) a shift from in-kind to capital contributions, with no change in allocation[88] – ie, a change in the form of contributions that alters their visibility but not their level

(b) a substantial and sustained change in connection mix from low to high incremental cost. For example, this could be due to increasing numbers of remote connections (with high extension costs) or large connections (with high extension and capacity costs)

(c) more connections with special pricing and charges structured with high up-front and low ongoing payments – ie, a change in structure without a change in allocation

(d) changes in regulatory accounting practices – such as coding a lower proportion of expenditure to consumer connections and system growth capex – ie, a change in how costs are recorded without an actual change in costs[89]

(e) reductions in system growth expenditure following a programme of major network capacity upgrades – ie, a change due to the 'lumpiness' of capacity investment rather than the rate of capacity consumption

(f) increases in input costs that disproportionately impact the portion of works funded through connection charges – ie, a change in underlying costs that disproportionately impacts connection charges without any change in pricing methodology.[90]

### Improvement potential

10.37. A key consideration is whether the reliance limit proposal can be improved to reduce the risk of false positives that could be caused by some combination of the factors above.

10.38. This could potentially be achieved by:

(a) adopting an alternative approach to restraining changes in allocation. For example, Unison and Powerco jointly suggested that the Authority should consider prohibiting methodology changes instead of limiting reliance levels.

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88 In-kind contributions are typically associated with vested assets – ie, the applicant will construct assets and 'vest' them to the distributor. The value of in-kind contributions is not available through information disclosures.

89 Capital projects often package and bundle a collection of works with a mix of drivers. Practices can vary as to how distributors allocate incurred costs to regulatory accounting categories.

90 Such that the numerator increases out of proportion to the denominator.

Our initial view is that this has significant workability challenges, but merits further consideration

(b) modifying the reliance limits proposal to address weakness and gaps. For example, the proposal could be modified or complemented with:

(i) a carve-out for connections with special pricing

(ii) adjusted limits for distributors whose baseline was impacted by elevated system growth investment (which suppresses observed reliance)

(iii) a limit reassessment trigger for changes in in-kind contribution policies – ie, a process for revising reliance limits in the event a distributor alters its use of in-kind contributions

(iv) a secondary limit on system growth reliance (to address cases where low measured reliance masks high in-kind reliance). This could improve consistency of limits between distributors.

10.39. We will further consider reliance limits along with other options later this year on how best to manage the risk of deterring efficient investment in electrification.

### Potential impact

10.40. The Authority acknowledges that reliance limits would be a high impact intervention for some distributors – particularly where limits would disrupt plans to increase costs allocated to newcomers. However, this is precisely where we consider the risk of poor pricing outcomes is the highest.

10.41. This means it is appropriate to further consult on improved proposals and to consider changes beyond those listed above that might reduce the 'footprint' of reliance limits. For example, reliance limits could potentially:

(a) include a sunset clause so that, absent further intervention, they lapse at the next regulatory control period (by which time the Authority aims to have full reform in place)

(b) be reframed so they are assessed, say, against the reported reliance level averaged across 2028, 2029, and 2030 disclosure years. This would extend the 'runway' for managing compliance

(c) apply limits to a targeted set of high-risk distributors, with other distributors only required to advise of intended changes to alter pricing methodologies to increase allocations (which may in turn prompt limits)

(d) establish an 'agreed transition' off-ramp option for impacted distributors – that is, an option for impacted distributors to engage in a process to determine an acceptable alternative to planned increases or default limits.

10.42. The improvements and mitigations outlined above could be complemented by enhanced documentation of connection pricing methodologies. For example, distributors could be required to publish methodologies that cover:

(a) all up-front payments – including capital contributions, in-kind contributions (vested assets), fees and bonds (or other security)

(b) all posted charges, rates and fees

(c) commentary on alignment with pricing principles

(d) identification of changes and planned changes.

10.43. The Authority has not yet formed a view on which modification (if any) may be merited or whether an improved proposal should proceed at all. Our intention is to carry out further analysis and develop a revised proposal for consultation later this year.

# 11. Other matters

11.1. This section addresses a range of other matters relating to connection pricing requirements.

## Obligation to connect

11.2. The existing framework for distributed generation access requires a distributor to approve applications that comply with the Code and any connection requirements set by the distributor.

11.3. In our *Network connections project: stage one amendments consultation paper*,[91] we set out our view that:

(a) the obligation to approve a connection implies a further obligation on distributors to provide the necessary infrastructure to enable connection

(b) the obligation does not impose time limits for the delivery of connection infrastructure

(c) proposed amendments would carry across these same obligations to larger (>69kVA) load applications.

11.4. This attracted strong opposition from submitters. Key arguments were that proposed Code amendments would:

(a) reverse policy implemented through primary legislation. The Electricity Industry Act 1992 had a sunset clause that repealed provisions (from 1994) dealing with licensing of electricity suppliers, which included a 'duty to supply'

(b) amount to an obligation to invest, which may sometimes be onerous for suppliers – particularly if they are prevented from recovering build costs up-front, or if a connection has high operating costs

(c) sometimes be detrimental to existing customers – either financially (if costs are not fully recovered from the connection applicant), or through adverse impacts on power quality, congestion or security of supply

(d) sometimes be impractical or impossible to implement, for example where land access is challenging or work to reconfigure and upgrade the network is too significant to deliver quickly

(e) risk encouraging inefficient network access outcomes – for example, not connecting to the nearest distribution network or connecting at distribution level when transmission connection would be more efficient.

11.5. Some of this opposition has strong links to connection pricing requirements. In particular:

(a) enhancement cost allocation requirements restrict allocation of distributor-selected enhancement costs

[91] Electricity Authority, Network connections project: stage one amendments consultation paper, 25 October 2024, page 21-22, para 3.24-3.25

(b) network capacity costing requirements restrict use of last-straw pricing, largely requiring the timing of connection revenues to be decoupled from the timing of capacity upgrade expenditures

(c) reliance limits would restrict overall ability to allocate the financing task for connection and upstream assets to newcomers

(d) on the other hand, the requirements promote cost-reflective allocation of extension costs, enhancement costs and capacity costs. For example, high up-front charges for connections with high extension or capacity costs (relative to incremental revenue).

11.6. The Authority is further considering whether a properly demarcated obligation to connect is appropriate for electricity distribution networks. This is a common element of regulatory access regimes for electricity networks because electricity is an essential service and electricity distribution services have strong monopoly characteristics.

11.7. However, we acknowledge concern from distributors that we should ensure obligations are not unduly onerous and that they are coherent with pricing requirements. Future proposals may consider matters including:

(a) the distinction between obligations to:

(i) build a network extension, or ensure such work is sufficiently contestable

(ii) liven a new connection

(iii) invest in upstream capacity to accommodate anticipated demand from a new connection

(iv) protect existing users from congestion caused by new connections

(v) provide continuance of supply (ie, incur investment and operating costs to sustain service to existing connections)

(b) testing to ensure that connection pricing requirements:

(i) will not make connection obligations unduly onerous

(ii) provide cost-reflectivity that promotes efficient investment (in network connection or alternative arrangements)

(c) the interplay between connection obligations, network standards, contestability and congestion policies.

11.8. As such, we consider it may be appropriate to consult further on obligations to connect alongside further consultation on reliance limits or other alternatives that manage the risk of deterioration in connection pricing settings prior to full reform. Further discussion on what this means in practice is outlined in chapter 5 of the Authority's *Network connections project (stage one): Decision paper*.[92]

## Distributors may not refuse to connect to avoid requirements

11.9. In the absence of an obligation to connect, we have however included a new requirement on distributors to not refuse to connect a person to the distributor's

92 Network connections project (stage one): Decision paper

distribution network to avoid complying with the connection pricing methodologies (clause 6B.3(3)). This is necessary to ensure the new requirements cannot be avoided.

## Connection applications for load and generation

11.10. In the consultation paper we focussed on connection pricing for load, in part because there are existing pricing principles in Part 6 that apply to distributed generation.

11.11. To give effect to this scope limitation, the proposed Code amendment included drafting at clause 6B.2(1)(a) providing that the new Part 6B "…does not apply to **connections** for **distributed generation** made under Part 6" and at 6B.2(2)(a) providing that pricing requirements for load apply if a connection applicant is applying to connect both generation and load.

11.12. We have decided on a revised approach to address two issues:

(a) providing greater clarity regarding the treatment of applications for "hybrid" connections that will serve both distributed generation and load

(b) improving alignment with the amendments we have decided to make to the Part 6 framework as part of the 'Network connections project: stage one' amendments.[93]

11.13. Under the amendments we have decided to make to Part 6, hybrid connections are connected using the processes applicable to the component (load or generation) with the highest capacity.[94] This makes sense for process selection, where only one process can apply.

11.14. For pricing, it makes sense that hybrid connections are priced in two steps in the following order:

(a) first, the load component is priced

(b) second, the generation component is priced based on its incremental impact (if any) on connection design or network capacity (or common quality).

11.15. This ordering makes sense because:

(a) connection pricing for load can allocate both incremental costs and a share of network costs, and can be structured with a mix of up-front and ongoing charges

(b) pricing for distributed generation may only allocate incremental costs and is commonly interpreted as requiring charges to be structured as fully up-front

(c) as such, it is more consistent to treat injection as the incremental functionality of a connection (with the incremental pricing approach).

11.16. To illustrate how this would apply for common scenarios:

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93 As part of its parallel work on non-price access arrangements, the Authority has decided to amend Part 6. Part 6 previously provided an access framework for distributed generation only. It now also provides access processes and default terms for larger load connections.

94 Refer clause 3(3) of Schedule 6.1 of Part 6.

(a) for a generation site with some incidental demand, the distributor would:

(i) not (in practice) need to cost extension works for load, because generation would drive extension sizing and both pricing schemes treat the incremental cost of extension works similarly. However, the distributor could cost the notional extension works for load if they wanted flexibility to structure that portion of cost recovery as a mix of up-front and ongoing

(ii) if the distributor allocates capacity costs to load connections, do so using capacity costing requirements based on the design demand of the new connection (for load). The distributor could structure recovery of this portion of costs as a mix of up-front and ongoing

(iii) allocate incremental extension, capacity and common quality costs (if any) associated with the generation connection

(b) for a load site with incidental generation, the distributor would:

(i) price the connection using their methodology for load, which would include applying enhancement and capacity costing requirements

(ii) assess (and allocate) any incremental costs associated with the generation – eg, power quality, monitoring or injection capacity costs

(c) for a site with balanced load and generation, the distributor would price the connection using their methodology for load and then consider (and allocate) any incremental costs associated with the generation

(d) in all cases, the distributor would establish a pioneer scheme if the applicant's contribution to extension costs exceeded the threshold

(e) in all cases, the distributor would prepare a charge reconciliation based on total costs and charges.

11.17. Establishing this requirement in the Code ensures a consistent approach (as between distributors and between applications). It also aligns with the pricing principles for distributed generation, which are currently based on allocating incremental cost (with no contribution to network costs).

11.18. To implement this approach, we have:

(a) aligned the definition of "load" in Part 6B with the definition in Part 6

(b) modified the clause that clarifies treatment of hybrid connections to set out that:

(i) load is priced first, then incremental cost of distributed generation (if any)

(ii) pioneer scheme entry thresholds apply to the total up-front contribution to extension costs

(iii) connection charge reconciliation requirement applies to total costs, charges and revenues (with any necessary modifications to the requirements).

## Dispute resolution

11.19. This section provides more information on the Authority's decision to extend dispute resolution provisions to connection applications for load from 1 April 2026.

11.20. In summary, having analysed submissions, our view is that a dispute resolution process will improve access to dispute resolution for both participants and non-participants.

### Introduction to dispute resolution

11.21. The dispute resolution process in Schedule 6.3 of the Code currently applies to distributed generation connection requirements in Part 6 including the application of pricing principles. Under the statutory framework, this dispute resolution approach can only apply to disputes between distributors and other participants.[95] Applicants who are not participants can report a breach of the Code under the Electricity Industry (Enforcement) Regulations 2010. Both participants and non-participants can make a complaint to Utilities Disputes Limited, which operates as a designated dispute resolution scheme under the Act.

11.22. The Authority proposed to apply the dispute resolution process in Schedule 6.3 of the Code to load connections with an additional requirement to seek to resolve issues in good faith. We also proposed an option for the Authority to make a determination on connection charges applying pricing methodologies.

11.23. As an alternative, the Authority considered a contractual terms model where some requirements would be reframed as default contractual terms rather than Code requirements. This approach would include most of the non-price requirements for load customers from the Part 6 reform, establishing a cohesive set of contractual terms that apply to load connections. The same approach would also be adopted for the generation requirements in Part 6.

### Decision on dispute resolution

11.24. The Authority has decided to proceed with the dispute resolution process, as consulted on. We have however excluded certain matters from the dispute resolution process which do not directly affect specific individual connecting parties and are therefore better enforced through the normal Code breach process (clause 6B.14(2)).

11.25. The Authority will monitor the disputes process and may consider further regulation if issues arise.

### Submissions on dispute resolution and our assessment

11.26. Several distributors[96] recommended deferring implementation of the dispute resolution process until full reform to give time for the fast-track measures to bed in.

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95 See Electricity Industry Act 2010, section 50, which sets out requirements for complaint, appeals and disputes. Complaints must be dealt with in accordance with regulations with the ability for the Ruling Panel to resolve disputes **between industry participants** of a kind identified in the Code or regulations, Accordingly, the Authority is unable to include dispute resolution provisions in the Code that involves persons who are not participants. It is also relevant that Code amendments must not impose obligations on non-participants (noting dispute resolution provisions are often two-sided).

96 For example, ENA, Wellington Electricity, Unison and Centralines, Orion, WEL Networks

For example, Wellington Electricity, Unison and Centralines, and Powerco questioned whether creating a formal dispute resolution process in relation to connection charges at this stage is consistent with the Authority's proposed short-term measures.

11.27. Providing time for fast-track measures to bed-in for both distributors and connection applicants was echoed by Drive Electric who noted that connection applicants may lack the information and resources to make an informed complaint. Unison and Centralines, supported by Hawke's Bay Consumer Power Trust, jointly recommended prioritising the education of connection applicants before launching the dispute resolution process as initial complaints are likely to stem from a lack of understanding and could be resolved through clear explanations alone.

11.28. Access seekers generally supported or partially supported inclusion of a dispute resolution process as part of the fast-track package, with no clear preference for the proposed dispute resolution process or the alternative contractual terms option.

**Response**

11.29. We do not agree that implementation of dispute resolution processes should be deferred until full reform. In our view the dispute resolution processes will provide an effective and efficient mechanism to resolve disputes for the fast-track measures when compared to the normal Code breach process that would apply in their absence.

11.30. The existence of a dispute resolution mechanism does not however prevent disputes from being resolved in the first instance by parties working together in good faith. Nor does it prevent education and clear explanations being provided about the operation of the new requirements to mitigate against disputes before they even arise.

**Matters better resolved through the Code breach process**

11.31. We have excluded certain requirements from the dispute resolution processes in Schedule 6.3 (clause 6B.12(2)).

11.32. These requirements are:

(a) Clause 6B.5(1)(a) to (b) (requirements relating to network capacity costs):

(b) Clause 6B.6 (requirement to establish a pioneer scheme policy):

(c) Clause 6B.7 (requirements for a pioneer scheme):

(d) Clause 6B.9 (requirement to publish information on pioneer schemes):

(e) Clause 6B.10(3) (requirement to provide information to the Authority on connection charge reconciliation amounts).

11.33. These requirements do not relate just to individual connection parties and are therefore not appropriate to be enforced between parties in accordance with the processes set out in Schedule 6.3.

11.34. We have therefore excluded them, with any disputes over their application being subject to the normal Code breach allegation, investigation, settlement, and enforcement processes in the Electricity Industry (Enforcement) Regulations 2010.

11.35. We have chosen not to proceed with an alternative contractual model for resolving disputes at this time, but we may consider revisiting this if issues arise.

### Updated Code amendment drafting

11.36. Table 11.1 highlights key updates to Code amendment drafting in relation to dispute resolution.

**Table 11.1 – Updated Code amendment drafting (dispute resolution)**

| Updated drafting | Comment |
|---|---|
| **Schedule 6.3 Default dispute resolution process**<br><br>**4** ~~**Application of pricing principles to disputes**~~ **Application of distributed generation pricing principles and connection pricing methodologies to disputes**<br><br>(1) The **Authority** and the **Rulings Panel** must:<br><br>(a) in relation to a dispute under clause 6.8, apply the **distributed generation** pricing principles set out in Schedule 6.4 to determine any ~~connection charges~~ **connection charges** payable in respect of connections of **distributed generation**;<br><br>(b) in relation to a dispute under clause 6B.12 require a **distributor** to determine any **connection charges** payable in respect of **connections** of **load** in a manner specified by the **Authority** or the **Rulings Panel** that is consistent with the **connection pricing methodologies**. ~~apply the **connection pricing methodologies** set out in Part 6B to determine any **connection charges** payable in respect of **connections** of **load**.~~ | Clarify the intended scope of the dispute resolution process which is only to give effect to the connection pricing methodologies, not to go beyond that. |

| Updated drafting | Comment |
|---|---|
| **6B.12 Disputes between distributors and connection applicants that are participants**<br><br>…<br><br>(2) Subclause (1) does not apply to disputes about the following clauses:<br><br>(a) Clause 6B.5(1)(a) to (b) (requirements relating to **network capacity costs**):<br><br>(b) Clause 6B.6 (requirement to establish a **pioneer scheme policy**):<br><br>(c) Clause 6B.7 (requirements for a **pioneer scheme**):<br><br>(d) Clause 6B.9 (requirement to **publish** information on **pioneer schemes**):<br><br>(e) Clause 6B.10(3) (requirement to provide information to the **Authority** on **connection charge reconciliation** amounts). | These clauses are more appropriately enforced through the standard Code breach process as these obligations do not relate only to a specific connecting party. |
| **6B.13 Disputes between distributors and connection applicants that are not participants**<br><br>(1) If a connection applicant that is not a participant is in a dispute with a distributor about the application of this Part, other than a dispute about any of the clauses listed in clause 6B.12(2), and has notified the distributor of the dispute, the distributor must attempt to resolve the dispute in good faith. | As above |

# 12. Regulatory statement

12.1. This section provides the Authority's final regulatory statement, which has been updated after consultation.

12.2. In summary, our view is that the Code amendments are consistent with the efficiency limb of our main statutory objective and necessary or desirable to promote the efficient operation of the electricity industry to deliver long-term benefits to consumers.

## Introduction to regulatory statement

12.3. The Authority's main objective, as outlined in section 15(1) of the Act, is to promote competition in, reliable supply by, and efficient operation of, the electricity industry for the long-term benefit of consumers. The Authority's additional objective, under section 15(2) of the Act, is to protect the interests of domestic and small business consumers in relation to their electricity supply.

12.4. Section 32(1) of the Act states that the Code may contain any provisions that are consistent with the Authority's objectives and are necessary or desirable to promote any or all of the matters listed in section 32(1).

12.5. The October 2024 Consultation Paper included at chapter 9 a regulatory statement in accordance with section 39(1) and 39(2) of the Electricity Industry Act 2010. The regulatory statement:

(a) set out the objectives of the proposed amendments, and how the proposals would give effect to these objectives

(b) provided a qualitative evaluation of the costs and benefits of the proposed amendments, finding that the proposals' benefits outweigh its costs

(c) provided an evaluation of alternative means of achieving the objectives

(d) summarised how the proposed amendments comply with s32(1) of the Act (see Table 9.1 on page 77-78 of the consultation paper); this included a summary of how the proposal would promote competition in, the reliable supply of, and the efficient operation of the electricity industry for the long-term benefit of consumers

(e) summarised how the proposed amendments comply with s17(1) of the Act (see Table 9.2 on page 78-79 of the consultation paper); this included a summary of how the proposal had regard to the Government Policy Statement on Electricity

(f) documented the Authority's consideration of how it has applied the Code amendment principles.

12.6. The Code amendment will introduce costs for all parties, most predominantly distributors, but we expect it is highly likely that the benefits for distributors and access seekers will significantly outweigh the costs. Costs and benefits are difficult to estimate given the wide-ranging nature of the proposals and the diversity of impacts across distributors and connection projects.

12.7. The Authority considers that the proposed amendments are consistent with its main objective. The amendments in this case are not primarily intended as measures to promote the Authority's additional statutory objective. However, the Authority considers the amendments are nevertheless consistent with this additional objective where the proposals involve the dealings between these consumers and participants.

12.8. The Authority has complied with section 17(1) of the Act and has appropriately applied the Code amendment principles.

## Submissions on regulatory statement and our assessment

12.9. Several submitters engaged directly with the Authority's regulatory statement or the issues it addresses, focussing on the Authority's cost-benefit analysis (CBA), Code amendment principles, and timing of consultation.

### Cost-benefit analysis can be relied on

12.10. Several submissions related to the assessment of the overall benefits to all consumers. These submitters suggested that the Authority conduct a quantitative CBA to ensure regulatory interventions are targeted and proportionate. Concerns around flow-on costs to consumers largely related to the impact of the proposed reliance limits.

12.11. Aurora Energy raised concerns around additional ongoing transaction costs and submitted that:

> *"The additional costs of the proposed changes need to be justified by quantifiable benefits. The impact to consumers is too significant to rely on a qualitative assessment based on economic theory. We question whether there are real world examples of network bypass caused by uneconomic connection pricing practices. This has not been demonstrated in the consultation material and, given the impact of the proposed changes, in our view, is important for the Authority to identify and consider when undertaking robust cost-benefit analysis."*

12.12. Powerco submitted that:

> *"Regulatory intervention needs to be tested against quantified cost and benefits to confirm they are proportionate to the harm they are trying to address. If this quantification cannot be undertaken, reforms should be limited to large customers to ensure the Authority aligns with its Consultation Charter.*
>
> *Quantifying the national economic benefits of removing barriers to timely electrification by connection type will enable the Authority to identify which regulatory option is an efficient and proportionate response to the barriers it has identified."*

12.13. Counties Energy Trust submitted that:

> *"It would be very rare that regulation would benefit all affected parties, as claimed in the consultation, including industry participants that would be regulated. It is more likely that the negative effects and costs of the regulation have not been fully identified or assessed.*

*The Authority should undertake a full quantified CBA of its proposals, including both the pricing and access regulation components of the proposals."*

**Response**

12.14. We disagree that a full quantitative CBA should be undertaken for the proposals or in combination with the Authority's 'Network connections project: stage one' proposals.

12.15. The Authority's position is supported by CEPA, who state that:[97]

*"Ideally, detailed welfare analysis would be undertaken. We agree that the Authority has not positively proved that there is net welfare loss, but nor has Vector or Axiom proved that there isn't. Absent detailed welfare analysis, we consider that on balance the potential economic harm from leaving connection charges unregulated would likely outweigh the potential welfare benefits from slightly lower on-going charges."*

12.16. While we agree that lowering barriers to electrification is likely a key source of benefits from the proposals, we consider that connection pricing has a pervasive impact across the economy – impacting the cost of housing, infrastructure and economic growth.

12.17. The cost associated with supressed or inefficient connection (and upstream) investment is not quantifiable – noting that it includes where:

(a) expectation of high costs either dampens activity altogether, or prevents it from reaching the connection application stage

(b) high connection costs flow through to high prices (eg, for housing or vehicle charging) and this in turn suppresses demand.

12.18. We note that much of the administrative cost associated with implementing the new requirements can be reduced through distributors cooperating with each other on common elements.

12.19. The costs of operating the new requirements need to be considered from a whole of economy perspective – ie, additional costs at an individual distributor level are offset by coordination and consistency improvements across New Zealand.

### Statutory objectives have been met

12.20. Some submitters were concerned that the Authority's proposals did not meet our statutory objectives, particularly the additional objective to protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers. For example, Vector considered that:

*"…the Authority's proposals could be in direct conflict with its additional statutory objective "to protect the interest of domestic consumers and small business consumers in relation to the supply of electricity to those consumers" by privileging new connecting customers over existing customers."*

[97] CEPA report attached in Appendix C

12.21. Similarly, The Lines Company submitted that:

> *"We do not believe the current proposal aligns with the EA's main statutory objective 'To promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers' in that if implemented as proposed it is likely to see a high degree of cross subsidisation of new customer's costs by existing customers, which in our view is not efficient."*

12.22. Counties Energy Trust also submitted that:

> *"The proposals would also be contrary to the Authority's consumer protection objective as they would disadvantage small business consumers and domestic consumers to the benefit of larger new connection customers. The safest way to protect small business and domestic consumers is to ensure full user-pays for new connections."*

12.23. Electra submitted that:

> *"Electra reminds the Authority that its role includes protecting the interests of existing consumers, especially domestic consumers and small businesses, and not putting at risk their interests for a few large, commercially driven connecting parties that are more than capable of strongly representing their own interests."*

12.24. Some submitters were concerned that the proposals were addressing equity issues, rather than efficiency. However, this was supported by Powerco, who submitted that "While fairness, popularity and sustainability aren't statutory objectives for the Authority, they are important considerations in network pricing particularly in a time of growth."

**Response**

12.25. The Authority's additional objective appeared to have been misunderstood by several submitters. The additional objective only applies in relation to "…the dealings of industry participants with domestic consumers and small business consumers". In this case, the dealings in question relate to those between distributors and domestic and small business consumers connecting to their networks.

12.26. We have, however, considered potential short to medium term impacts on consumers (as well as considering the long-term benefit of consumers). This was considered under the efficiency limb of the Authority's main objective by assessing whether impacts would be such that the proposed Code would not be durable (because external intervention could overturn the Code) and therefore be inefficient.

12.27. The Authority disagrees the new requirements privilege new connecting customers over existing customers. On the contrary, the charge reconciliation requirements increase visibility of any such subsidisation – as well as helping highlight where cost allocation to new connections is very high or otherwise privileging existing customers over new customers.

### Regulatory process complied with Code amendment principles

12.28. Some submitters noted that consultation took place during the busiest months for distributors. For example, ENA requested that for future consultation around pricing, "…the Authority avoid November and December. These are the busiest months for pricing teams at EDBs, as they are busy working through the following year's pricing updates."

12.29. PowerNet submitted that:

> *"It is arguably poor practice to engage in significant regulatory change proposals throughout the months of December and January, and for meaningful pricing consultation November to December."*

12.30. Other submitters referenced the Ministry for Regulation's expectations for good regulatory practice and the Authority's Consultation Charter. For example, Vector submitted that:

> *"The Authority's approach is not good regulatory practice [when assessed against the Ministry of Regulation's expectations for good regulatory practice]. The current proposals do not fulfil a number of these elements. As discussed above, shortcomings with the problem definition mean the proposals cannot be said to have "clear objectives", nor does the proposal "seek to achieve those objectives in the least cost way" given the rushed move to pricing reform rather than investigating a more targeted solution or exploring the ability to better address any perceived problem through more targeted Commerce Commission regulation."*

**Response**

12.31. The Authority acknowledges that consultation took place across a busy period for the sector. Submitters were provided eight weeks for submissions plus two weeks for cross-submissions. We also provided engagement opportunities to discuss the consultation paper as we recognised that some stakeholders may find some of the proposals challenging to interpret. This included an open webinar as well as an invitation for one-on-one meetings.

12.32. Additionally, as outlined in chapter 2 of this paper, the October 2024 consultation paper followed earlier papers that signalled a principled direction of travel on broader distribution pricing reform. This includes an issues paper in July 2023 where the Authority sought input on connection pricing as one of five focus areas, and a 'next steps' paper in May 2024 where the Authority set out its plan to develop a Code amendment proposal.

12.33. However, we disagree that the Authority has not complied with its Consultation Charter. As outlined in chapter 5 of this paper, there is a clear case for intervention. Our cost-benefit analysis is summarised in chapter 9 and 10 of the October 2024 consultation paper.

## Impact of changes to the Code amendment

12.34. While the Authority has largely adopted the Code amendment that was proposed in the October 2024 consultation paper, we have made a number of minor changes.

We have also decided not to proceed with the reliance limits methodology as proposed.

12.35. The Authority has considered whether any of these changes may have impacted on the assessment provided in the regulatory statement set out in the consultation paper.

12.36. More specifically, the changes have the following impacts on our earlier analysis:

(a) decision to not proceed with reliance limits as proposed defers:

(i) for some distributors, costs associated with revising capital expenditure and revenue path forecasts (including costs of the Commerce Commission reconsidering those revenue paths)

(ii) for some distributors, benefits associated with a reduction in instances of connection demand being deterred by high connection charges

(b) deferring capacity costing (for quotes) by one year:

(i) has a negligible impact on distributor costs (given capacity costing also features in charge reconciliation) but may enable a smoother introduction (with slightly lower associated costs)

(ii) defers, by one year, benefits associated with removing last-straw pricing and improving consistency and predictability. This could extend the period where some access seekers hold-off submitting applications

(c) adopting higher default entry thresholds for pioneer schemes:

(i) reduces costs associated with administering comparatively low value pioneer schemes

(ii) may reduce the benefits associated with mitigating first-mover disadvantage (ie, for smaller network extensions)

(d) overall, this does not alter the conclusion that it is highly likely benefits will significantly outweigh costs.

12.37. Overall, the Authority is satisfied that it has met the requirements of a regulatory statement in section 17(1) and section 39(2) of the Electricity Industry Act 2010, and that it has had proper regard for the Code amendment principles as required by the Authority's Consultation Charter. The Authority considers that the Code amendment will promote the efficient operation of the industry for the long-term benefit of consumers.

# 13. Next steps

## Commencement date

13.1. The following Code amendment comes into effect for connection applications received from 1 April 2026:

(a) connection enhancement cost allocation requirement

(b) pioneer scheme pricing methodology

(c) connection charge reconciliation requirement

(d) dispute resolution process.

13.2. The capacity costing requirement will come into effect for reconciliation purposes from 1 April 2026. The requirement for the capacity costing methodology to be the basis for quotes for connection applications will come into effect from 1 April 2027.

13.3. We will further consider additional guidance on the exemption process, if required.

# Appendix A Proposed Code amendment

**Proposed new Code provisions**

**1.1 Interpretation**

(1) In this Code, unless the context otherwise requires,—

**acquired pioneer scheme** means a **pioneer scheme** established by a **distributor** (the **selling distributor**) in accordance with clause 6B.7 relating to **pioneering connection works** carried out by a **distributor** that relate to the **distribution network** of a **distributor**, where ownership of the **distribution network** on which the **pioneer scheme** is established or relates or the part of a **distribution network** on which the **pioneer scheme** is established or relates is transferred to another **distributor** (the **buying distributor**)

**adjustment clause** means a clause in a **risk management contract** under which the price or prices of a specified volume of **electricity** may be adjusted, including an adjustment relating to the **Consumers Price Index**, the Producers Price Index or any other index

**buying distributor** is defined as set out in the definition of **acquired pioneer scheme**

**capacity costing requirements** means the **mandatory connection pricing methodology** relating to capacity costs, the requirements for which are set out in clause 6B.5

**capacity demand assumption** means the design capacity applicable to a given **connection application** and **network tier** as determined by a **distributor** under clause 6B.5(1)(c)

**connection**, for the purposes of Part 6B, means the physical link between a **consumer installation** and a **distribution network** at a **point of connection** to enable **electrical connection** between the **consumer installation** and the **distribution network**, and **connect** has a corresponding meaning

**connection applicant** means a person who:

(a) applies to a **distributor** to **connect** any **load** owned or operated, or to be owned or operated, by the person to the **distributor's distribution network**, or to a **consumer installation** that is connected to the **distribution network**, including by an **extension**; or

(b) is a **consumer**, and applies to a **distributor**:

  (i) to increase the security, or change the capacity of, the **load connection** provided to the **connection applicant** at the **point of connection** between the **consumer installation** owned or operated by the **connection applicant** and the **distributor's distribution network**; or

  (ii) to change to or from a **flexible connection**; and

  (iii) includes where any of the **connection applications** in sub-paragraphs (i) to (ii) involves allocating additional **network** security or capacity, with or without associated physical works

**connection application** means an application of the kind described in the definition of **connection applicant**, made in accordance with a **distributor's connection process**

**connection charge** means—

(a) any price, fee, tariff, charge or other similar monetary impost or cost, or any part of any price, fee, tariff, charge, or other similar monetary impost or cost and that is, either directly or indirectly, imposed or required, or agreed by a **distributor** in relation to **connection works** for a **connection applicant** or is otherwise applied for the purposes of, or has the effect of, recovering **connection works costs** directly or indirectly from a **connection applicant**; and

(b) excludes any **connection fees** or **pioneer scheme contributions**

**connection charge reconciliation** means a standardised breakdown of **connection charge** components in accordance with clause 6B.11

**connection charge reconciliation methodology requirements** means the requirements set out in clauses 6B.10 and 6B.11

**connection enhancement** means a **customer-selected enhancement** or a **distributor-selected enhancement**

**connection enhancement cost allocation requirements** means the **mandatory connection pricing methodology** set out in clause 6B.4

**connection fee** means an amount paid by a **connection applicant** to a **distributor** for the administrative aspects relating to **connection** or increasing the security or capacity at a new **point of connection**, including processing **connection applications** and completing **connection** inspections

**connection pricing methodologies** means the pricing methodologies that each **distributor publishes** setting out how it determines **connection charges** and **connection pricing methodology** has a corresponding meaning

**connection process** means the process a **distributor** requires a **connection applicant** to follow to establish or improve a **connection**, and may include requirements relating to information, timeframes, **connection charges** and **connection works**

**connection revenue life** means 30 years for a residential **connection** and 15 years for a non-residential **connection**, unless the **distributor** reasonably believes the **connection** will have a shorter revenue-generating life

**connection works** means an **extension** or a **network capacity upgrade**

**connection works cost** means the cost of **connection works**

**Consumers Price Index** means the Consumers Price Index (all groups) published by Statistics New Zealand or, if that index ceases to be published, any measure certified by the Government Statistician as being equivalent to that index

**CPI movement** means, for the purposes of Part 6B, the percentage movement in the **Consumers Price Index** for the 12-month period ending on 31 March in the previous calendar year

**customer-owned assets** means any **assets** whose ownership does not transfer to a **distributor**, such that a **consumer** will retain responsibility for its operation, maintenance and renewal or disposal

**customer-selected enhancement** means any improvement to the **relevant minimum scheme** requested, and agreed to in writing, by a **connection applicant**

**dedicated assets** means any **assets** owned or operated by a **distributor** that were built for a **connection** ~~**consumer**~~ and are not subsequently used to support another **connection**

**disclosure year**, for the purposes of Part 6B, means the 12-month period in which information disclosures are required of a **distributor** under section 53C of the Commerce Act 1986 and, if no such year is specified or if more than one 12-month period applies to the **distributor** under those information disclosure requirements, means the 12-month period ending on 31 March of the year a disclosure relates to

**distributor-selected enhancement** means any improvement to the **relevant minimum scheme** chosen by a **distributor**

**EDB ID determination** means the *Electricity Distribution Information Disclosure Determination 2012* [2012] NZCC 22, and any revision or replacement of this determination

**EDB IMs** means the *Electricity Distribution Services Input Methodologies Determination 2012* [2012] NZCC 26, and any revision or replacement of this determination

**electricity lines services** has the meaning given in section 54C of the Commerce Act 1986

**extension** means—

(a) works or operating arrangements to provide a **connection** of, or to increase the security or capacity of or at, a **point of connection** or of any assets owned or operated by a **distributor** that do not increase the capacity of the **shared network**; or
(b) an **extension-like upgrade**; or
(c) **incremental transmission works**; but
(d) does not include works or operating arrangements associated with **customer-owned assets** or work covered by a **connection fee**

**extension cost** means the cost of an **extension**

**extension-like upgrade** means works or operating arrangements that increase the capacity of the **shared network** that—

(a) substantially benefit only the **connection applicant** and the **distributor** reasonably considers this is likely to remain the case; and
(b) do not meet the threshold to use an estimate in clause 6B.5(2)

**first pioneer** is defined as set out in the definition of **pioneer**

**flexible connection** means an arrangement whereby a **connection applicant's** export or import of **electricity** is managed (often through real-time control) based upon contracted and agreed principles of available security or capacity

**incremental cost estimate** means an estimate of the incremental cost of a **connection** calculated in accordance with ~~sub~~clause 6B.~~13~~11(2)

**incremental distribution revenue estimate** means the portion of an **incremental revenue estimate** relating to distribution line charge revenue

**incremental opex scaling factor** means the scaling factor calculated in accordance with clause 6B.11(5)

**incremental revenue estimate** means an estimate of the incremental revenue from a **connection** calculated in accordance with clause 6B.11(3)

**incremental transmission cost** means an estimate of the cost of **incremental transmission works** including—

(a) a change in transmission charges due to a benefit-based charge adjustment event under paragraph 81(1)(e), (g), (h), (i) or (l) of the **transmission pricing methodology**; or

(b) new transmission charges relating to a high-value post-2019 BBI (as those terms are defined in the **transmission pricing methodology**)

**incremental transmission revenue estimate** means the portion of an **incremental revenue estimate** relating to pass-through of transmission charges

**incremental transmission works** means, in relation to a **connection** works to establish a new **grid** connection, increase security or capacity of **grid** connection **assets** or otherwise alter **grid** connection **assets** to accommodate the new or altered **connection**

**load** means, for the purposes of Part 6B, any **connection** to a **distribution network** or to a **consumer installation** that consumes **electricity**, other than **distributed** except as provided for in clause 6B.2(3)(b)

**localised historical cost recovery** means an allocation of historical **distributor-selected enhancement** costs or historical network development costs to subsequent connections that benefit from the works to which those costs relate

**mandatory connection pricing methodologies** means the pricing methodologies set out in Part 6B that each **distributor** must use for determining **connection charges** and **pioneer scheme contributions** and **mandatory connection pricing methodology** have corresponding meanings

**minimum flexi scheme** means **connection works** that deliver a **flexible connection** at lesser cost than the **minimum scheme**

**minimum scheme** means the least-cost solution for any **connection works** provided by a **distributor**, including for security and firmness of capacity, in accordance with the **distributor's connection and operation standards**~~.~~or a lower standard if agreed to in writing between the **connection applicant** and the **distributor**

**net incremental cost** means **incremental cost estimate** less the **incremental revenue estimate** for a **connection**

**network capacity cost** means the cost of consuming or adding capacity in the **shared network** (other than **extension-like upgrade** costs)

**network capacity upgrade** means—

(a) works or operating arrangements to provide a **connection** of, or to increase the security or capacity of or at, a **point of connection** or of any assets owned or operated by a **distributor** that increase the capacity of the **shared network**; and

(b) for the avoidance of doubt, includes:
  (i) operational changes made by the **distributor** that are required to provide the **connection** or to increase security or capacity:
  (ii) allocation of additional network security or capacity to the **connection**, even where this does not involve physical works or a change to a person's right to capacity on a **distributor's distribution network**; but

(c) does not include:
  (i) **extension-like upgrades**; or
  (ii) works or operating arrangements associated with **customer-owned assets** or work covered by a **connection fee**

**network cost contribution** means the difference between the **connection charge** for a **connection** and the **net incremental cost** of that **connection**

**network costing zone** means the part of a **distribution network** to which a common **posted capacity rate** applies

**network tier** means any one of the following functional components of a **distribution network**:

(a) sub-transmission line; or
(b) zone substation; or
(c) high voltage feeder; or
(d) distribution substation; or
(e) low voltage mains

**nominal capacity increment** means an amount of added capacity corresponding to the assumptions used to derive a **posted capacity rate**

**operating cost loading** means estimated incremental operating costs associated with a **connection**, where the estimate is either—

(a) zero if the customer or customers at the **connection** will pay posted tariffs; or
(b) if the customer or customers at the **connection** will not pay posted tariffs, based on a reasonable assessment of incremental operating costs associated with the **connection**—
  (i) including costs associated with operating and maintaining new **assets**; and
  (ii) excluding **transmission** charges; and
  (iii) expressed as the present value of future costs.

**pioneer** means—

(a) the **connection applicant** referred to in paragraph (a) of the definition of **pioneering connection works** (the **first pioneer**); and

(b) any **connection applicant** who subsequently **connects** to the **pioneering connection works** (a **subsequent pioneer**) and—

(i) who makes a **pioneer scheme contribution** of more than the amount of $25,000 in December 2025 dollar terms, adjusted each year by the **CPI movement**, or a lesser amount specified by the **distributor**; and

(ii) is determined by the relevant **distributor** to be a **pioneer** under clause 6B.7(1)(b)

**pioneering connection works** means an **extension** where—

(a) the portion of the **extension cost** initially met by a **connection applicant** is more than the amount of $50,000 in December 2025 dollar terms, adjusted each year by the **CPI movement**, or a lesser amount specified by the **distributor**; and

(b) the **connection applicant** has not opted out of applying a **pioneer scheme** to the **extension** by agreeing in writing with the relevant **distributor** that the **extension** should not form part of a **pioneer scheme**; and

(c) it is feasible that other parties may seek to **connect** to all or part of, or make use of, the **extension** at a later date; but

(d) excludes an **extension** where the **extension costs** are established using **posted connection charges**; and

(e) excludes any portion of **extension cost** relating to a **benefit-based charge adjustment event**

**pioneer scheme** means—

(a) an arrangement that covers any part of a **distributor's network** or the **distributor's grid** connections that comprises **pioneering connection works**, and includes an **acquired pioneer scheme**; and

(b) a **vested pioneer scheme**

**pioneer scheme contribution** means a payment to be made by a **connection applicant** to a **distributor**—

(a) determined in accordance with clause 6B.8; and

(b) any similar legally binding obligation put in place for any **connection works** built or established for a single **consumer** prior to 1 April 2026

**pioneer scheme policy** means a policy **published** in accordance with clause 6B.9

**pioneer scheme pricing methodology requirements** means the **mandatory connection pricing methodologies** set out in clauses 6B.6 to 6B.9

**posted capacity rate** means the estimated average cost per capacity unit that is published by a **distributor** for a **network capacity upgrade** for a given **network tier** and **network costing zone**, where the rate may be set to zero if the **distributor** reasonably considers there is no foreseeable need within the **distributor's** applicable **network** planning horizon for a **network capacity upgrade**

**posted connection charge** means a **connection charge** that is **published** by a **distributor** that applies to any **connection** of a type that meet requirements specified by the **distributor**

**posted extension rate** means a unit rate that has been **published** by a **distributor** for use in building up **extension cost** estimates for **connections** of a type specified by the **distributor** that meet requirements specified by the **distributor**

**real estate development** means the development of land for a commercial purpose including its development in one or more of the following ways:

(a) subdivision:

(b) the construction of commercial or industrial premises (or both):

(c) the construction of multiple new residential premises

**rebate** means any disbursement, credit or deduction made to a **pioneer** by a **distributor** in accordance with clause 6B.8(5)

**relevant minimum scheme** means a **minimum scheme** or, if a **connection applicant** requests it and the **distributor** can reasonably supply it, a **minimum flexi scheme**

**selling distributor** is defined in the definition of **acquired pioneer scheme**

**shared network** means any part of a **distribution network** that is not **customer-owned assets** or **dedicated assets**

**start date**, for a **pioneer scheme**, means the date the first **pioneer** for the **pioneer scheme** made its first **connection charge** payment in relation to the **pioneering connection works** or the **vested pioneering works** subject to the **pioneer scheme**

**subsequent pioneer** is defined as set out in the definition of **pioneer**

**vested pioneer scheme** means an arrangement that covers any part of a **distributor's network** where a **consumer** carried out or funded works that were initially owned by the **consumer** and the **distributor** to whose **network** the works were **connected** agreed to take ownership of those works and that those works should form a **pioneer scheme**

**vested pioneering works** means the works carried out or funded by a **consumer** as referred to in the definition of **vested pioneer scheme**

# Part 6B
# Distributor pricing methodologies, information requirements and other requirements for load connections

**6B.1 Contents of this Part**

This Part specifies—

(a) **mandatory connection pricing methodologies** which are the pricing methodologies that must be applied by **distributors** in relation to **connection charges** and **pioneer scheme contributions**; and

(b) information requirements for **distributors** in relation to access to **distribution networks**; and

(c) application of the dispute resolution process in Schedule 6.3 to the requirements under this Part where **connection applicants** are **participants** and enhancement of the processes available to non-participants.

**6B.2 Application of this Part**

(1) This Part does not apply to—

(a) any **connection application** received by a **distributor** prior to 1 April 2026; or

(b) a **distributor** in respect of the **distributor's** ownership or operation of a secondary network; or

(c) existing **load connected**, or a **connection applicant** seeking to **connect load**, to a secondary network.

(2) For the avoidance of doubt—

(a) this Part applies in addition to Part 6 and applies to all **connection applications** for **load** despite how an application is treated under Part 6:

(b) a **connection applicant** who is not a **participant** is not required to comply with this Part and cannot be subject to the enforcement measures set out in the **Act** or the Electricity Industry (Enforcement) Regulations 2010 for failing to comply with this Part.

(3) If an application under Part 6 includes both **load** and **distributed generation**—

(a) the **connection enhancement cost requirements** and the **capacity costing requirements** must be applied to the **load** component of the application before the requirements of Part 6 are applied to the **distributed generation** component of the application; and

(b) the **pioneer scheme pricing methodology requirements** and **connection charge reconciliation methodology requirements** must be applied, with all necessary modifications, to the connection as a whole.

*Connection pricing methodologies*

**6B.3 Distributors must comply with mandatory connection pricing methodologies**

(1) Each **distributor** must apply the **mandatory connection pricing methodologies** in subclause (2) in setting **connection charges**, including in the calculation of quoted charges and application of such charges, the allocation of costs to customers, and in otherwise recovering or allocating **connection works costs**.

(2) The **mandatory connection pricing methodologies** are:
  (a) the **connection enhancement cost allocation requirements** in clause 6B.4:
  (b) the **capacity costing requirements** in clause 6B.5:
  (c) the **pioneer scheme pricing methodology requirements** in clauses 6B.6 to 6B.9:
  (d) the **connection charge reconciliation methodology requirements** in clauses 6B.10 and 6B.11.

(3) Despite subclause (1), a **distributor** is—
  (a) not required to apply the **pioneer scheme pricing methodology requirements** in respect of **real estate developments**; and
  (b) in respect of any **connection** covered by a large connection contract as defined in the **EDB IMs,** required to apply the **connection charge reconciliation methodology requirements** only.

(4) A **distributor** must not refuse to connect a person to the **distributor's distribution network** for the purpose of avoiding compliance with the **mandatory connection pricing methodologies**.

*Connection enhancement cost allocation requirements*

**6B.4 Allocation of connection enhancement costs**

(1) Subject to subclauses (2) to (4), each **distributor** in determining the **connection charges** that it requires a **connection applicant** to pay for or in respect of a **connection** or any increase in security or **capacity** at a **point of connection** or for an **asset—**
  (a) must determine those **connection charges** on the basis of the **relevant minimum scheme**, unless the **connection applicant** agrees in writing to improvements to the **relevant minimum scheme**; and
  (b) if improvements are made to the **relevant minimum scheme**, must allocate only the **customer-selected enhancement** costs to the **connection applicant**, in addition to the costs of the **relevant minimum scheme**; and
  (c) must not allocate any **distributor-selected enhancement** costs to the **connection applicant**.

(2) If a **connection applicant** and **distributor** agree in writing that the **distributor** does not need to determine the cost of the **relevant minimum scheme**, the **distributor** does not need to determine charges in accordance with subclause (1).

(3) If a **connection applicant** and **distributor** agree in writing to an alternative allocation of **connection enhancement** costs than set out in subclause (1), the **distributor** does not need to determine charges in accordance with subclause (1).

(4) If a **distributor publishes posted connection charges**, it may use those charges to determine the charges under subclause (1), instead of applying subclauses (1)(a) to (1)(b), where the **connection** is of the type and meets the requirements specified by the **distributor** for the **posted connection charge**.

(5) If a **distributor publishes posted extension rates** it must use those rates to determine the costs under a **relevant minimum scheme** or for any **customer-selected enhancement** costs, where the **connection** works are of the type and meet the requirements specified by the **distributor** for the **posted extension rate**.

*Capacity costing requirements*

**6B.5 Capacity costing requirements**

(1) If a **distributor** intends to include or includes **network capacity costs (**in whole or in part) in the charges payable by a **connection applicant** for or in respect of any **connection works**, it must—

(a) determine a **posted capacity rate** for each **network tier** and **network costing zone** in respect of which it charges for **network capacity costs** for each current **disclosure year** and the following four **disclosure years** on an annual rolling basis; and

(b) not revise the **posted capacity rates** and **nominal capacity increments published** under paragraph (a) for the current **disclosure year** and the following **disclosure year** except to correct errors; and

(c) determine the **capacity demand assumption** for each **network tier** and **network costing zone** to which each **connection application** that it receives relates having reasonable regard to any relevant information provided by the **connection applicant**; and

(d) use the **posted capacity rate** and **capacity demand assumption** applicable to each **network tier** and **network costing zone** to which the **connection application** relates to calculate the **network capacity costs**.

(2) If the **capacity demand assumption** determined by a **distributor** for a **network tier** (other than **distribution** substations and low voltage mains) is greater than 80% of the **nominal capacity increment** for that **network tier**, the **distributor** may use estimated capacity upgrade costs for that **network tier** instead of the **posted capacity rate** in the calculation under subclause (1)(d).

(3) If the **distributor** determines that the estimated cost per unit to add capacity at a **network tier** is more than 150% or less than 80% of the applicable **posted capacity rate** for that **network tier** and **network costing zone**, the **distributor** may use the estimated rate instead of the **posted capacity rate** in the calculation under subclause (1)(d).

(4) This clause does not apply to any **connection application** received by a **distributor** prior to 1 April 2027.

(5) Subclause (1)(b) does not apply with respect to **posted capacity rates** and **nominal capacity increments** for the **disclosure year** ending 31 March 2028.

*Pioneer scheme pricing methodology requirements*

**6B.6 Distributors must establish a pioneer scheme policy**

(1) Each **distributor** must establish a **pioneer scheme policy** by 1 April 2026.

(2) The **pioneer scheme policy** must set out how the **distributor** will-apply the requirements in clauses 6B.7 and 6B.8, including how it will—

(a) determine whether a **pioneer scheme** exists; and

(b) determine the matters in clause 6B.7(1)(b) and (3); and

(c) otherwise administer **pioneer schemes**.

**6B.7 Requirements for a pioneer scheme**

(1) For the purposes of clause 6B.6, this clause and clause 6B.8—

(a) a **pioneer scheme** continues from its **start date** until the expiry date set by the **distributor**, which must be not less than 7 years from the **start date**, unless each **pioneer** to a **pioneer scheme** and the **distributor** agree in writing that the scheme shall cease; and

(b) a **distributor** may determine which **connection applicants**, other than the **first pioneer**, are **subsequent pioneers**.

(2) For the purposes of this clause and clause 6B.8, a **distributor** must—

(a) determine whether a **pioneer scheme** exists in accordance with this Part and its **pioneer scheme policy**; and

(b) record the location of each **pioneer scheme** on its **distribution network** or connection to the **grid**.

(3) Each **distributor** must determine for each **pioneer scheme** additional or more detailed pricing methodologies to those set out in clause 6B.8 specifying how it will, in a way that is consistent with clause 6B.8,—

(a) administer and collect **pioneer scheme contributions**; and

(b) determine **rebates**; and

(c) determine which **connection applicants** are eligible for **rebates**.

(4) A **distributor** must treat all **connection applications** to **connect** to **assets** that are subject to a **pioneer scheme** as subject to the **pioneer scheme**.

(5) If a **pioneer scheme** is an **acquired pioneer scheme**, the **purchasing distributor**—

(a) must not change any aspect of the matters determined for the **pioneer scheme** by the **selling distributor** or the **pioneer scheme policy** for that scheme set by the **selling distributor**; and

(b) **must** continue to administer, and comply with, those requirements and that **pioneer scheme policy** in complying with clauses 6B.8, 6B.9 and this clause.

**6B.8 Determining connection charges, contributions and rebates for pioneer schemes**

(1) From 1 April 2026, where there is a **pioneer scheme**, the **distributor** must determine the **connection charges** and, where applicable, any other charges, for—

(a) the **first pioneer** to the scheme in accordance with subclause (2); and

(b) for each **subsequent pioneer** to the scheme and each other **connection applicant** that **connects** to the scheme in accordance with subclause (3).

(2) The **distributor** must determine the **connection charges** and any other charges payable by the **first pioneer** to a **pioneer scheme** in accordance with the following:

(a) the **distributor** must determine the **connection charges** in accordance with the **connection enhancement cost requirement**, the **capacity costing requirements** and the **distributor's connection pricing methodology**:

(b) from the time that any other **pioneer** or other **connection applicant connects** to the scheme, in determining any remaining **connection charges** or any other charges that the first **pioneer** must pay, the **distributor** must apply a **rebate** determined in accordance with subclause (5):

(c) the **distributor** must otherwise comply with its **pioneer scheme policy** and the matters determined under clause 6B.7:

(d) the **distributor** must determine the costs of any **vested pioneering works** in accordance with subclause (4)(a).

(3) The **distributor** must determine the **connection charges** and any other charges payable by each **subsequent pioneer** or other **connection applicant** that **connects** to a **pioneer scheme** in accordance with the following:

(a) the **pioneer scheme contribution** requirements set out in subclause (4):

(b) the **distributor** must continue to apply the **capacity costing requirements** and the **distributor's connection pricing methodology**:

(c) if the **connection applicant** is a **subsequent pioneer**, from the time that any other **pioneer** or other **connection applicant** connects to the scheme, in determining any remaining **connection charges** or any other charges that the **pioneer** must pay, the **distributor** must apply a **rebate** determined in accordance with subclause (5):

(d) the **distributor** must otherwise comply with its **pioneer scheme policy** and the matters determined under clause 6B.7.

(4) The **pioneer scheme contribution** is to be determined as follows:

(a) in determining the costs of the **pioneering connection works** or **vested pioneering works**—

(i) the **distributor** must use the actual costs if these are known to the **distributor**:

(ii) if the actual costs are not known to the **distributor** (for example, if the **pioneering connection works** or **vested pioneering works** were constructed or contracted by a person other than the **distributor**), the **distributor** may use its estimated costs of the works:

(iii) if the **distributor** is using information provided by the **consumer** who constructed or paid for any **vested pioneering works**, the **distributor** must be reasonably satisfied that the information is accurate:

(b) the **distributor** must apply straight-line depreciation to the costs of the **pioneering connection works** or the **vested pioneering works** that the **pioneer scheme** relates to in order to determine the present-day value of those costs each time it calculates **pioneer scheme contributions,** using a depreciation period of 20 years; and

(c) the **distributor** must take into account shares of **extension** length and capacity of the **pioneer scheme** among the parties **connected** or **connecting** to the **pioneer scheme**; and

(d) **pioneer scheme contributions** must not be collected if the **pioneer scheme contribution** would be less than the amount of $1,000 in December 2025 terms adjusted each year by the **CPI movement** after deducting any fee to cover the reasonable costs of administering the scheme, or of a lesser amount specified by the **distributor**.

(5) The **rebate** due to a **pioneer** must be determined in a way that shares any **pioneer scheme contribution** received by a **distributor** among all **pioneers** who are connected to a **pioneer scheme** proportionate to the extent to which each **pioneer** has met the costs of the **pioneering connection works** or the **vested pioneering works** and after deducting any fee to cover the reasonable costs of administering the scheme.

(6) This clause does not apply to a **pioneer scheme** entered into before 1 April 2026.

**6B.9 Distributors must publish information on pioneer schemes**

(1) Each **distributor** must—

(a) **publish** its **pioneer scheme policy**, which must include:

(i) how **pioneer scheme contributions** are to be determined:

(ii) how it will administer and collect **pioneer scheme contributions**:

(iii) how it will determine **rebates**:

(iv) how it will determine which **connection applicants** are eligible for **rebates**:

(v) how it will distribute **funded asset rebates** it receives in accordance with clause 29 of the **transmission pricing methodology** relating to **incremental transmission works** to **pioneers**:

(b) make each **connection applicant** aware of the existence of the **pioneer scheme policy**:

(c) **publish** the **details** of each **pioneer scheme** it administers, applying the requirements in clause 6B.7, including the following information:

(i) the location of the **pioneer scheme** on its **network**:

(ii) the **start date** of the **pioneer scheme**:

(iii) the expiry date of the **pioneer scheme**:

(iv) the relevant opening value(s) of the **pioneer scheme**.

(2) Subclause (1)(c) does not apply to a **pioneer scheme** entered into before 1 April 2026.

*Connection charge reconciliation methodology requirements*

**6B.10 Distributor must provide connection charge reconciliation on request**

(1) If requested by a **connection applicant**, or as otherwise required under subclause (2), a **distributor** must provide a written **connection charge reconciliation**.

(2) A **distributor** must, when providing a quote for the **connection charge** or **connection charges**, in respect of any **connection works**, either—

(a) provide a written **connection charge reconciliation**; or

(b) notify the **connection applicant** of their right to request a written **connection charge reconciliation** under this clause.

(3) If requested by the **Authority**, a **distributor** must—

(a) provide information on **connection charge reconciliation** amounts to the **Authority** within the timeframe specified by the **Authority**; and

(b) if requested, provide sufficient information under paragraph (a) to enable the **Authority** to understand how the **distributor** determined those amounts.

**6B.11 Connection charge reconciliation requirements**

(1) A **connection charge reconciliation** must show:

$$CC = (IC - IR) + NC$$

where

*CC* is the **connection charge** or **connection charges**

*IC* is the **incremental cost estimate**

*IR* is the **incremental revenue estimate**

*NC* is the **network cost contribution**

(2) A **distributor** must assess the **incremental cost estimate** under subclause (1), and show this assessment in the **connection charge reconciliation**, in accordance with the following formula:

$$IC = EC + CSE + NCC + ITC + LHCR + OCL$$

where

*IC* is the **incremental cost estimate**

*EC* is the **extension cost** of the **relevant minimum scheme**, excluding any **incremental transmission cost**

*CSE* is the **customer-selected enhancement** costs, if any

*NCC* is the **network capacity cost** of the **relevant minimum scheme** calculated in accordance with clause 6B.5, including in respect of a **connection application** received by a **distributor** prior to 1 April 2027 as though that clause applied to the **connection application**

*ITC* is the **incremental transmission cost**, if any

*LHCR* is the **localised historical cost recovery**, if any

*OCL* is the **operating cost loading**, if any

(3) A **distributor** must assess the **incremental revenue estimate** under subclause (1), and show this assessment in the **connection charge reconciliation**, in accordance with the following formula:

$$IR = IDR + ITR$$

where

*IDR* is the **incremental distribution revenue estimate**

*ITR* is the **incremental transmission revenue estimate**

(4) A **distributor** must assess the **incremental distribution revenue** and **incremental transmission revenue** estimates, and show this assessment in the **connection charge reconciliation**, by—

(a) estimating revenue from **electricity lines services** (excluding **connection charges** and **connection fees**) the **distributor** will receive in respect of the **connection** in the first **disclosure year** (or part **disclosure year**) following the **electrical connection** of the **connection** or the completion of the **connection works**, whichever is later; and

(b) estimating revenue for subsequent **disclosure years** by adjusting the estimate derived under paragraph (a) for—

(i) change from part-year to full-year, if applicable; and

(ii) forecast changes in demand at the **connection** (if any); and

(iii) forecast changes in revenue per **connection**, in real terms, for any years for which the **distributor** has a reasonable revenue path forecast; and

(iv) forecast changes in tariff structures or levels for any years for which the **distributor** has a reasonable price path forecast; and

(c) discounting the estimates under paragraph (b) to their present value using—

(i) a duration from the beginning of the first full year of operation equal to the **connection revenue life**; and

(ii) a discount rate equal to the most recent available mid-point estimate of vanilla WACC (being the weighted average cost of capital) made by the Commerce Commission in accordance with the **EDB ID determination** made under Part 4 of the Commerce Act 1986 less an adjustment to remove inflation consistent with inflation projections for the year ahead from the most recent Monetary Policy Statement published by the Reserve Bank of New Zealand; and

(d) for **incremental distribution revenue** only, multiplying the amount derived after the application of paragraph (c) by the **distributor's incremental opex scaling factor** calculated in accordance with subclause (5) to adjust for incremental operational expenditure costs, unless the **incremental cost estimate** includes an **operating cost loading**.

(5) A **distributor** must calculate its **incremental opex scaling factor**, and show this calculation in the **connection charge reconciliation**, in accordance with the following formula:

$$OSF = 1 - \frac{ASO}{AEDR}$$

where

*OSF* is the **incremental opex scaling factor**

*ASO* is the average selected opex, being the average value over the five most recent available **disclosure years** of the sum of a **distributor's**—

(a) operational expenditure relating to service interruptions and emergencies as defined in the **EDB ID determination**; and

(b) operational expenditure relating to vegetation management as defined in the **EDB ID determination**; and

(c) operational expenditure relating to routine and corrective maintenance and inspection as defined in the **EDB ID determination**; and

(d) any costs described in clause 3.1.2(1)(a) of the **EDB IMs**

*AEDR* is the average electricity distribution revenue, being the average value over the five most recent available **disclosure years** of a **distributor's** distribution line charge revenue (excluding revenue relating to pass through of electricity transmission costs)

and where all values must exclude goods and services tax and be expressed in real terms (with a common base year)

(6) A **distributor** may further adjust the calculation of the amounts of the *CC*, *IC* and *IR* in subclauses (1) and (2) to recognise differences in the timing of cashflows using a discount rate for each year consistent with the rate determined in subclause (3)(c)(ii).

(7) A **distributor** must treat in-kind contributions consistently as between *CC* and *IC* (either both zero or both the same estimated value).

*Disputes about the application of this Part*

**6B.12 Disputes between distributors and connection applicants that are participants**

(1) If there is a dispute between a **connection applicant** that is a **participant** and a **distributor** about the application of any of the **mandatory connection pricing methodologies**, either **participant** may commence the default dispute resolution process in Schedule 6.3 at any time.

(2) Subclause (1) does not apply to disputes about the following clauses:

(a) Clause 6B.5(1)(a) to (b) (requirements relating to **network capacity costs**):

(b) Clause 6B.6 (requirement to establish a **pioneer scheme policy**):

(c) Clause 6B.7 (requirements for a **pioneer scheme**):

(d) Clause 6B.9 (requirement to **publish** information on **pioneer schemes**):

(e) Clause 6B.10(3) (requirement to provide information to the **Authority** on **connection charge reconciliation** amounts).

**6B.13 Disputes between distributors and connection applicants that are not participants**

(1) If a **connection applicant** that is not a **participant** is in a dispute with a **distributor** about the application of this Part, other than a dispute about any of the clauses listed in clause 6B.12(2), and has notified the **distributor** of the dispute, the **distributor** must attempt to resolve the dispute in good faith.

(2) For the avoidance of doubt, nothing in this clause prevents the **connection applicant** from reporting a breach or possible breach of this Code under regulation 9 of the Electricity Industry (Enforcement) Regulations 2010 or from making a complaint to the **distributor** under regulation 5 of the Electricity Industry (Enforcement) Regulations 2010 at any time.

**Amendments to existing Code provisions (proposed amendments in red)**

**1.1 Interpretation**

(1) In this Code, unless the context otherwise requires,—

**consumer installation**, for the purposes of the definition of **associated equipment**, Part 6 and Part 6B, means—

(a) all fittings that are part of a system for conveying **electricity** from a **consumer's point of supply** to any point from which **electricity** conveyed through that system may be consumed; and

(b) includes any fittings that are used, or designed or intended for use, by any person in, or in relation to, the generation of **electricity**—

(i) for that person's use and not for supply to any other person; or

(ii) so that **electricity** can be injected into a **distribution network**; but

(c) does not include any appliance that uses, or is designed or intended to use, **electricity**, whether or not it also uses, or is designed or intended to use, any other form of energy

# Schedule 6.3 Default dispute resolution process

**Contents**



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**1 Application of this Schedule**

This Schedule applies in accordance with clause 6.8 and clause 6B.12 of this Code.

**2 Notice of dispute**

(1) A party must give written notice to the other party of the dispute.

(2) The parties must attempt to resolve the dispute with each other in good faith.

(3) If the parties are unable to resolve the dispute, either party may complain in writing to the **Authority**.

**3 Complaints**

(1) A complaint made under clause 2(3) must be treated as if it were a notification given under regulations made under section 112 of the **Act**.

(2) The following provisions apply to the complaint:

(a) sections 53-62 of the **Act**; and

(b) the Electricity Industry (Enforcement) Regulations 2010 except regulations 5, 6, 7, 9, 17, 51 to 75, and subpart 2 of Part 3.

(3) Those provisions apply—

(a) to the dispute that is the subject of the complaint in the same way as those provisions apply to a notification of an alleged breach of this Code; and

(b) as if references to a **participant** in those provisions were references to a party under Part 6 of this Code; and

(c) with any further modifications that the **Authority** or the **Rulings Panel**, as the case may be, considers necessary or desirable for the purpose of applying those provisions to the complaint.

**4 Application of distributed generation pricing principles and mandatory connection pricing methodologies to disputes**

(1) The **Authority** and the **Rulings Panel** must—

(a) in relation to a dispute under clause 6.8, apply the **distributed generation** pricing principles set out in Schedule 6.4 to determine any **connection charges** payable in respect of connections of **distributed generation**; and

(b) in relation to a dispute under clause 6B.12, require a **distributor** to determine any **connection charges** payable in respect of **connections** of **load** in a manner specified by the **Authority** or the **Rulings Panel** that is consistent with the **mandatory connection pricing methodologies**.

(2) Subclause (1) applies if—

(a) there is a dispute under Part 6 or Part 6B of this Code; and

(b) in the opinion of the **Authority** or the **Rulings Panel** it is necessary or desirable to apply subclause (1) in order to resolve the dispute.

**5 Orders that Rulings Panel can make**

If a complaint is referred to it, the **Rulings Panel** may make any order, or take any action, that it is able to make or take in accordance with section 54 of the **Act**.

# Appendix B Proposed Code amendment (redlined)

**Proposed new Code provisions**

*Red underlined text indicates additions to the drafting from the version previously consulted on.*
*~~Red strikethrough~~ text indicates deletions from the drafting from the version previously consulted on.*
*Highlighted text indicates changes to red text in the version previously consulted on.*

**1.1 Interpretation**

(1) In this Code, unless the context otherwise requires,—

**acquired pioneer scheme** means a **pioneer scheme** established by a **distributor** (the **selling distributor**) in accordance with clause 6B.~~9~~7 relating to **pioneering connection works** carried out by a **distributor** that relate to the **distribution network** of a **distributor**, where ownership of the **distribution network** on which the **pioneer scheme** is established or relates or the part of a **distribution network** on which the **pioneer scheme** is established or relates is transferred to another **distributor** (the **buying distributor**)

**adjustment clause** means a clause in a **risk management contract** under which the price or prices of a specified volume of **electricity** may be adjusted, including an adjustment relating to the **Consumers Price Index** ~~Consumer Price Index~~, the Producers Price Index or any other index

**buying distributor** is defined as set out in the definition of **acquired pioneer scheme**

**capacity costing requirements** means the **mandatory connection pricing methodology** relating to capacity costs, the requirements for which are set out in clause 6B.~~6~~5

**capacity demand assumption** means the design capacity applicable to a given **connection application** and **network tier** as determined by a **distributor** under clause 6B.5(1)(c) ~~having reasonable regard to any relevant information provided by a **connection applicant**~~

~~**capital contribution reliance** means the ratio, expressed as a percentage, between the sum of capital contributions funding **consumer connection** and capital contributions funding system growth, divided by the sum of **consumer connection** expenditure and system growth expenditure, as disclosed by a **distributor** in relation to a **disclosure year**~~

~~**capital contribution reliance for load** means **capital contribution reliance** adjusted to remove capital contributions and expenditure relating to **connections** for **distributed generation** made under Part 6 of this Code~~

~~**capital contribution reliance limit for load** means, for a **distributor**, an upper limit on reasonably anticipated **capital contribution reliance for load**, assuming **typical connection activity**, determined in accordance with clause 6B.7~~

~~**capital contribution reliance limit for load methodology** means the **connection pricing methodology** set out in clause 6B.7~~

**connection**, for the purposes of Part 6B, means the physical link between a **consumer installation** and a **distribution network** at a **point of connection** to enable **electrical connection** between the **consumer installation** and the **distribution network**, and **connect** has a corresponding meaning

**connection applicant** means a person who:

(a) applies to a **distributor** to **connect** any **load** owned or operated, or to be owned or operated, by the person to the **distributor's distribution network**, or to a **consumer installation** that is connected to the **distribution network**, including by ana ~~**network**~~ **extension**; or

(b) is a **consumer**, and applies to a **distributor**:

  (i) to increase the security, or change the capacity of, the **load connection** provided to the **connection applicant** at the **point of connection** between the **consumer installation** owned or operated by the **connection applicant** and the **distributor's distribution network**; or

  (ii) to change to or from a **flexible connection**; and

  (iii) includes where any of the **connection applications** in sub-paragraphs (i) to (ii) involves allocating additional **network** security or capacity, with or without associated physical works

**connection application** means an application of the kind described in the definition of **connection applicant**, made in accordance with a **distributor's connection process**

**connection charge** means—

(a) any price, fee, tariff, charge or other similar monetary impost or cost, or any part of any price, fee, tariff, charge, or other similar monetary impost or cost and~~; (b)~~ that is, either directly or indirectly, imposed or required, or agreed by a **distributor** in relation to **connection works** for a **connection applicant** or is otherwise applied for the purposes of, or has the effect of, recovering **connection works costs** directly or indirectly from a **connection applicant**; and

(bc) ~~includes~~ excludes any **connection fees** or **pioneer scheme contributions**

**connection charge reconciliation** means a standardised breakdown of **connection charge** components~~, other than for **connection fees**,~~ in accordance with clause 6B.~~13~~11

**connection charge reconciliation methodology requirements** means the requirements set out in clauses 6B.~~12~~10 and 6B.~~13~~11

**connection enhancement** means a **customer-selected enhancement** or a **distributor-selected enhancement**

**connection enhancement cost allocation requirements** means the **mandatory connection pricing methodology** set out in clause~~s~~ 6B.4 ~~and 6B.5~~

**connection fee** means an amount paid by a **connection applicant** to a **distributor** for the administrative aspects relating to **connection** or increasing the security or capacity at a new **point of connection**, including processing **connection applications** and completing **connection** inspections

~~**connection pricing methodologies** means the pricing methodologies set out Part 6B that each **distributor** must use for determining **connection charges**, other than any **connection fees**, and **connection pricing methodology** has a similar meaning~~

**connection pricing methodologies** means the pricing methodologies that each **distributor publishes** setting out how it determines **connection charges** and **connection pricing methodology** has a corresponding meaning

**connection process** means the process a **distributor** requires a **connection applicant** to follow to establish or improve a **connection**, and may include requirements relating to information, timeframes, **connection charges** and **connection works**

**connection revenue life** means 30 years for a residential **connection** and 15 years for a non-residential **connection**, unless the **distributor** reasonably believes the **connection** will have a shorter revenue-generating life

**connection works** means an **extension** or a **network capacity upgrade**~~the works involved to provide a **connection**, or to increase the capacity of, a **point of connection** or of any **assets** owned or operated by a **distributor**~~

~~(a) including any of the following:~~

~~(i) any **network extensions** or the construction of any **dedicated assets**:~~

~~(ii) any increases in security or capacity of the **distributor's distribution network** or of any **network extensions** or **dedicated assets**:~~

~~(iii) any operational changes made by the **distributor** that are required in order to provide the **connection** or to increase security or capacity:~~

~~(iv) any allocation of additional network security or capacity to the **connection**, even where this does not involve physical works~~

~~(v) any other improvements to the **distributor's distribution network**; but~~

~~(b) not including work associated with **customer-owned assets** or work covered by a **connection fee**~~

**connection works cost** means the cost of **connection works**

**Consumers Price Index** means the Consumers Price Index (all groups) published by Statistics New Zealand or, if that index ceases to be published, any measure certified by the Government Statistician as being equivalent to that index

**CPI movement** means, for the purposes of Part 6B, the percentage movement in the **Consumers Price Index**~~consumer price index (CPI all groups)~~ for the 12-month period ending on 31 March in the previous calendar year

**customer-owned assets** means any ~~**connection works**~~**assets** whose ownership does not transfer to a **distributor**, such that a **consumer** will retain responsibility for its operation, maintenance and renewal or disposal

**customer-selected enhancement** means any improvement to the **relevant minimum scheme** requested, and agreed to in writing, by a **connection applicant**

**dedicated assets** means any **assets** owned or operated by a **distributor** that were built for a **connection** ~~**consumer**~~ and are not subsequently used to support another **connection** ~~for another **consumer**~~

**disclosure year**, for the purposes of Part 6B, means the 12-month period in which information disclosures are required of a **distributor** under section 53C of the Commerce Act 1986 and, if no such year is specified or if more than one 12-month period applies to the **distributor** under those information disclosure requirements, means the 12-month period ending on 31 March of the year a disclosure relates to

**distributor-selected enhancement** means any improvement to the **relevant minimum scheme** chosen by a **distributor**

**EDB ID determination** means the *Electricity Distribution Information Disclosure Determination 2012* [2012] NZCC 22, and any revision or replacement of this determination

**EDB IMs** means the *Electricity Distribution Services Input Methodologies Determination 2012* [2012] NZCC 26, and any revision or replacement of this determination

**electricity lines services** has the meaning given in section 54C of the Commerce Act 1986

**extension** means—

(a) works or operating arrangements to provide a **connection** of, or to increase the security or capacity of or at, a **point of connection** or of any assets owned or operated by a **distributor** that do not increase the capacity of the **shared network**; or

(b) an **extension-like upgrade**; or

(c) **incremental transmission works**; but

(d) does not include works or operating arrangements associated with **customer-owned assets** or work covered by a **connection fee**

**extension cost** means the cost of an **extension** ~~**connection works**, excluding any **network capacity cost** (or the **network capacity upgrade** portion, if applicable, of **connection works**)~~

**extension-like upgrade** means works or operating arrangements that increase the capacity of the **shared network** that—

(a) substantially benefit only the **connection applicant** and the **distributor** reasonably considers this is likely to remain the case; and

(b) do not meet the threshold to use an estimate in clause 6B.5(2)

**first pioneer** is defined as set out in the definition of **pioneer**

**flexible connection** means an arrangement whereby a **connection applicant's** export or import of **electricity** is managed (often through real-time control) based upon contracted and agreed principles of available security or capacity

~~**good electricity industry practice** means, for the purposes of Part 6B, the exercise of that degree of skill, diligence, prudence, foresight and economic management, as determined by reference to good international practice, which would reasonably be expected from a skilled and experienced **distributor** engaged in the management of a **distribution network** under conditions comparable to those applicable to the **distributor's distribution network** consistent with applicable law, safety and~~

~~environmental protection and taking into account factors such as the relative size, duty, age and technological status of the relevant distribution network~~

**incremental cost estimate** means an estimate of the incremental cost of a **connection** calculated in accordance with ~~sub~~clause 6B.~~13~~11(2)

**incremental distribution revenue estimate** means the portion of an **incremental revenue estimate** relating to distribution line charge revenue

**incremental opex scaling factor** means the scaling factor calculated in accordance with clause 6B.11(5)

**incremental revenue estimate** means an estimate of the incremental revenue from a **connection** calculated in accordance with ~~sub~~clause 6B.~~13~~11(3)

**incremental transmission cost** means an estimate of the ~~incremental~~ cost of **incremental transmission works** ~~transmission services resulting from **connection works** where there is an identifiable and material change in transmission costs associated with the **connection**,~~ including—

(a) a change in transmission charges due to a benefit-based charge adjustment event under paragraph 81(1)(e), (g), (h), (i) or (l) of the **transmission pricing methodology**; or

(b) new transmission charges relating to a high-value post-2019 BBI (as those terms are defined in the **transmission pricing methodology**)~~; or~~

~~(c) works to increase security or capacity of transmission connection **assets** or establish a new transmission connection~~

**incremental transmission revenue estimate** means the portion of an **incremental revenue estimate** relating to pass-through of transmission charges

**incremental transmission works** means, in relation to a **connection** works to establish a new **grid** connection, increase security or capacity of **grid** connection **assets** or otherwise alter **grid** connection **assets** to accommodate the new or altered **connection**

**load** means, for the purposes of Part 6B, any **connection** to a **distribution network** or to a **consumer installation** that consumes **electricity**, other than **distributed** except as provided for in clause 6B.2(3)(b)~~the electrical **load** of a **consumer installation** connected to a **distribution network** or to a **consumer installation** that **connects** to a **distribution network**~~

**localised historical cost recovery** means an allocation of historical **distributor-selected enhancement** costs or historical network development costs to subsequent connections that benefit from the works to which those costs relate

**mandatory connection pricing methodologies** means the pricing methodologies set out in Part 6B that each **distributor** must use for determining **connection charges** and **pioneer scheme contributions** and **mandatory connection pricing methodology** have corresponding meanings

**minimum flexi scheme** means **connection works** that deliver a **flexible connection** at ~~lower~~ lesser cost than the **minimum scheme**

**minimum scheme** means the least-cost solution for any **connection works** provided by a **distributor**, including for security and firmness of capacity, in accordance with ~~**good electricity industry practice**~~ the **distributor's connection and operation standards** ~~or~~ or a lower standard if agreed to in writing between the **connection applicant** and the **distributor**

**net incremental cost** means **incremental cost estimate** less the **incremental revenue estimate** for a **connection**

**network capacity cost** means the cost of consuming or adding capacity in the **shared network** (other than **extension-like upgrade** costs)

**network capacity upgrade** means—

(a) works ~~(other than **network extensions**)~~ or operating arrangements to provide a **connection** of, or to increase the security or capacity of or at, a **point of connection** or of any assets owned or operated by a **distributor** that increase the capacity of the **shared network**; and

(b) for the avoidance of doubt, includes:

(i) operational changes made by the **distributor** that are required to provide the **connection** or to increase security or capacity:

(ii) allocation of additional network security or capacity to the **connection**, even where this does not involve physical works or a change to a person's right to capacity on a **distributor's distribution network**; but

(c) does not include:

(i) **extension-like upgrades**; or

(ii) works or operating arrangements associated with **customer-owned assets** or work covered by a **connection fee**

~~**network extension** means **connection works** that tie a proposed **connection** to a **shared network**~~

**network cost contribution** means the difference between the **connection charge** for a **connection** ~~(not including any **fees** or **pioneer scheme contributions**)~~ and the **net incremental cost** of that **connection**

**network costing zone** means the part of a **distribution network** to which a common **posted capacity rate** applies

**network tier** means any one of the following functional components of a **distribution network**:

(a) sub-transmission line; or

(b) zone substation; or

(c) high voltage feeder; or

(d) distribution substation; or

(e) low voltage mains

**nominal capacity increment** means an amount of added capacity corresponding to ~~commensurate with~~ the assumptions used to derive a **posted capacity rate**

**operating cost loading** means estimated incremental operating costs associated with a **connection**, where the estimate is either—

(a) zero if the customer or customers at the **connection** will pay posted tariffs; or

(b) if the customer or customers at the **connection** will not pay posted tariffs, based on a reasonable assessment of incremental operating costs associated with the **connection**—

(i) including costs associated with operating and maintaining new **assets**; and

(ii) excluding **transmission** charges; and

(iii) expressed as the present value of future costs.

**pioneer** means—

(a) the **connection applicant** referred to in paragraph (~~b~~a) of the definition of **pioneering connection works** (the **first pioneer**); and

(b) any **connection applicant** who subsequently **connects** to the **pioneering connection works** (a **subsequent pioneer**) and—

(i) who makes a **pioneer scheme contribution** of more than the amount of $25,000 ~~$10,000~~ in December 2025 dollar terms, adjusted each year by the **CPI movement**, or a lesser amount specified by the **distributor**; and

(ii) is determined by the relevant **distributor** to be a **pioneer** under clause 6B.~~9~~7(1)(b)

**pioneering connection works** means an **extension** ~~**connection works**~~ where—

(a) the portion of the **extension cost** initially met by a **connection applicant** ~~**connection works cost**~~ is more than the amount of $50,000 ~~$30,000~~ in December 2025 dollar terms, adjusted each year by the **CPI movement**, or a lesser amount specified by the **distributor**; and

~~(b) that cost is initially met by a **connection applicant**; and~~

(~~c~~b) the **connection applicant** has not opted out of applying a **pioneer scheme** to the **extension** ~~**connection works**~~ by agreeing in writing with the relevant **distributor** ~~who carried out the **pioneering connection works** that the **pioneering connection works**~~ that the **extension** should not form part of a **pioneer scheme**; and

(c) it is feasible that other parties may seek to **connect** to all or part of, or make use of, the **extension** ~~**connection works**~~ at a later date; but

(d) excludes an **extension** where the **extension costs** are established using **posted connection charges**; and

(e) excludes any portion of **extension cost** relating to a **benefit-based charge adjustment event**

**pioneer scheme** means—

(a) an arrangement that covers any part of a **distributor's network** or the **distributor's grid** connections that comprises **pioneering connection works**, and includes an **acquired pioneer scheme**; and

(b) a **vested pioneer scheme**

**pioneer scheme contribution** means a payment to be made by a **connection applicant** to a **distributor**—

(a) determined in accordance with clause 6B.~~10~~8; and

(b) ~~for the purposes of preparing a **connection charge reconciliation** also means~~ any similar legally binding obligation put in place for any **connection works** built or established for a single **consumer** prior to 1 April 2026

**pioneer scheme policy** means a policy **published** in accordance with clause 6B.~~11~~9

**pioneer scheme pricing methodology requirements** means the **mandatory connection pricing methodologies** set out in clauses 6B.~~8~~6 to 6B.~~11~~9

**posted capacity rate** means the estimated average cost per capacity unit that is published by a **distributor** for a **network capacity upgrade** for a given **network tier** and **network costing zone**, where the rate may be set to zero if the **distributor** reasonably considers there is no foreseeable need within the **distributor's** applicable ~~network~~**network** planning horizon for a **network capacity upgrade**

**posted connection charge** means a **connection charge**~~, other than any **connection fees** or **pioneer scheme contributions**,~~ that is **published** by a **distributor** that applies to any **connection** of a type that meet requirements specified by the **distributor**

**posted extension rate** means a unit rate that has been **published** by a **distributor** for use in building up **extension cost** estimates for **connections** of a type specified by the **distributor** that meet requirements specified by the **distributor**

**real estate development** means the development of land for a commercial purpose including its development in one or more of the following ways:

(a) subdivision:

(b) the construction of commercial or industrial premises (or both):

(c) the construction of multiple new residential premises

**rebate** means any disbursement, credit or deduction made to a **pioneer** by a **distributor** in accordance with clause 6B.~~10~~8(5)

**relevant minimum scheme** means a **minimum scheme** or, if a **connection applicant** requests it and the **distributor** can reasonably supply it, a **minimum flexi scheme**

**selling distributor** is defined in the definition of **acquired pioneer scheme**

**shared network** means any part of a **distribution network** that is not **customer-owned assets** or **dedicated assets**

**start date**, for a **pioneer scheme**, means the date the first **pioneer** for the **pioneer scheme** made its first **connection charge** payment ~~(not including **connection fees**)~~ in relation to the **pioneering connection works** or the **vested pioneering works** subject to the **pioneer scheme**

**subsequent pioneer** is defined as set out in the definition of **pioneer**

~~**typical connection activity** means a level and mix of **connection** activity adjusted for **connections** that are outliers in terms of their **connection charge** outcome and have a material impact on overall **capital contribution reliance** in a year~~

**vested pioneer scheme** means an arrangement that covers any part of a **distributor's network** where a **consumer** carried out or funded works that were initially owned by the **consumer** and the **distributor** to whose **network** the works were **connected** agreed to take ownership of those works and that those works should ~~those works and for those works to~~ form a **pioneer scheme**

**vested pioneering works** means the works carried out or funded by a **consumer** as referred to in the definition of **vested pioneer scheme**

# Part 6B
# Distributor pricing methodologies, information requirements and other requirements for load connections

**6B.1 Contents of this Part**

This Part specifies—

(a) **mandatory connection pricing methodologies** which are the pricing methodologies that must be applied by **distributors** in relation to **connection charges** and **pioneer scheme contributions**; and

(b) information requirements for **distributors** in relation to access to **distribution networks**; and

(c) application of the dispute resolution process in Schedule 6.3 to the requirements under this Part where **connection applicants** are **participants** and enhancement of the processes available to non-participants.

**6B.2 Application of this Part**

(1) This Part does not apply to—

~~(a) **connections** for **distributed generation** made under Part 6; or~~

~~(b)~~(a) any **connection application** received by a **distributor** ~~for which a quote was provided~~ prior to 1 April 2026; or

~~(c)~~(b) a **distributor** in respect of the **distributor's** ownership or operation of a secondary network ~~an **embedded network** that conveys less than 5 GWh of **electricity** per annum~~; or

~~(d)~~(c) existing **load connected**, or a **connection applicant** seeking to **connect load**, to a secondary network ~~an **embedded network** that conveys less than 5 GWh of **electricity** per annum~~.

(2) For the avoidance of doubt—

(a) this Part applies in addition to Part 6 and applies to all **connection applications** for **load** despite how an application is treated under Part 6~~if a **connection applicant** is seeking to **connect** both **distributed generation** under Part 6 and **load** under Part 6 and this Part, this Part applies to the **connection application** for load despite subclause (1)(a)~~:

(b) a **connection applicant** who is not a **participant** is not required to comply with this Part and cannot be subject to the enforcement measures set out in the **Act** or the Electricity Industry (Enforcement) Regulations 2010 for failing to comply with this Part.

(3) If an application under Part 6 includes both **load** and **distributed generation**—

(a) the **connection enhancement cost requirements** and the **capacity costing requirements** must be applied to the **load** component of the application before the requirements of Part 6 are applied to the **distributed generation** component of the application; and

(b) the **pioneer scheme pricing methodology requirements** and **connection charge reconciliation methodology requirements** must be applied, with all necessary modifications, to the connection as a whole.

*Connection pricing methodologies*

**6B.3 Distributors must comply with mandatory connection pricing methodologies**

(1) Each **distributor** must apply the **mandatory connection pricing methodologies** in subclause (2) in setting **connection charges**, including in the calculation of quoted charges and application of such charges, the allocation of costs to customers, and in otherwise recovering or allocating **connection works costs**.

(2) The **mandatory connection pricing methodologies** are:

(a) the **connection enhancement cost allocation requirements** in clause~~s~~ 6B.4 ~~and 6B.5~~:

(b) the **capacity costing requirements** in clause 6B.~~6~~5:

~~(c) the **capital contribution reliance limit for load methodology** in clause 6B.7:~~

~~(d)~~(c) the **pioneer scheme pricing methodology requirements** in clauses 6B.~~8~~6 to 6B.~~11~~9:~~; and.~~

~~(e)~~(d) the **connection charge reconciliation methodology requirements** in clauses 6B.~~12~~10 and 6B.11.

(3) Despite subclause (1), a **distributor** is—

(a) not required to apply the **pioneer scheme pricing methodology requirements** in respect of **real estate developments**; and

(b) in respect of any **connection** covered by a large connection contract as defined in the **EDB IMs,** required to apply the **connection charge reconciliation methodology requirements** only.

(4) A **distributor** must not refuse to connect a person to the **distributor's distribution network** for the purpose of avoiding compliance with the **mandatory connection pricing methodologies**.

*Connection enhancement cost allocation requirements*

**6B.4 Allocation of connection enhancement costs**

(1) Subject to subclauses (2) to (4) ~~and clause 6B.10~~, each **distributor** in determining the **connection charges**~~, other than **connection fees**,~~ that it requires a **connection applicant** to pay for or in respect of a **connection** or any increase in security or **capacity** at a **point of connection** or for an **asset—**

(a) must determine those **connection charges** on the basis of the **relevant minimum scheme**, unless the **connection applicant** agrees in writing to improvements to the **relevant minimum scheme**; and

(b) if improvements are made to the **relevant minimum scheme**, must allocate only the **customer-selected enhancement** costs to the **connection applicant**, in addition to the costs of the **relevant minimum scheme**; and

(c) must not allocate any **distributor-selected enhancement** costs to the **connection applicant**.

(2) If a **connection applicant** and **distributor** agree in writing that the **distributor** does not need to determine the cost of the **relevant minimum scheme**, the **distributor** does not need to determine charges in accordance with subclause (1).

(3) If a **connection applicant** and **distributor** agree in writing to an alternative allocation of **connection enhancement** costs than set out in subclause (1), the **distributor** does not need to determine charges in accordance with subclause (1).

(4) If a **distributor publishes posted connection charges**, it may use those charges to determine the charges under subclause (1), instead of applying subclauses (1)(a) to (1)(b), where the **connection** is of the type and meets the requirements specified by the **distributor** for the **posted connection charge**.

~~**6B.5 Calculation of connection enhancement costs**~~

(5) If a ~~distributor~~**distributor publishes posted extension rates** it must use those rates to determine the costs under a **relevant minimum scheme** or for any **customer-selected enhancement** costs, where the **connection** works are of the type and meet the requirements specified by the **distributor** for the **posted extension rate**.

*Capacity costing requirements*

**6B.~~6~~5 Capacity costing requirements**

(1) If a **distributor** intends to include or includes **network capacity costs** (in whole or in part) in the charges payable by a **connection applicant** for or in respect of any **connection works**, it must—

(a) determine a **posted capacity rate** for each **network tier** and **network costing zone** in respect of which it ~~imposes~~ charges for **network capacity costs** for each current **disclosure year** and the following four **disclosure years** on an annual rolling basis; and

(b) not revise the **posted capacity rates** and **nominal capacity increments published** under paragraph (a) for the current **disclosure year** and the following **disclosure year** except to correct errors; and

(c) determine the **capacity demand assumption** for each **network tier** and **network costing zone** to which each **connection application** that it receives relates having reasonable regard to any relevant information provided by the **connection applicant**~~, if it intends to include **network capacity costs** in the charges payable by a **connection applicant**~~; and

(d) use the **posted capacity rate** and **capacity demand assumption** applicable to each **network tier** and **network costing zone** to which the **connection application** relates ~~in determining~~to calculate the **network capacity costs** ~~included in the charges payable by the **connection applicant**~~.

(2) If the **capacity demand assumption** determined by a **distributor** for a **network tier** (other than **distribution** substations and low voltage mains) is greater than 80% of the **nominal capacity increment** for that **network tier**, the **distributor** may use estimated capacity upgrade costs for that **network tier** instead of the **posted capacity rate** in the calculation under subclause (1)(d).

(3) If the **distributor** determines that the estimated cost per unit to add capacity at a **network tier** is more than 150% or less than 80% of the applicable **posted capacity rate** for that **network tier** and **network costing zone**, the **distributor** may use the estimated rate instead of the **posted capacity rate** in the calculation under subclause (1)(d).

(4) This clause does not apply to any **connection application** received by a **distributor** prior to 1 April 2027.

(5) Subclause (1)(b) does not apply with respect to **posted capacity rates** and **nominal capacity increments** for the **disclosure year** ending 31 March 2028.

~~*Capital contribution reliance limit for load methodology*~~

~~**6B.7 Capital contribution reliance limit for load methodology**~~

~~(1) Each **distributor** must, in setting or amending its policy or methodology for determining capital contributions (or any standard schedule of capital contribution charges), make best endeavours to ensure the policy or methodology (or schedule) is unlikely to result in its **capital contribution reliance for load** exceeding its **capital contribution reliance limit for load**.~~

~~(2) Subject to subclause (3), each **distributor** must determine its **capital contribution reliance limit for load** so that it is no higher than—~~

~~(a) its **capital contribution reliance** for the year ended 31 March 2024; or~~

~~(b) 47%.~~

~~(3) If a person acquires any **assets** that were a part (or the whole) of a **distribution network** after 31 March 2024, the requirements in subclause (2) that applied to the previous owner in respect of those **assets** immediately before the acquisition apply to the person in respect of those **assets**.~~

*Pioneer scheme pricing methodology requirements*

**6B.~~8~~6 Distributors must establish a pioneer scheme policy**

(1) Each **distributor** must establish a **pioneer scheme policy** by 1 April 2026.

(2) The **pioneer scheme policy** must set out how the **distributor** will—

~~(a)~~ apply the requirements in clauses 6B.~~9~~7 and 6B.~~10~~8, including how it will:—

~~(i)~~(a) ~~how it will~~ determine whether a **pioneer scheme** exists; and

~~(ii)~~(b) ~~how it will~~ determine the matters in clause 6B.~~9~~7(1)(b) and ~~6B.9~~(3); and

~~(iii)~~(c) otherwise administer **pioneer schemes**.

**6B.~~9~~7 Requirements for a pioneer scheme**

(1) For the purposes of clause 6B.~~8~~6, this clause and clause 6B.~~10~~8—

(a) a **pioneer scheme** continues from its **start date** until the expiry date set by the **distributor**, which must be not less than ~~10~~ 7 years from the **start date**, unless each **pioneer** to a **pioneer scheme** and the **distributor** agree in writing that the scheme shall cease; and

(b) a **distributor** may determine which **connection applicants**, other than the **first pioneer**, are **subsequent pioneers**.

(2) For the purposes of this clause and clause 6B.~~10~~8, a **distributor** must—

(a) determine whether a **pioneer scheme** exists in accordance with this Part and its **pioneer scheme policy**; and

(b) record the location of each **pioneer scheme** on its **distribution network** or connection to the **grid**.

(3) Each **distributor** must determine for each **pioneer scheme** additional or more detailed pricing methodologies to those set out in clause 6B.~~10~~8 specifying how it will, in a way that is consistent with clause 6B.8,—

(a) administer and collect **pioneer scheme contributions** ~~in a way that is consistent with clause 6B.10~~; and

(b) determine **rebates** ~~in a way that is consistent with clause 6B.10 in compliance with clause 6B.10;~~ and

(c) ~~how it will~~ determine which **connection applicants** are eligible for **rebates** ~~in a way that is consistent with clause 6B.10~~.

(4) A **distributor** must treat all **connection applications** to **connect** to **assets** that are subject to a **pioneer scheme** as subject to the **pioneer scheme**.

(5) If a **pioneer scheme** is an **acquired pioneer scheme**, the **purchasing distributor**—

(a) must not change any aspect of the matters determined for the **pioneer scheme** by the **selling distributor** or the **pioneer scheme policy** for that scheme set by the **selling distributor**; and

(b) **must** continue to administer, and comply with, those requirements and that **pioneer scheme policy** in complying with clauses 6B.~~10~~8, 6B.~~11~~9 and this clause.

**6B.~~10~~8 Determining connection charges, contributions and rebates for pioneer schemes**

(1) From 1 April 2026, where there is a **pioneer scheme**, the **distributor** must determine the **connection charges** and, where applicable, any other charges, for—

(a) the **first pioneer** to the scheme in accordance with subclause (2); and

(b) for each **subsequent pioneer** to the scheme and each other **connection applicant** that **connects** to the scheme in accordance with subclause (3).

(2) The **distributor** must determine the **connection charges** and any other charges payable by the **first pioneer** to a **pioneer scheme** in accordance with the following:

(a) the **distributor** must determine the **connection charges** in accordance with the **connection enhancement cost requirement**, the **capacity costing requirements** and the **distributor's** **connection pricing methodology**~~policy or methodology for determining capital contributions (or standard schedule of capital contribution charges)~~:

(b) from the time that any other **pioneer** or other **connection applicant connects** to the scheme, in determining any remaining **connection charges** or any other charges that the first **pioneer** must pay, the **distributor** must apply a **rebate** determined in accordance with subclause (5):

(c) the **distributor** must otherwise comply with its **pioneer scheme policy** and the matters determined under clause 6B.~~9~~7:

(d) the **distributor** must determine the costs of any **vested pioneering works** in accordance with subclause (4)(a).

(3) The **distributor** must determine the **connection charges** and any other charges payable by each **subsequent pioneer** or other **connection applicant** that **connects** to a **pioneer scheme** in accordance with the following:

(a) the **pioneer scheme contribution** requirements set out in subclause (4):

(~~c~~b) the **distributor** must continue to apply the **capacity costing requirements** and the **distributor's** ~~policy or methodology for determining capital contributions (or standard schedule of capital contribution charges)~~ **connection pricing methodology**:

(~~d~~c) if the **connection applicant** is a **subsequent pioneer**, from the time that any other **pioneer** or other **connection applicant** connects to the scheme, in determining any remaining **connection charges** or any other charges that the

**pioneer** must pay, the **distributor** must apply a **rebate** determined in accordance with subclause (5):

(~~e~~d) the **distributor** must otherwise comply with its **pioneer scheme policy** and the matters determined under clause 6B.~~9~~7.

(4) The **pioneer scheme contribution** is to be determined as follows:

(a) in determining the costs of the **pioneering connection works** or **vested pioneering works**—

(i) the **distributor** must use the actual costs if these are known to the **distributor**:

(ii) if the actual costs are not known to the **distributor** (for example, if the **pioneering connection works** or **vested pioneering works** were constructed or contracted by a person other than the **distributor**), the **distributor** may use its estimated costs of the works:

(iii) if the **distributor** is using information provided by the **consumer** who constructed or paid for any **vested pioneering works**, the **distributor** must be reasonably satisfied that the information is accurate:

(b) the **distributor** must apply straight-line depreciation to the costs of the **pioneering connection works** or the **vested pioneering works** that the **pioneer scheme** relates to in order to determine the present-day value of those costs each time it calculates **pioneer scheme contributions** ~~contributions~~, using a depreciation period of 20 years; and

(c) the **distributor** must take into account shares of ~~extension~~ **extension** length and capacity of the **pioneer scheme** among the parties **connected** or **connecting** to the **pioneer scheme**~~e~~; and

(d) **pioneer scheme contributions** must not be collected if—

~~(i)~~ the **pioneer scheme contribution** would be less than the amount of $1,000 in December 2025 terms adjusted each year by the **CPI movement** after deducting any fee to cover the reasonable costs of administering the scheme, or of a lesser amount specified by the **distributor**~~; and~~

~~(ii) a **connection applicant** is applying for a **connection** within the **real estate development** boundary of an earlier **pioneer**.~~

(5) The **rebate** due to a **pioneer** must be determined in a way that shares any **pioneer scheme contribution** received by a **distributor** among all **pioneers** who are connected to a **pioneer scheme** proportionate to the extent to which each **pioneer** has met the costs of the **pioneering connection works** or the **vested pioneering works** and after deducting any fee to cover the reasonable costs of administering the scheme.

(6) This clause does not apply to a **pioneer scheme** entered into before 1 April 2026.

**6B.~~11~~9 Distributors must publish information on pioneer schemes**

(1) Each **distributor** must—

(a) **publish** its **pioneer scheme policy**, which must include:

(i) how **pioneer scheme contributions** are to be determined:

(ii) how it will administer and collect **pioneer scheme contributions**:

(iii) how it will determine **rebates**:

(iv) how it will determine which **connection applicants** are eligible for **rebates**:

(v) how it will distribute **funded asset rebates** it receives in accordance with clause 29 of the **transmission pricing methodology** relating to **incremental transmission works** to **pioneers**:

(b) make each **connection applicant** aware of the existence of the **pioneer scheme policy**:

(c) **publish** the **details** of each **pioneer scheme** it administers, applying the requirements in clause 6B.~~9~~7, including the following information:

(i) the location of the **pioneer scheme** on its **network**:

(ii) the **start date** of the **pioneer scheme**:

(iii) the expiry date of the **pioneer scheme**:

(iv) the relevant opening value(s) of the **pioneer scheme**.

~~(iv) how **pioneer scheme contributions** are to be determined:~~

~~(v) how it will administer and collect **pioneer scheme contributions**; and~~

~~(vi) how it will determine **rebates**:~~

~~(vii) how it will determine which **connection applicants** are eligible for **rebates**.~~

(2) Subclause (1)(c) does not apply to a **pioneer scheme** entered into before 1 April 2026.

*Connection charge reconciliation methodology requirements*

**6B.~~12~~10 Distributor must provide connection charge reconciliation on request**

(1) If requested by a **connection applicant**, or as otherwise required under subclause (2), a **distributor** must provide a written **connection charge reconciliation**.

(2) A **distributor** must, when providing a quote for the **connection charge** or **connection charges**, ~~other than **connection fees** or **pioneer scheme contributions**,~~ in respect of any **connection works**, either—

(a) provide a written **connection charge reconciliation**; or

(b) notify the **connection applicant** of their right to request a written **connection charge reconciliation** under this clause.

(3) If requested by the **Authority**, a **distributor** must—

(a) provide information on **connection charge reconciliation** amounts to the **Authority** within the timeframe specified by the **Authority**; and

(b) ~~in doing so~~ if requested, provide sufficient information under paragraph (a) to enable the **Authority** to understand how the **distributor** determined those amounts.

**6B.~~13~~11 Connection charge reconciliation requirements**

(1) A **connection charge reconciliation** must show:

$$CC = (IC - IR) + NC$$

where

*CC* is the **connection charge** or **connection charges**~~, other than any **connection fee** or **pioneer scheme contribution**~~

*IC* is the **incremental cost estimate**

*IR* is the **incremental revenue estimate**

*NC* is the **network cost contribution**

(2) A **distributor** must assess the **incremental cost estimate** under subclause (1), and show this assessment in the **connection charge reconciliation**, in accordance with the following formula:

$$IC = EC + CSE + NCC + ITC + LHCR + OCL$$

where

*IC* is the **incremental cost estimate**

*EC* is the **extension cost** of the **relevant minimum scheme**, excluding any **incremental transmission cost**

*CSE* is the **customer-selected enhancement** costs, if any

*NCC* is the **network capacity cost** of the **relevant minimum scheme** calculated in accordance with clause 6B.~~6~~5, including in respect of a **connection application** received by a **distributor** prior to 1 April 2027 as though that clause applied to the **connection application**

*ITC* is the **incremental transmission cost**, if any

*LHCR* is the **localised historical cost recovery**, if any

*OCL* is the **operating cost loading**, if any

(3) A **distributor** must assess the **incremental revenue estimate** under subclause (1), and show this assessment in the **connection charge reconciliation**, in accordance with the following formula:

$$IR = IDR + ITR$$

where

*IDR* is the **incremental distribution revenue estimate**

*ITR* is the **incremental transmission revenue estimate**

(4) A **distributor** must assess the **incremental distribution revenue** and **incremental transmission revenue** estimates, and show this assessment in the **connection charge reconciliation**, by—

(a) estimating revenue from **electricity lines services** (excluding **connection charges** and **connection fees**) the **distributor** will receive in respect of the **connection** in the first ~~12 months~~ **disclosure year** (or part **disclosure year**) following the **electrical connection** of the **connection** or the completion of the **connection works**, whichever is later; and

(b) estimating revenue for subsequent **disclosure years** ~~years~~ by adjusting the estimate derived under paragraph (a) for—

(i) change from part-year to full-year, if applicable; and

~~(i)~~(ii) forecast changes in demand at the **connection** (if any); and

~~(ii)~~(iii) forecast changes in revenue per **connection**, in real terms, for any years for which the **distributor** has a reasonable revenue path forecast; and

~~(iii)~~(iv) forecast changes in tariff structures or levels for any years for which the **distributor** has a reasonable price path forecast; and

(c) discounting the estimates under paragraph (b) to ~~its~~ their present value using—

(i) a duration from the beginning of the first full year of operation equal to the **connection revenue life**; and

(ii) a discount rate equal to the most recent available mid-point estimate of vanilla WACC (being the weighted average cost of capital) made by the Commerce Commission in accordance with the ~~**Electricity Distribution Information Disclosure Determination 2012**~~**EDB ID determination** made under Part 4 of the Commerce Act 1986 less an adjustment to remove inflation consistent with inflation projections for the year ahead from the most recent Monetary Policy Statement published by the Reserve Bank of New Zealand; and

(d) for **incremental distribution revenue** only, multiplying the amount derived after the application of paragraph (c) by the **distributor's incremental opex scaling factor** calculated in accordance with subclause (5) ~~0.9~~ to adjust for incremental operational expenditure costs, unless the **incremental cost estimate** includes an **operating cost loading**.

(5) A **distributor** must calculate its **incremental opex scaling factor**, and show this calculation in the **connection charge reconciliation**, in accordance with the following formula:

$$OSF = 1 - \frac{ASO}{AEDR}$$

where

OSF is the **incremental opex scaling factor**

ASO is the average selected opex, being the average value over the five most recent available **disclosure years** of the sum of a **distributor's**—

(a) operational expenditure relating to service interruptions and emergencies as defined in the **EDB ID determination**; and

(b) operational expenditure relating to vegetation management as defined in the **EDB ID determination**; and

(c) operational expenditure relating to routine and corrective maintenance and inspection as defined in the **EDB ID determination**; and

(d) any costs described in clause 3.1.2(1)(a) of the **EDB IMs**

AEDR is the average electricity distribution revenue, being the average value over the five most recent available **disclosure years** of a **distributor's** distribution line charge revenue (excluding revenue relating to pass through of electricity transmission costs)

and where all values must exclude goods and services tax and be expressed in real terms (with a common base year)

~~(4)~~(6) A **distributor** may further adjust the calculation of the amounts of the *CC*, *IC* and *IR* in subclauses (1) and (2) to recognise differences in the timing of cashflows using a discount rate for each year consistent with the rate determined in subclause (3)(c)(ii).

(7) A **distributor** must treat in-kind contributions consistently as between *CC* and *IC* (either both zero or both the same estimated value).

*Disputes about the application of this Part*

**6B.~~14~~12 Disputes between distributors and connection applicants that are participants**

(1) If there is a dispute between a **connection applicant** that is a **participant** and a **distributor** about the application of any of the **mandatory connection pricing methodologies**, either **participant** may commence the default dispute resolution process in Schedule 6.3 at any time.

(2) Subclause (1) does not apply to disputes about the following clauses:

(a) Clause 6B.5(1)(a) to (b) (requirements relating to **network capacity costs**):

(b) Clause 6B.6 (requirement to establish a **pioneer scheme policy**):

(c) Clause 6B.7 (requirements for a **pioneer scheme**):

(d) Clause 6B.9 (requirement to **publish** information on **pioneer schemes**):

(e) Clause 6B.10(3) (requirement to provide information to the **Authority** on **connection charge reconciliation** amounts).

**6B.~~15~~13 Disputes between distributors and connection applicants that are not participants**

(1) If a **connection applicant** that is not a **participant** is in a dispute with a **distributor** about the application of this Part, other than a dispute about any of the clauses listed in clause 6B.12(2), and has notified the **distributor** of the dispute, the **distributor** must attempt to resolve the dispute in good faith.

(2) For the avoidance of doubt, nothing in this clause prevents the **connection applicant** from reporting a breach or possible breach of this Code under regulation 9 of the Electricity Industry (Enforcement) Regulations 2010 or from making a complaint to

the **distributor** under regulation 5 of the Electricity Industry (Enforcement) Regulations 2010 at any time.

**Amendments to existing Code provisions (proposed amendments in red)**

**1.1 Interpretation**

(1) In this Code, unless the context otherwise requires,—

**consumer installation**, for the purposes of the definition of **associated equipment**, ~~and~~ Part 6 and Part 6B, means—

(a) all fittings that are part of a system for conveying **electricity** from a **consumer's point of supply** to any point from which **electricity** conveyed through that system may be consumed; and

(b) includes any fittings that are used, or designed or intended for use, by any person in, or in relation to, the generation of **electricity**—
(i) for that person's use and not for supply to any other person; or
(ii) so that **electricity** can be injected into a **distribution network**; but

(c) does not include any appliance that uses, or is designed or intended to use, **electricity**, whether or not it also uses, or is designed or intended to use, any other form of energy

# Schedule 6.3 Default dispute resolution process

**Contents**



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**1 Application of this Schedule**

This Schedule applies in accordance with clause 6.8 and clause 6B.~~14~~12 of this Code.

**2 Notice of dispute**

(1) A party must give written notice to the other party of the dispute.

(2) The parties must attempt to resolve the dispute with each other in good faith.

(3) If the parties are unable to resolve the dispute, either party may complain in writing to the **Authority**.

**3 Complaints**

(1) A complaint made under clause 2(3) must be treated as if it were a notification given under regulations made under section 112 of the **Act**.

(2) The following provisions apply to the complaint:
(a) sections 53-62 of the **Act**; and
(b) the Electricity Industry (Enforcement) Regulations 2010 except regulations 5, 6, 7, 9, 17, 51 to 75, and subpart 2 of Part 3.

(3) Those provisions apply—

(a) to the dispute that is the subject of the complaint in the same way as those provisions apply to a notification of an alleged breach of this Code; and

(b) as if references to a **participant** in those provisions were references to a party under Part 6 of this Code; and

(c) with any further modifications that the **Authority** or the **Rulings Panel**, as the case may be, considers necessary or desirable for the purpose of applying those provisions to the complaint.

~~**4 Application of pricing principles to disputes**~~

~~(1) The Authority and the Rulings Panel must apply the pricing principles set out in Schedule 6.4 to determine any connection charges payable.~~

~~(2) Subclause (1) applies if—~~

~~(a) there is a dispute under Part 6 of this Code; and~~

~~(b) in the opinion of the Authority or the Rulings Panel it is necessary or desirable to apply subclause (1) in order to resolve the dispute.~~

**4 Application of distributed generation pricing principles and mandatory connection pricing methodologies to disputes**

(1) The **Authority** and the **Rulings Panel** must—

(a) in relation to a dispute under clause 6.8, apply the **distributed generation** pricing principles set out in Schedule 6.4 to determine any ~~connection charges~~ **connection charges** payable in respect of connections of **distributed generation**; and

(b) in relation to a dispute under clause 6B.~~1~~412, require a **distributor** to determine any **connection charges** payable in respect of **connections** of **load** in a manner specified by the **Authority** or the **Rulings Panel** that is consistent with the **mandatory connection pricing methodologies**. ~~apply the **connection pricing methodologies** set out in Part 6B to determine any **connection charges** payable in respect of **connections** of **load.**~~

(2) Subclause (1) applies if—

(a) there is a dispute under Part 6 or Part 6B of this Code; and

(b) in the opinion of the **Authority** or the **Rulings Panel** it is necessary or desirable to apply subclause (1) in order to resolve the dispute.

**5 Orders that Rulings Panel can make**

If a complaint is referred to it, the **Rulings Panel** may make any order, or take any action, that it is able to make or take in accordance with section 54 of the **Act**.

# Appendix C CEPA report

# Distribution Connection Pricing – Assessment of submissions

## New Zealand Electricity Authority

2 July 2025

**FINAL REPORT**

# Important notice

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# Contents

# 1. EXECUTIVE SUMMARY

1. "Connection charges" are the fees charged by Electricity Distribution Businesses (EDBs) for a new connection, or an upgrade of an existing connection, to an electricity distribution network. Because these charges typically depend on the circumstances or needs of the customer they are not always set in advance but must often be determined on a case-by-case basis. As the only provider of connection services, EDBs have a degree of market power in the provision of these services. But connection charges are not directly regulated under the existing regulatory framework. The exercise of market power may have the effect of delaying or deterring new connections, or upgrades of existing connections, which may increase the cost and/or slow the process of electrification of key sectors of the New Zealand economy.

2. The New Zealand Electricity Authority (EA) is in the process of developing a set of policies which seek to limit the exercise of market power by EDBs. In the first phase, the Authority is working up a set of "fast-track" proposals which could improve the connection process in the interim until a permanent set of arrangements can be put in place.

3. These fast-track proposals are set out in the Authority's October 2024 Consultation Paper and can be summarised as follows:[1]

   - **Minimum scheme requirement:** Networks will be required to offer a least-cost technically acceptable solution for connecting an applicant to the network unless the applicant asks for specific enhancements. In addition, applicants may request (and networks must offer) a lower-quality/lower-cost 'flexible' connection in which their demand can be curtailed at times of network congestion.
   - **Publishing of unit rates:** Connection charges will be required to be based on published unit rates (e.g., per unit of capacity). This is intended to make charges more transparent, predictable and consistent. This policy should limit the ability of networks to discriminate between connecting customers, acting as a constraint on the exercise of market power.
   - **Pioneer schemes requirement:** Where a 'first mover' or 'pioneer' funds connection assets, networks will be required to offer a scheme in which they collect a contribution from subsequent connecting parties who share those assets and make a payment to the pioneer. This is intended to reduce the disincentive to be a first mover (and/or to delay a connection application to avoid incurring the first-mover costs).
   - **Transparency over connection costings:** Networks will be required to break down the total connection charge into separate components, corresponding to (a) the net incremental cost; and (b) a contribution to the shared network costs. This information must be provided to customers on request.
   - **Dispute resolution requirement:** Connecting parties will have the ability to request a third-party to resolve disputes over connection terms and conditions, drawing on existing arrangements for generator connections in Part 6 of the Code.[2]
   - **Reliance limits:** Networks will not be allowed to increase the ratio of connection charges to connection and system growth investment above the level of this ratio in 2024 (or 47 per cent, whichever is higher). This is intended to prevent networks from increasing reliance on connection charges over time.[3]

[1] These are set out in table 7.1 of the Consultation Paper.

[2] We understand that, in the fast-track proposal, the dispute resolution panel will not be able to rule on the reasonableness of the connection charge for individual connections.

[3] We note that the Authority is not proposing to progress the reliance limits in the short-term. The Authority is re-evaluating options to address risks in this area. As a consequence, analysis of the feedback in the expert economic reports on the reliance limits is not in scope for this paper.

4. These proposals attracted a large number of submissions. The Authority is in the process of considering all of the submissions. Several of the respondents commissioned economic analysis from independent experts to support their position. The Authority has asked CEPA to assess and respond to these expert reports. We understand that the Authority is in the process of evaluating options for the reliance limits and so discussion of the reliance limits is not in scope for this report.

5. Of the Authority's proposals we have been asked to consider the stakeholder feedback on, most attracted little pushback in the expert reports. However, a few attracted significant attention and criticism.

6. Several of the submissions asserted that the Authority had not provided sufficient evidence that there is a problem to be addressed. The Authority relied primarily on evidence of increasing capital contributions (specifically, the ratio of capital contributions to total system growth capex, referred to as 'reliance'). We agree that the Authority could probably do more to document anecdotal or empirical evidence of the exercise of market power with regard to connection charges. However, we are concerned that this obligation to provide evidence not become an undue or disproportionate hurdle. It is widely accepted that EDBs have market power over connection charges. In this context it is not necessary to prove that the economic harm is substantial before taking action. Nor is it likely to be easy to demonstrate that such harm exists.

7. The Authority also proposed longer-term reforms which would require EDBs to set connection charges between the 'Neutral Point' and the 'Balance Point" (discussed in detail below). Several of the submissions criticised the concept of the Neutral Point and the Balance Point as lacking an economic foundation. We disagree with this criticism. Although the terminology is novel, these concepts are soundly based in conventional economic theory, as we demonstrate here. We argue that the Balance Point can be justified on the grounds of non-discrimination; ensuring that like customers are treated alike. By requiring that all customers in a class are treated alike, the Balance Point concept reduces the risk of price discrimination in the setting of connection charges which could undermine the incentive of connecting parties to develop business plans or make investments which rely on connection to the distribution network.

8. Several submissions argued that the Authority's proposals would require setting connection charges below the direct incremental cost of connection. We consider that this reflects a misunderstanding of the Authority's proposals. We point out that – provided the EDB can set new on-going charges for the connecting customer – the concepts of the Neutral Point and the Balance Point are *agnostic* as to the balance between upfront and ongoing charges. An EDB may choose to set the upfront connection charge above or below the direct costs of connection and (depending on the other on-going revenue and costs) could still be pricing consistent with the Neutral Point or the Balance Point. This is discussed in more detail in section 4.2.2.

9. Several submissions argued that connection charges should not be set below the direct incremental cost of connecting, on the basis that doing so reduces the risk of stranded connection assets, and facilitates contestability. We agree with these observations. But, as just emphasised, the Authority's proposals do not go as far as requiring that the connection charges be equal to the direct incremental cost of connection. This would be a more significant regulatory intervention than proposed by the Authority.

10. Although there is scope for some refinement of the Authority's workstream in the light of the submissions received, the bulk of the Authority's proposals remain supported or uncontested. We remain of the opinion that there is the potential for improved regulation of connection charges in New Zealand to materially improve the overall economic outcomes in the sector.

# 2. INTRODUCTION

11. The Electricity Authority is carrying out a review of the arrangements for distribution connection pricing in New Zealand. Distribution connection arrangements are becoming increasingly important as New Zealand seeks to meet its climate change commitments. As Incenta note:

> "Meeting these commitments is expected to be achieved through the electrification of many existing and new energy loads that otherwise would have been met via other energy sources, spanning use at the industrial level (e.g., conversion of coal or gas process heat to electricity), commercial level (e.g., conversion of gas heating and commercial cooking to electricity and creation of charging stations for electric vehicles (EVs)) and residential level (changes to connections to facilitate conversion of gas appliances to electricity and charging of EVs)."[4]

12. The Authority released a Consultation Paper in October 2024 and received a number of submissions in response.[5] The Authority is considering all of the submissions. Several of the respondents commissioned independent expert economic analysis, including experts' reports authored by HoustonKemp, Frontier, Axiom Economics, and Sapere. CEPA has been asked to comment on and respond to this subset of submissions.

13. Customers of distribution networks in New Zealand may be charged two different types of charges: (a) up-front or one-off charges for a distribution connection and (b) on-going charges for the delivery of electricity over the distribution network (these latter charges may have a fixed and/or variable component and may vary with the size or type of the customer and the time of day and so on). Collectively these two sets of charges must provide enough revenue to cover the total cost of providing distribution services.

14. The on-going charges for EDBs in New Zealand (also known as "lines charges") are set out in advance each year in distribution price schedules[6] which are subject to the regulatory framework established by the New Zealand Commerce Commission. The level of the one-off, or up-front connection charges are, however, not directly regulated under the current regulatory framework.[7]

15. Upfront charges for connection are often linked to the creation of new physical assets which connect a customer's location with the nearest suitable connection point on the distribution network. The cost of these assets depends on, among other things, the size of the connection required and on the distance to the nearest connection point on the shared distribution network. This can vary widely across customers. As a result, connection charges are typically not set in advance but rather are typically bespoke to each customer. A challenge for policymakers is designing a regulatory framework which controls the market power of distribution businesses while reflecting the varying customer-specific and bespoke costs incurred by the distribution business in providing the service.

16. In addition, some connection assets (provided they are suitably sized) can be – and often should be – shared between connecting customers. This gives rise to questions as to how to efficiently size connection assets and how to allocate those shared costs. Furthermore, since the arrival of new customers is, to an extent,

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[4] Incenta, "Electricity Authority's consultation on price and non-price aspects of customer connection: Report for Powerco and Unison", December 2024, para 12(a), page 5.

[5] Electricity Authority, "Distribution connection pricing proposed Code Amendment: Consultation Paper", 25 October 2024.

[6] See, for example, https://www.powerco.co.nz/who-we-are/disclosures-and-submissions/electricity-pricing or https://www.vector.co.nz/personal/electricity/about-our-network/pricing

[7] The revenue from connection charges is, however, indirectly taken into account in the regulatory framework, through the net capital expenditure. Persistently higher revenue from connection charges would be expected to lead to a lower Regulatory Asset Base, a lower annual revenue allowance, and therefore lower on-going charges.

uncertain, there is a further policy challenge in sharing the risk of the timing and size of new connections across connecting customers and the EDB.

17. In recent years, concerns have arisen in New Zealand that the current regulatory regime may not be fully effective. Specifically, concerns have arisen that, under the current regime, EDBs may have an incentive to increase connection charges without an immediate and corresponding reduction in the on-going charges, which could have the effect of deterring new connections, over-compensating the EDB, and/or cross-subsidising of existing customers from the newly-connecting customers. In addition, concerns have been raised about a lack of transparency and consistency in approaches to connection charges across EDBs, and the lack of recourse for customers who are unhappy with the connection charges they have been offered. Finally, there are concerns that the existing arrangements may not lead to efficient sharing of connection assets and the allocation of stranding risk, which may lead to "position in queue" effects – whereby connecting parties seek to avoid paying first-mover costs or having to pay for a 'last straw' augmentation (if they are not deterred from connecting entirely). The Authority is addressing those aspects of these issues that fall within its jurisdiction in this Code amendment process.[8]

## 2.1. The Authority's Consultation Paper

18. In October 2024 the Authority released a Consultation Paper proposing a set of potential Code changes to improve the regulation of connection charges in New Zealand.

19. That Consultation Paper:

- Notes that electrification is a key to unlocking benefits for consumers and the wide economy. To achieve this the Authority notes that "the regulations and rules that underpin distribution connections need to be more consistent, and we need clear processes and greater transparency to deliver lower transaction costs for those wanting to connect. We also recognise the need for mechanisms to resolve issues when parties have been unable to resolve disputes".[9]
- Notes that distributors have market power over connections as (i) they can control access to the network and (ii) since bypass for most parties is prohibitively expensive.
- Notes that capital contributions (upfront payments by customers for connections) have been increasing as a share of total growth capex in recent years. At the same time, the Authority notes that there is some variation across distributors, with Vector recovering more than 80 per cent of its growth capex in the form of capital contributions (forecast to rise above 100 per cent), whereas the average for other distributors is closer to 30 per cent.
- Notes that there is an overall trend towards higher connection charges, which risks deterring new connections and delaying the benefits of electrification. In addition, connecting parties may be faced connection offers which provide services in excess of their requirements, or which may cost more than is necessary.
- Notes that there are large differences across distributors in the handling of connection charges, increasing the transaction costs for parties which must connect in multiple distribution regions. In addition, there are inconsistencies in pricing structures and in the availability of mechanisms (such as pioneer schemes) to share the risks of new connections. While recognising that it is not necessary to achieve complete harmonization of approaches, the Authority suggests that there is "excessive inconsistency".
- Notes that distributors may have an incentive to change their methodology to increase the connection charges for newcomers without corresponding reduction in the on-going charges. In addition, there are

[8] Issues relating to, say, the total revenue received by an EDB likely fall within the jurisdiction of the Commerce Commission.

[9] Electricity Authority, para 4.8, page 19.

instances of inefficiently low connection charges that are not cost-reflective and result in existing users subsidising newcomers. This may lead to over-engineered connections or connections that would not proceed if they had to cover their incremental cost.

- Notes that the level of connection charges may depend on where you in the queue of connection requests, giving rise to 'position-in-queue' dynamics.
- Notes that there is currently no mechanism for connecting parties to contest or dispute the terms and conditions of connection that they are offered by their distributor.

20. In response to these concerns, the Consultation Paper proposed a series of reforms. These reforms were grouped into two categories: "Fast-track" reforms, which are able to be implemented in the short-term, and more significant "full reform" to be implemented in the medium term.

21. The fast-track reforms outlined in the Consultation paper are:[10]

- **Minimum scheme requirement:** Networks will be required to offer a least-cost technically acceptable solution for connecting an applicant to the network unless the applicant asks for specific enhancements. In addition, applicants may request (and networks must offer) a lower-quality/lower-cost 'flexible' connection in which their demand can be curtailed at times of network congestion.
- **Publishing of unit rates:** Connection charges will be required to be based on published unit rates (e.g., per unit of capacity). This is intended to make charges more transparent, predictable and consistent. This policy should limit the ability of networks to discriminate between connecting customers, acting as a constraint on the exercise of market power.
- **Pioneer schemes requirement:** Where a 'first mover' or 'pioneer' funds connection assets, networks will be required to offer a scheme in which they collect a contribution from subsequent connecting parties who share those assets and make a payment to the pioneer. This is intended to reduce the disincentive to be a first mover (and/or to delay a connection application to avoid incurring the first-mover costs).
- **Transparency over connection costings:** Networks will be required to break down the total connection charge into separate components, corresponding to (a) the net incremental cost; and (b) a contribution to the shared network costs. This information must be provided to customers on request.
- **Dispute resolution requirement:** Connecting parties will have the ability to request a third-party to resolve disputes over connection terms and conditions, drawing on existing arrangements for generator connections in Part 6 of the Code.[11]
- **Reliance limits:** Networks will not be allowed to increase the ratio of connection charges to connection and system growth investment above the level of this ratio in 2024 (or 47 per cent, whichever is higher). This is intended to prevent networks from increasing reliance on connection charges over time.[12]

22. These reforms will go some distance to increasing the transparency and harmonisation of connection charging practices across the EDBs. But, although an important step forward, the Authority recognises that these reforms may not be able to fully constrain the market power of EDBs with regard to connection charges. The Authority writes:

[10] These are set out in table 7.1 of the Consultation Paper.

[11] We understand that, in the fast-track proposal, the dispute resolution panel will not be able to rule on the reasonableness of the connection charge for individual connections.

[12] Analysis of feedback from the expert economic reports on the reliance limit is not in scope for this paper.

"[T]he fast-track Code amendments will still leave distributors with significant residual discretion as to how much cost they allocate to newcomers and how the pricing methodology for this allocation is carried out. This means the Authority will still lack sufficient assurance that connection pricing will be efficient."[13]

23. To address this residual discretion the Authority proposed, as part of the "full reform" to more effectively constrain the connection charges. Specifically, the Authority introduced the concept of the "neutral point" and the "balance point" and proposes to require "distributors to estimate the neutral and balance points and set [connection] charges within a band relative to those points".[14]

[13] Authority, para 8.2, page 70.

[14] Authority, para 8.3, page 70.

# 3. SUBMISSIONS IN RESPONSE TO THE AUTHORITY'S PROPOSALS

24. The Authority received a large number of submissions in response to its Consultation paper. We were asked to respond to the submissions from economic consultancies: HoustonKemp, Incenta, Frontier, Axiom Economics and Sapere, as well as the cross-submissions from these parties.

25. Some of the expert reports were supportive of the work of the Authority. For example, Incenta observes that it agrees with the principles the Authority has applied:

> "The Electricity Authority and its advisers, CEPA, present a very good discussion of the relevant economic and other principles in relation to the appropriate levels of connection charges"[15]

26. Similarly, Frontier write:

> "We broadly support the Authority's initiative to establish a more robust and consistent approach to connection charging. If well-implemented, this reform can enhance confidence among connecting parties that they are paying charges reflective of the efficient costs of connection. At a minimum, it will increase the transparency regarding what customers can expect to pay when connecting to the network, leading to better informed connection decisions. Additionally, greater regulatory certainty around connection pricing will provide distributors with improved clarity and predictability regarding the costs and revenues associated with new connections. In the context of the anticipated increased electrification of the economy, fostering greater efficiency in network connections has the potential to deliver substantial welfare benefits."[16]

27. We note that most of the Authority's proposals attracted little criticism or objection. Specifically, there was little objection to the proposals for a minimum scheme, and the requirements for publishing unit rates and for enhancing transparency over the components of the connection charge. Similarly, there was little objection to the proposal to allow for dispute resolution offer connection offers.

28. However, the expert reports made a number of specific criticisms to the Authority's proposals which are briefly summarised here, and addressed in detail in the sections that follow:[17]

- **Lack of evidence of a problem:** Several reports noted that the Authority had not set out explicit evidence that EDBs were exercising market power over connection charges in the status quo. For example, Axiom observed that "the analysis is purely theoretical, with no empirical evidence provided to substantiate the claim that connection rates are being constrained to inefficiently low levels".[18] Some reports also argued that no evidence had been presented that "position in queue" issues was a material problem in practice.
- **Concerns relating Neutral Point, Bypass Point and Balance Point:**
    - **Neutral Point and Bypass Point are not valid lower and upper bounds on pricing:** Although some of the expert reports explicitly endorsed the concept of the Neutral Point and the Bypass

[15] Incenta, para 16, page 10.

[16] Frontier, "Efficient pricing of distribution network connections", 18 December 2024, page 4.

[17] Axiom summarised its position as (a) the Authority had failed to demonstrate significant issues with the current connection charging framework; (b) there is no clear connection between the problems the Authority identified and the solutions it proposed; and (c) even if there were a problem it is not clear that the Authority would be the most appropriate entity to address them. Axiom letter of 11 January 2025.

[18] Axiom, "Economic review of problem definition: A report for Vector", December 2024, page 3.

Point as relevant bounds for pricing, some of the expert reports criticised the concept of the Neutral Point as a lower bound on pricing, and/or the Bypass Point as the upper bound.

  - **The Balance Point has no economic significance in pricing:** Even where the Neutral Point and Bypass Point was accepted, some of the submissions criticised the concept of the Balance Point. Frontier, for example, argued that any pricing above the Neutral Point potentially deters new connections and is therefore inefficient. Some expert reports argued that there is no efficiency basis for the concept of the Balance Point.

  - **Neutral Point pricing raises risk allocation and competition issues:** Some reports argued that a requirement to price connections at the Neutral Point would lead to a risk of stranded assets if a new connection ceased to be useful before it reached the end of its technical life. Several reports also argued that pricing at the Neutral Point would reduce the scope for contestability in the provision of connection assets.

- **Incentive issues should be addressed by the Commerce Commission:** Several stakeholders argued that if there is an incentive to increase capital contributions, this should be addressed by changes to the regulatory framework administered by the Commerce Commission. For example, Incenta writes that:

  "Whilst we agree that it is desirable for the EDBs to have a financial incentive to process connection requests and connect customers in a timely manner, a better mechanism to achieve this is to refine the DPP [Default Price Path] regime."[19]

- **Concern that the Pioneer scheme could involve raised administrative costs**: A few reports raised the concern that the administrative costs of the Pioneer scheme could outweigh the benefits.

29. We note at the outset that there were quite strong differences amongst the respondents as to how the Authority's proposals should be categorized. A few of the submissions referred to the proposals as being a significant reform. For example, Axiom Economics refers to the Authority's proposals as "major reforms that would be highly disruptive for EDBs"[20], "substantial changes with far-reaching implications"[21], and a "radical reworking of the connection charging framework"[22]. In contrast, Sapere questions whether the proposals would change much at all:

    "Our final conclusion is that nothing changes with respect to what EDBs can charge for connection in the fast-track proposal. The only limit comes from not allowing EDBs with capital contributions that are higher than the industry average, relative to capital expenditure, to increase capital contributions further. …As the proposed code amendments make little attempt to control the upper limit on costs, we do not consider that the proposed connection enhancement will improve pricing efficiency. … [T]he Authority has just endorsed the status quo of current connection charges. Even the reliance limits on capital contributions still allows every EDB to, at least, do what they currently do".[23]

30. Our understanding is closer to that of Sapere. We understand that – putting aside the reliance limits – the fast-track proposals put forward by the Authority are not primarily intended to directly constrain the pricing discretion of the EDBs. Rather, the primary benefit of the proposals is in increasing the transparency over the methodologies used to determine connection charges (which will likely reduce the diversity and increase the harmonisation of approaches used by EDBs), to reduce the risk faced by first-movers, and to increase the potential for independent dispute resolution.

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[19] Incenta, para 21, page 9.

[20] Axiom, page 1.

[21] Axiom letter of 11 January 2025, page 4.

[22] Axiom letter of 11 January 2025, page 11.

[23] Sapere, Review of the Electricity Authority's proposed amendments to Part 6, December 2024, page 17.

# 4. RESPONSE TO THE CRITICISMS RAISED

31. Let's turn now to address the individual concerns raised in the expert reports.

## 4.1. LACK OF EVIDENCE OF A PROBLEM

32. Many submissions expressed concern that the Authority had not provided sufficient evidence that there is a problem with connection charges that needs to be solved. In particular, many submissions argued that no evidence was presented that connection charges in the status quo were deterring efficient connection decisions.

33. This point is argued at some length by Axiom who write:

> "Even if the prevailing capital contribution requirements are 'too high' or 'too onerous' …, it does not necessarily indicate a substantial problem with parties deciding not to connect or delaying their decisions. It could be that most (or even all) parties ultimately proceed with the connection, however begrudgingly, and pay the higher price. If that is the case, then the main concern raised by the Authority and CEPA – electrification demand not connecting – would be purely theoretical and, in practice, illusory.
>
> Almost no evidence has been presented to support the claim that connections are actually being prevented, let alone that those connections would have been efficient. The *Next Steps* document released by the Authority in May included a few anecdotal references to connection costs 'hampering' private sector investments in EV charging stations. However, these assertions were not backed by any quantitative evidence. For example:
>
> - No *empirical* evidence has been provided regarding the number of projects where parties experienced difficulties connecting (unlike, for example, the analysis contained in Ofgem's recent connection boundary discussion note, which is detailed below).
> - Similarly, no quantitative data have been supplied on the reasons behind any such difficulties (e.g., whether they were caused by high up-front charges or other factors) or, importantly, the proportion of projects that proceeded versus those that did not.
> - There is also limited analysis of the *types* of parties facing connection issues, although the Authority seems to suggest that these difficulties primarily affect 'electrification demand' projects, such as EV charging stations".[24]

34. Sapere notes that, while the Authority suggests that some connection charges may be too low, no evidence of this is presented:

> "The Authority believes there are instances of inefficiently low connection charges and that several distributors have extremely low charges. They note that low connection charges can result in:
>
> i. subsidised connections, making existing customers worse off
> ii. an absence of cost-reflective price signals for access seekers, leading to inefficient connection activity, including over-engineered connections, or connections that would not proceed if they had to cover their incremental cost
>
> However, there was no analysis demonstrating that low connection charges are inefficient".[25]

[24] Axiom, section 3.4, page 12.

[25] Sapere, section 5.2, page 16.

### 4.1.1. Our assessment of "evidence of a problem"

35. The Authority summarises its concerns with the status quo (the "problem definition") as follows:

> "[D]istributors have market power by virtue of their ability to control access to their networks, and because network cost structures mean that bypass is usually prohibitively expensive. Economic regulation, including revenue control for non-exempt distributors, aims to address this. However, distributors can shift expenditure in or out of their regulated asset base by adjusting their connection pricing settings".[26]

36. We understand that several aspects of this problem definition are not contested in the submissions. Specifically, it appears to be widely accepted that:

(a) EDBs have market power over the setting of connection charges;

(b) Connection charges are not subject to any direct regulatory constraints in the status quo[27]; and

(c) Revenue from connection charges (capital contributions as a proportion of growth capex) has been increasing for at least some EDBs.

37. As an example, Axiom writes:

> "It is true that the capital expenditure associated with connection costs is not subject to forensic scrutiny by the Commission. It is also undoubtedly the case that EDBs have market power in the provision of connection services on account of their natural monopoly positions".[28]

**Aside: Are all of the Authority's proposals based in market power concerns?**

While some of the Authority's proposals (such as the proposals related to the Neutral Point and Balance Point) seem to relate to price controls and market power, other proposals (such as Pioneer scheme, or minimum scheme, or unit costing requirements) seem to be less directly related to market power concerns. Nevertheless, we consider that all of the proposals of the Authority are fundamentally based in market power concerns. The proposed policies differ somewhat from simple, conventional ex ante price controls because connection costs vary from one connection to another, and so regulated connection charges cannot be easily fixed in advance. It is the presence of market power which allows EDBs to, say, charge different amounts to different customers based on their time of arrival, giving rise to position-in-queue dynamics. Similarly, it is the presence of market power which allows an EDB to choose the quality or capacity of the connection offered to the customer. Therefore, even though the Authority's proposals differ somewhat from simple conventional price controls, nevertheless they remain rooted in market power concerns.

38. We agree that the Authority, as the primary proponent of a regulatory change, has an obligation to establish that there is evidence of an economic problem or harm which might justify regulatory intervention.

39. Establishing that EDBs have market power in theory or in principle does not establish that they are, in fact, exercising that market power in practice, or that there is any economic harm arising. We consider that it is not unreasonable to expect the proponent of a regulatory change to produce some empirical or anecdotal

[26] Authority, para 5.3, page 26.

[27] More specifically, forecast revenue from connections is subtracted off the total capex, so EDBs do not benefit from an increase in forecast connection charges, but EDBs do benefit from an increase in connection charges that is not forecast in advance

[28] Axiom, section 2.1, page 5.

evidence that at least some distributors may be using that market power and that this is deterring or hampering efficient connection decisions.

40. We consider that there is a need for balance. By conventional economic reasoning, it is reasonable to assume that the presence of significant market power would be having some impact in the market. But, at the same time, it is reasonable as a matter of good public policy to require some confirmation that the predictions of the economic models are having an adverse effect on this market in practice. This confirmation or verification gives an assurance that the textbook models are not overlooking some key features of the market under examination which might, for example, be constraining market power in unexpected ways. At the same time, we emphasise that the requirement for empirical evidence should not impose an undue or unreasonable hurdle, or as an attempt to shift the burden of proof.

41. When it comes to empirical evidence of a problem, the Authority has focused (although not exclusively) on the fact that capital contributions have been rising as a share of growth capex for some distributors (especially Vector). The problem here is that the link between the total level of capital contributions and the exercise of market power over connection charges is somewhat indirect and imperfect. While it is possible that increasing capital contributions is a signal that connection charges have been increasing, this is not certain for a variety of reasons that are discussed further in section 4.1.2 below.

42. We understand that the Authority has recently sought further information from EDBs to document how EDBs are setting connection charges or requiring the provision of vested assets, and how these policies are changing over time. This approach was also supported in some of the submissions. Axiom provides an example of the type of information that could be collected:

> "[W]hen Ofgem sought to determine whether there were issues with the UK's distribution connection charging arrangements, it explicitly called for empirical evidence. Respondents were asked to provide examples where the connection charging arrangements had caused problems, detailing what happened in each case (e.g., whether the connection proceeded) and the factors driving each outcome. Ofgem received information on 51 projects, which informed its problem statement and policy recommendations".[29]

43. While acknowledging that the Authority could do more to document evidence of a problem, we consider that the many of the specific demands for evidence set out in the expert reports go too far.

44. Some respondents assert that, to demonstrate the existence of an economic problem, the Authority must demonstrate the existence of connection requests which, although socially valuable (i.e., for which the value of the connection to the customer exceeds the full incremental cost of providing a distribution service) the connection does not go ahead. In other words, these respondents would require that the Authority prove the existence of desirable connections that did not happen. The problem here is that identifying potentially desirable connections that did not happen is likely to be impossible.

45. It is not sufficient to merely look at the outcome of *connection requests*. Even if it could be shown that the connection charges are set in such a way as to never deter a socially valuable connection request from proceeding, this is still not sufficient to determine that there is no economic harm from the presence of market power. This is discussed in more detail below in section 4.1.4. The reason is as follows: Potential connecting parties must make a sunk investment to explore economic opportunities which rely on access to the electricity distribution network (such as the cost of designing a nationwide EV charging network). Those investments must typically occur before approaching the distribution network to negotiate a connection charge. But, if the distribution network is able to price discriminate it could, in principle, set the connection charge to expropriate the full value of the investment by the connecting party. This would not deter

[29] Axiom, section 3.4, page 12.

connection ex post but would undermine the incentive on the connecting party to make the sunk investment in the first place.

46. In other words, the exercise of market power does not necessarily show up in the outcome of connection negotiations – rather, the exercise of market power is felt by chilling the incentive on connecting parties to make the investments which must occur *before* connection negotiations can take place. In principle this requires a demonstration of what business opportunities would have been exploited, what new products or services would have been developed, what investments would have occurred, if connection charges were effectively regulated. This is likely to be impossible.

47. For this reason, in regulatory and competition policy practice, it is not normally considered necessary to demonstrate the existence of activities which did not happen. Although some economists would insist on an estimation of the deadweight loss, in practice, a decision to impose regulation usually commences with a market power assessment (i.e., assessment of the relevant market, the degree of competition, and barriers to entry). Where there is found to be substantial market power there is typically a presumption that there is a need for some form of regulation. We do not consider that the Authority should be required to demonstrate the existence of services which potentially rely on access to the distribution network, and which are socially valuable, and which did not occur.

48. In any case, the courts in New Zealand have denounced over-emphasis on quantitative modelling as "false scientism". For example, in the High Court case *Godfrey Hirst NZ Ltd v Commerce Commission* (2011) 9 NZBLC 103,396 (HC), the judge discussed the need to quantify efficiencies:

> "Where possible these elements should be quantified; but the Commission and the courts cannot be compelled to perform a quantitative analysis of qualitative variables. … It is true that some data will be weighed or considered in deciding whether the law is violated and some will not. Yet all the suggestions about more systematic ways to inform that judgment are merely techniques, or hand tools. In short, this Court should not allow a kind of false scientism to overtake what is in the end a fundamental judgment which is required by the Act itself. … The Commission cannot be expected to render all relevant factors in quantitative terms. Nor should its qualitative judgment be reserved as a mere backstop."

49. We are keenly aware that demands for empirical evidence can easily amount to little more than an attempt to shift the burden of proof – especially to set the burden of proof at a level that cannot be easily satisfied. While we agree that the Authority could do more to substantiate the problem, we consider that some of the demands for empirical evidence in the expert reports risk placing an undue hurdle. The appropriate hurdle depends on the extent of the regulatory intervention. In our view – putting aside the reliance limits – the Authority's fast-track proposals impose relatively limited constraints on the discretion of EDBs. It follows, that the evidentiary burden for their adoption can remain relatively light.

### 4.1.2. Is an increase in customer contributions revenue evidence of a problem?

50. When it came to providing evidence of a problem the Authority relied heavily on the observation that, at least for some EDBs, the revenue from customer contributions has been increasing substantially in recent years. Several of the expert reports argued that this is not, in itself, sufficient evidence that the EDBs are exercising market power with respect to connection charges. For example, while acknowledging that the Authority has demonstrated a theoretical incentive to increase capital contributions above the forecast level, HoustonKemp write:

> "The Authority provides no evidence that this incentive has been acted upon by distributors. Such evidence could be gleaned from the extent to which outturn connections and connection expenditure exceeded the forecast values that underpinned its regulatory proposal. A general increase in connection charges through time is not sufficient evidence to conclude that, once a regulatory period commenced, distributors are

increasing connection charges above the level that was previously forecast so as to generate an incentive payoff".[30]

51. Axiom makes a very similar point:

> "[N]either the Authority nor CEPA have presented any examples of EDBs changing their charging approaches 'after the fact' and/or any estimates of the supposed financial benefits derived from doing so. That is not to say no such case studies exist – they simply have not been presented. Therefore, it has not been established that this is a problem in practice".[31]

52. We understand that the Authority has recognised that the reliance limits have some weaknesses and has decided to take more time to consider this option. We note that customer contributions as a share of growth capex could be increasing over time, even without any change in the incentive to connect, if for example:

- There is a shift in the provision of assets "in kind" to a requirement for upfront charges. Since "vested assets" are not (at present) included in customer contributions, even if the total cost of connection remains the same, a shift from a requirement to provide vested assets to a requirement to pay the same value in upfront charges would increase the customer contribution without changing the incentive to connect.[32]
- There is a rebalancing between upfront and ongoing charges. As discussed in more detail in section 4.2, when making a decision to connect, a connecting customer looks at the total stream of future charges (that is, any upfront charges or vested asset requirement and any on-going charges). If an EDB reduces the ongoing charges but raises the upfront charges in a manner which preserves the NPV of these charges, the total incentive to connect would remain the same, but the capital contribution would increase.
- New connections incur a higher cost to serve (relative to other growth capex) than historical connections. If the cost of connection assets is rising faster than other system growth capex, the reliance ratio may be increasing even though there is no increase in the exercise of market power (the revenue from connection relative to the cost remains the same). We have no reason to think that this is happening in practice – we raise it primarily as a theoretical possibility.[33]

### 4.1.3. Is diversity of approaches across EDBs a problem?

53. The Authority observes that there is considerable diversity of approaches to connections across EDBs, including differences in terminology, approach, and degree of reliance on capital contributions. In contrast, Axiom argues that diversity of approaches is not necessarily a problem:

> "There is no objective, principled standard for determining the 'efficient' or 'optimal' level of diversity across EDBs. As such, whether the existing differences genuinely constitute a problem is ultimately an empirical matter that requires quantitative assessment. For instance, Ofgem's review of connection projects in the UK

[30] HoustonKemp, "Review of the Electricity Authority's proposed distribution pricing Code amendment: A report for Vector", 20 December 2024, section 3.2, page 9.

[31] Axiom, section 2.2, page 7.

[32] This point is made by Incenta, para 23(b), page 11: "[T]he measured reliance of the EDBs on capital contributions only covers the assets the EDBs have installed themselves, and ignores any assets that are installed on behalf of customers that amount to in-kind (rather than cash) connection charge (these are referred to in New Zealand as "vested assets", and in Australia as "gifted assets"). Thus, the reliance statistic will understate the connection charges for the EDBs that make use of in-kind contributions, and any difference in the presence of in-kind contributions across EDBs will mean that the inconsistency of method across EDBs will be overstated".

[33] A similar point is made by Incenta, page 10-11: "[T]he strong real growth of capital input prices over the last decade means that an increase in connection charges would be expected over time, even before considering the potential that networks may be being extended into higher cost areas as well as the potential for distributed generation to be a larger share of the mix."

found that only a small proportion (4%) failed to proceed due to inconsistencies in approaches across EDB".[34]

54. We agree that variation in approaches to connection charges across EDBs is not definitive evidence of a problem. Different EDBs may choose to rely on a different balance between upfront and on-going charges. Some EDBs may choose to have high upfront charges and low ongoing charges. Others may choose to have low upfront and high ongoing charges. Since all customers must pay a combination of both upfront and ongoing charges, the balance between these charges need not have any economic significance and therefore is somewhat arbitrary.

55. Variation in connection charges across EDBs likely raises transactions cost for connecting parties who require connections across multiple EDBs but is not necessarily a sign that there is a problem with the exercise of market power.

56. This observation applies even if an EDB imposes no upfront connection charge at all. An EDB may not require the payment of connection charges but may, instead, require that the connecting customer itself provide all the connecting assets. In other words, the connection "charge" takes the form of the provision of "in kind" assets and services. In this context, the absence of a payment in cash to the EDB does not mean that the overall cost of connecting is inefficiently low.[35]

57. We agree that differences in approach to connection are unlikely to be a problem for most connecting parties (who only connect to one EDB). However, at the same time, there is scope to harmonize terminology and information disclosure at relatively low cost. This could facilitate comparisons and benchmarking across EDBs. Since the costs of the proposals are likely quite low, the obligation to demonstrate benefits is correspondingly, proportionally low.

### 4.1.4. Can economic harm arise even if there are no inefficient connection negotiations?

58. As noted above, Axiom argues that, even if we could show that some connections did not take place this is not evidence of economic harm. It could simply be that the value of the connection to the customer was less than the economic cost of the connection. In this case preventing such connections from occurring *improves* overall economic welfare. Axiom suggests that, in order to show economic harm, the Authority must show that some connections did not take place *and* those connections were efficient in the sense that the value of the connection to the customer exceeded the economic cost.[36]

59. As we noted above, this is likely to be very difficult in practice. We noted above that it is not normal, in regulatory practice, to require proof that there are transactions which are socially valuable, and which did not occur but which would have occurred but for the exercise of market power. This requirement could impose an unduly high hurdle to the taking of reasonable regulation action.

60. However, we consider that there is a deeper and more fundamental point to be made here. **Even if we could show that no socially-valuable connection requests were denied, this would still not demonstrate the absence of economic harm.**

[34] Axiom, section 6.1, page 22.

[35] Incenta points out that the two non-exempt EDBs that forecast no capital contributions in the next DPP both rely heavily on third-parties to provide connection assets, which are vested with the EDB on completion.

[36] Axiom, section 3.3, page 11.

61. The reason is that connecting parties may need to undertake a range of investments *before* ever requesting a connection. An EV charging company might, for example, invest in exploring a range of different locations for EV chargers across the country and advertise and build brand awareness (perhaps by developing and marketing an associated mobile app). For an EV charging network there is likely to be material value in achieving wide geographic coverage – that is, having charging stations across a wide area.

62. An EV charging company who has made such investments faces a hold-up problem by any one distributor. Let's suppose that the EV charging company determines that it would like to have a charging station in the geographic area of a particular distributor – and that without such a location its overall EV network would be substantially less valuable. When the EV network approaches that distributor for a connection, in the absence of regulatory controls, that distributor could in principle "hold out" for all or almost all of the additional value that it offers to the EV network in exchange for agreeing to connect that charging station. Put colloquially, the EV charging network could be "held to ransom" by the EDB. If the EDB is careful the charging network would still choose to connect, but it would be forced to give up a share of the gains from its investment.

63. Faced with this possibility, the EV network may think twice before investing resources in planning and marketing its network – since it knows that, once it has invested in establishing its network, certain key distributors can attempt to extract all the rent from the network.

64. Note, once again, that each distributor, if it is careful, will not prevent that EV charging network from connecting – that is, it will not deny any socially-valuable connection request. However, the price the distributor charges will extract the rent the EV charger expects to receive on its investments. The EV charging company will not undertake the investments to roll out the network in the first place.

65. This example shows that even if there are no inefficient connection decisions there can still arise an economic harm – in this case the serious economic harm of deterring a business opportunity which might rely on connection to the distribution network.

66. This thought experiment is not unique to EV charging networks. The same issue arises for any party which makes an investment in developing a business opportunity which relies on access to electricity distribution services before approaching the distributor for a connection. In each case the distributor could, in principle, hold-out for the full value of the business opportunity. Having made an investment, the connection decision would still be efficient, but the incentive to develop the business opportunity might be eliminated in the first place. The presence of market power may have a chilling effect on investment even when each individual (ex post) transaction is efficient.

### 4.1.5. Is there a need for a detailed welfare analysis?

67. In our previous report we noted that, under the current regulatory regime, if an EDB increased its upfront connection charges, this would eventually (at the next regulatory period) have to be reflected in the forecast customer contributions, which would reduce the capex in the next regulatory period, resulting in lower on-going charges over time.

68. Axiom argued that even if the higher connection charges deterred some customers from connecting, this should be offset against the welfare gains from lower on-going charges in the future. In other words, a balancing of the welfare effects is required. Axiom writes:

> "As CEPA acknowledges, higher upfront capital contributions lead to lower use-of-system charges. These lower ongoing prices contribute to a static efficiency improvement by increasing demand from existing customers (as most EDBs still incorporate volumetric charging). After all, the price elasticity of demand for electricity distribution network usage is not perfectly inelastic. …

Instead, CEPA has implicitly assumed that the welfare gain from lower use-of-system charges is zero. This is clearly not the case. While examining the size of that welfare effect is beyond the scope of this report, we can confidently say that it exists and has not been explored. This is a significant omission, because it means it has not been demonstrated, even at a conceptual level, that the observed increase in capital contributions has negatively impacted overall efficiency. In short, the welfare analysis is incomplete."[37]

69. This point was repeated by Vector:

"The Authority's welfare calculus does not sufficiently consider allocative efficiency. As acknowledged by CEPA, higher up-front capital contributions mean lower use-of-system charges. Those lower ongoing prices will have resulted in a static efficiency improvement in the form of higher usage by existing connected customers but appears to have been overlooked by the Authority".[38]

70. This point is technically correct. However, we suggest that there is good reason to believe that a more detailed welfare analysis would not change our conclusions.

71. As Axiom acknowledges the price elasticity of demand for electricity distribution network usage – while not perfectly inelastic – is likely to be relatively small. Let's consider the effect of the exercise of market power leading to a large increase in the connection charges to an individual customer. This large increase in the connection charges reduces the net capex rolled into the RAB, which reduces the on-going charges over many years into the future. The effect on the revenue allowance in any one year (since the change in capex is spread over many years) is small. Moreover, since the number of connecting customers is small relative to the total volume of existing customers, even a large increase in the connection charges to any one customer will have a small effect on the on-going charges in any one year. The welfare loss from changes in on-going charges is the deadweight loss. The effect on the deadweight loss from a change in the prices is proportional to the square of the change in the prices, so is very small indeed.

72. In comparison, the threat of a large increase in connection charges is likely to deter some connections – and, as we have argued above, is likely to deter investment in the development of opportunities which rely on a connection to the distribution network. As set out in the previous section, the welfare loss is not just the deadweight loss, but the entire surplus received by these customers from the consumption of electricity.

73. Ideally, detailed welfare analysis would be undertaken. We agree that the Authority has not positively proved that there is net welfare loss, but nor has Vector or Axiom proved that there isn't. Absent detailed welfare analysis, we consider that on balance the potential economic harm from leaving connection charges unregulated would likely outweigh the potential welfare benefits from slightly lower on-going charges

### 4.1.6. Conclusion

74. In summary, we agree that, as the proponent of a policy change there is a requirement on the Authority to establish the existence of a problem in the status quo.

75. We understand that the Authority relied on several different sources to justify a problem with the regulation of connection charges. We agree that it would be desirable for the Authority to collect further anecdotal or empirical evidence (perhaps in a similar exercise to that carried out by Ofgem) of cases where connections were denied, deferred or delayed due to the market power of EDBs. We understand that the Authority has recently done so.

[37] Axiom, section 3.2, page 10.

[38] Vector, "Submission on the Electricity Authority's distribution connection pricing: proposed code amendment", page 18.

76. However, the obligation to provide evidence of a problem should not be taken too far. We do not accept that, as a matter of good policy, it is necessary for the Authority to provide evidence of inefficient connection decisions – and even if it were possible to prove that there were no inefficient connection decisions this still would not be sufficient to determine that there is not an economic problem to be addressed.

## 4.2. CONNECTION PRICING: THE NEUTRAL POINT, BYPASS POINT AND BALANCE POINT

77. As noted above, under the "fast-track" reforms EDBs would be required to separate the connection charge into a component corresponding to the net incremental cost; and a component corresponding to the contribution to the shared network costs. This information must be provided to customers on request. Under the "full reform" proposals of the Authority, EDBs would be further required to adopt:

> "[A] formula-based approach that provides for the setting of connection charges based on net incremental costs … plus a contribution to [shared] network costs, with the contribution required to be within a permitted range. This provides cost-reflective pricing for connection applicants, while ensuring the benefits of connection growth are shared between newcomers and existing users".[39]

78. This proposal seems to have created some confusion, so we have been careful in this response to set out the arguments as precisely and clearly as possible.

### 4.2.1. Our assessment of the Authority's Pricing Principles

79. Even though the Authority did not propose *mandating* pricing relative to the Neutral Point or the Balance Point in the "fast track" reforms, nevertheless these pricing principles attracted a great deal of attention in the expert reports. Although there was some support for the principles, the expert reports claimed, variously, that these pricing concepts were novel, arbitrary, lacking in economic foundation, or not the correct pricing concepts. The reports also claimed that pricing on the basis of these principles would yield problems such as the risk of stranded assets or hindering contestability.

80. These concerns seem to reflect, in part, misunderstandings. This may be due to the Authority's presentation of the proposals, as we discuss below. Overall, we consider that the principles articulated by the Authority broadly represent a sound and reasonable approach to connection pricing. We consider that the criticisms raised in the expert reports variously reflect misunderstandings in the application of conventional regulatory pricing principles to the context of distribution connections, or in the terminology used by the Authority. We agree that some forms of pricing may give rise to a risk of stranded assets and may hinder contestability, but we understand the Authority is not, at this stage, seeking to either mandate or prevent these forms of pricing in its proposals. We therefore consider that these arguments are not relevant criticisms. These issues are discussed in more detail in the sections below.

81. We will relate these pricing concepts to the Authority's 2019 Distribution Pricing Principles which are set out here:

[39] Consultation Paper, para. 6.6, page 32.

**2019 Distribution pricing principles**

- Prices are to signal the economic costs of service provision, including by:
  - being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs);
  - reflecting the impacts of network use on economic costs;
  - reflecting differences in network service provided to (or by) consumers; and
  - encouraging efficient network alternatives.
- Where prices that signal economic costs would under-recover target revenues, the shortfall should be made up by prices that least distort network use.
- Prices should be responsive to the requirements and circumstances of end users by allowing negotiation to:
  - reflect the economic value of services; and
  - enable price/quality trade-offs.
- Development of prices should be transparent and have regard to transaction costs, consumer impacts and uptake incentives.

### 4.2.2. Net Incremental Cost, Neutral Point, Bypass Point

82. This section sets out the theoretical foundation for the concepts used by the Authority.

**Derivation of the NIC principle**

83. There is a widely accepted concept in regulatory economics that new customers to a regulated firm should normally provide additional or incremental revenue to the regulated firm that is at least as large as the incremental cost of serving those customers. We will refer to this principle as the "floor test".

84. This principle ensures that the revenue from any extensions of service (new services or new customers) cover the additional cost incurred. By ensuring that those additional services "pay their own way", the principle in effect ensures that other, existing customers or services are not forced to pay more for their own services as a consequence of the regulated firm extending other services to new customers. This allows the regulated firm to make a credible commitment to existing customers that their prices will be stable and cost-reflective, regardless of changes in the scale or scope of services provided to other customers.

85. The requirement that the incremental revenue for each service exceeds the incremental cost of that service is sometimes described as the requirement that the charges are "subsidy-free".[40]

86. This principle can be expressed using pseudo-maths as follows. The additional revenue from a new service (or a new customer) should satisfy the following condition:

*Incremental revenue (of service) ≥ incremental cost (of service)*

87. When applying this principle to the context of distribution connection services we must take into account that distribution "connection services" are not valuable to end-customers in their own right and are not consumed

[40] Frontier, page 13, observe that "the avoidance of cross-subsidy was the Australian Energy Regulator's (AER) justification for its incremental cost and incremental revenue test (the cost-revenue-test) when implementing its approach to connection charging."

on their own. Rather, distribution connection services are only valued for the "indirect" benefit they provide - providing access to the on-going services of a distribution network; that is, the ability to import and export electricity to the grid at the location of the customer.

88. In the case of distribution services, it is common to charge both one-off upfront charges and/or on-going charges for the use of the distribution network. When applying the principle above (that incremental revenue of a service should normally exceed the incremental cost) we must take into account *both* the upfront and on-going charges (as well as the upfront and on-going costs). Specifically, the economic principle of incremental-cost-as-a-price-floor must be extended slightly, to express the requirement that the incremental revenue from both upfront and on-going charges exceeds the sum of the upfront connection costs and the on-going costs of providing services. In other words:[41]

*Upfront Incremental revenue + On-going Incremental revenue (of service) ≥ Upfront Incremental cost + On-going Incremental Cost (of service)*

89. This can be re-written slightly (by moving the on-going incremental revenue to the right-hand side) to be expressed as a price floor on just the upfront charges:

*Upfront Incremental revenue ≥ Upfront Incremental cost + On-going Incremental Cost - On-going Incremental revenue (of service)*

90. Let's define the Net Incremental Cost (NIC) to be the right-hand side of the equation immediately above. In other words:

*NIC = Upfront Incremental cost + On-going Incremental Cost - On-going Incremental revenue (of service)*

91. Then we have the principle that the upfront charges for access to a distribution network should be no less than the net incremental cost:

*Upfront Incremental revenue ≥ NIC*

92. By requiring that new customers pay upfront revenue no less than the Net Incremental Cost, the regulatory regime ensures that existing customers are not forced to pay higher charges when the EDB extends its services to new customers.

93. To be clear, the Net Incremental Cost represents a *floor* under regulated prices – that is a level below which regulated prices are not normally allowed to go. It does not require that the EDB set connection charges at this level. If the NIC is negative (that is, if the on-going revenue exceeds the upfront costs plus the on-going costs) then the floor test does not *require* that the EDB make an upfront payment to the customer (although such a payment could be consistent with the floor test). Conversely, if the NIC is positive then the floor test would normally require that there be some upfront charge. The floor test is consistent with the practice for connection charges in Australia.[42]

### Worked example

94. The following worked example shows how the NIC might be calculated in practice. This example assumes that the EDB is considering connecting a specific customer. The connection asset for this customer will last

[41] See HoustonKemp, page 17.

[42] Australian Energy Regulator, "Connection charge guidelines for electricity customers", April 2023: "Where there is a revenue shortfall from an individual customer, then the DNSP will levy a capital contribution. Alternatively, where the incremental revenue is in excess of the incremental cost, then the customer would not be required to make a capital contribution to the network. The AER is not proposing that any excess incremental revenue be returned to the customer. The AER considers this would still be consistent with the limit cross-subsidisation purpose of the guideline because it is unlikely these customers will be paying in excess of their stand alone cost."

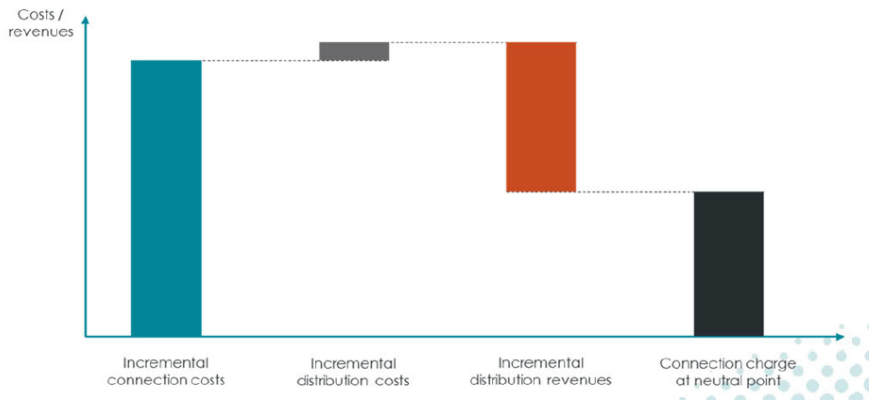
30 years and there is no risk of asset stranding. The discount rate (the cost of capital) is assumed to be 8 per cent. The EDB is assumed to incur additional up-front costs of $10,000 in connecting the customer, and to receive $900 per year in additional distribution charges from this customer. The EDB incurs an additional $300 per year to provide distribution service to the new customer. With these assumptions the Net Incremental Cost (NIC) for this customer is $3,425. The floor test requires that this customer make an upfront capital contribution of at least $3,425.

*Table 1: Worked Example No. 1*

| Component | | Value | Comment |
|---|---|---|---|
| **Incremental cost of connection (i.e., cost of constructing connection assets)** | (A) | $10,000 | One-off |
| **Revenue from on-going connection charges** | (B) | $10,132 | Present value of $900 per annum over 30 years, discount rate = 8% |
| **On-going incremental costs of servicing the customer** | (C) | $3,377 | Present value of $300 per annum over 30 years, discount rate = 8% |
| **Net Incremental Cost** | (A)+(C)-(B) | $3,425 | One-off |

95. HoustonKemp illustrate this result in their figure 4.1 page 15, using the Authority's terminology of the "neutral point" instead of NIC:

Figure 4.1: Demonstration of calculation of the neutral point




96. The Net Incremental Cost concept is indifferent to the structure of distribution charges – that is, whether the total cost of the distribution business is recovered through upfront or on-going charges. While one EDB might choose to have relatively high on-going charges for the newly-connecting customer (as in the example above), another might choose to have relatively low on-going charges for the newly connecting customer, as the next table shows. The NIC will be different in each case, but in any case, still represents the minimum upfront charge for connection that is consistent with the EDB being able to connect the customer without having to raise charges to the other existing customers.

97. For example, let's now consider a second case in which an EDB has chosen on-going charges equal to $250 per annum, but is otherwise identical. As Table 2 shows, the NIC is now $10,563. This would require an upfront or connection charge of at least $10,563 – higher, even, than the direct incremental cost of connecting.

*Table 2: Worked Example No. 2*

| Component | | Value | Comment |
|---|---|---|---|
| **Incremental cost of connection (i.e., cost of constructing connection assets)** | (A) | $10,000 | One-off |
| **Revenue from on-going connection charges** | (B) | $2,814 | Present value of $250 per annum over 30 years, discount rate = 8% |
| **On-going incremental costs of servicing the customer** | (C) | $3,377 | Present value of $300 per annum over 30 years, discount rate = 8% |
| **Net Incremental Cost** | (A)+(C)-(B) | $10,563 | One-off |

### NIC and the Neutral Point

98. The Electricity Authority uses the term "Neutral Point" to refer to the Net Incremental Cost of connection. The Authority observes that it is undesirable to set connection charges below the Neutral Point (para 7.60, 7.63). This is equivalent to the statement that the upfront connection charges should be greater than or equal to the Net Incremental Cost as we explained above. The Authority observes that if upfront charges are set below the Neutral Point the newly connecting party is, in effect, subsidised to connect (figure 7.1, para 7.63).

99. Several of the expert reports acknowledged that NIC represents a valid floor for the upfront connection charges. For example, Incenta note:

> "[T]he efficient lower-bound for connection charges is achieved where the sum of the connection charge and the revenue from (expected) ongoing network charges equates to the incremental cost of connecting and serving the customer, which implies a connection charge that is set equal to the difference between the incremental cost of connecting and serving the customer, and the revenue from (expected) ongoing network charges".[43]

100. Similarly, Frontier observes that:

> "[A] connection price that signals the net incremental cost of connection – which is the Authority's neutral point -- can be expected to encourage the economically efficient volume of network connections".[44]

101. In contrast, Axiom argues that the Neutral Point is a "benchmark entirely of the Authority's own creation":

> "The 'neutral point' is not a recognised concept in authoritative economic literature on efficient regulatory pricing; to the best of knowledge, it is a benchmark entirely of the Authority's own creation. We are not aware of any basis in economic theory to suggest that setting upfront connection charges at this level will maximise efficiency".[45]

102. While the *terminology* "Neutral Point" may be a creation of the Authority, we disagree that the underlying of the Neutral Point is not well recognised in regulatory theory. Rather, as we have seen, the concept of the Neutral Point is directly based on one of the most fundamental concepts in regulatory theory – the concept that the revenues from a service should exceed the incremental cost of providing that service. In addition, as we pointed out in our previous report, the concept of the Net Incremental Cost is widely used as a floor on

[43] Incenta, para 16, page 7.

[44] Frontier, section 2.5.1, page 16.

[45] Axiom Letter, page 11.

distribution pricing in regulatory regimes around the world. The Neutral Point – as an extension of the concept of incremental cost – is a well-established concept in regulatory pricing theory.

103. HoustonKemp argue that since the on-going revenue exceeds the on-going cost of providing distribution services, the definition of the Neutral Point would allow a connection charge below the direct incremental cost of connection.

> "The Commerce Commission's approach to the regulation of distributors tends to allow revenues from distribution services that are substantially higher than their incremental costs. … It follows from these facts that the Authority's approach to combining revenues and costs from these services in its definition of the neutral point allows the connection charge to be materially below the incremental cost of providing the connection service".[46]

104. While the floor test requires that the *total* incremental revenue from connection exceeds the *total* incremental cost from connection, the floor test does not necessarily require that the upfront connection charges alone exceed the direct or upfront cost of connection. HoustonKemp is correct that the Authority's approach allows the connection charge to be materially below the incremental cost of providing the connection service.

105. But this is not relevant for the application of the floor test. If connecting customers had an incentive to obtain connection assets in their own right (i.e., could use connection assets directly without requiring on-going services) HoustonKemp's point would be a legitimate concern. But end-customers do not receive value or utility from connection assets directly. Rather, connection assets are acquired as part of a bundle that is required in order to receive distribution services. End-customers pay for connection assets and then *also* pay for on-going distribution services. It is only the price of the bundle that matters for economic connection decisions, not the price of the individual components.

106. This situation arises in many economic contexts. Many businesses routinely provide upfront assets at a discount to the actual cost in order to induce customers to sign up to an on-going service, recovering the costs of those connection assets through on-going charges. For example, telecommunication companies may provide broadband services to the home, charging little or no set-up or connection fees, but recovering the cost of the network or modem through on-going usage charges. Similar issues arise with, say, ink-jet printers or video-game consoles.

107. It is the relationship between the total stream of charges and the total costs which determines whether or not the floor test is satisfied, not the relationship between the upfront charges and the upfront costs. The fact that one component of the charges (the upfront charges) does not exceed one component of the cost (the upfront cost) does not violate the floor test (which is only concerned about total charges and the total costs).

### Bypass Point and Upper Bound Pricing

108. In regulatory theory, it is commonly asserted that the revenue charged for a new service (or new customer or group of customers) should not exceed the *standalone cost* of providing that service (or that customer or group of customers). The standalone cost of a service is the cost that would be incurred to provide the desired service on its own (rather than in concert with the full range of other services provided by the regulated firm).

109. There are two reasons why standalone cost is a relevant upper bound on pricing. The first reason is directly related to the floor test. Mathematically, if the regulated firm is breaking even overall, then every service (or combination of services) is earning sufficient revenue to cover its incremental cost if and only if every service (or combination of services) is earning revenue below its standalone cost. This is a purely mathematical

[46] HoustonKemp, section 4.2, page 17.

relationship – and it implies that the incremental cost floor test and the standalone cost test are, in some sense, equivalent or parallel requirements.[47]

110. When the incremental revenue for a service falls between the incremental cost and the standalone cost for that service, the prices are said to be subsidy-free, as required in the Authority's Distribution Pricing Principles.

111. The second reason why standalone cost is a relevant upper bound on pricing is derived from efficiency considerations. In normal circumstances, due to economies of scale and scope, a regulated firm can almost always provide any given service cheaper (i.e., using fewer resources) when the service is provided alongside the vast range of other services provided by the regulated firm than when the service is provided on a standalone basis. Usually, therefore, it is considered undesirable to create incentives for customers to bypass the regulated service and to supply the required service themselves on a standalone basis. If the charges of the regulated firm exceed the standalone cost for a service, a customer (or a group of customers) would find it cheaper to provide the service itself rather than purchase from the regulated firm. That is, those customers would *bypass* the regulated firm. The same services would be provided at a higher total cost, which is inefficient.

112. Again, of course, when we apply this concept in the context of distribution connection charges, we must take into account that the provision of a new connection service may result in *both* an upfront and on-going stream of revenue and an upfront and on-going stream of costs. The principle that the revenue the regulated firm receives from a service should not exceed the standalone cost of that service becomes:

*Upfront Incremental revenue + On-going Incremental revenue (of service) ≤ Upfront standalone cost + On-going standalone cost (of service)*

113. As before, this can be re-written to represent an upper bound on just the upfront charges:

*Upfront Incremental revenue ≤ Upfront standalone cost + On-going standalone cost - On-going Incremental revenue (of service)*

114. Expressed in words, this says that the upfront charges for connection should not exceed the total cost that the customer would face to provide the same service on a standalone basis less the on-going revenue that the customer would save by providing the service itself.

115. The Authority uses the term Bypass Point (BP) to refer to the right-hand side of the equation immediately above. In other words, the Authority defines:

*BP = Upfront standalone cost + On-going standalone cost - On-going Incremental revenue (of service)*

116. It follows that the connection charges should not exceed the Bypass Point:

*Upfront Incremental revenue ≤ BP*

117. For many electricity distribution customers, the cost of bypassing the electricity grid entirely, to self-provide electricity, is prohibitively expensive. For these customers, the upper bound provides little practical constraint on the range of possible prices. However, there may be some customers (e.g., those located further from the "core" of the distribution business) for whom self-provision of electricity (e.g., through a local micro-grid) is only slightly more expensive than grid-supplied electricity (and for very remote customers a local micro-grid

[47] See Faulhaber, Gerald R. "Cross-subsidization: pricing in public enterprises." *The American Economic Review* 65.5 (1975): 966-977.

could be considerably cheaper than connecting the shared network). For these customers this upper bound may represent a real constraint.

118. We agree with the Authority that, for most customers, the standalone cost of self-provision of electricity is "typically very high"[48] and therefore not a relevant constraint.

119. Sapere quote Mayo and Willig as follows:

> "Properly calculated stand-alone costs are determined from a long-run, forward-looking perspective. This follows since they represent the costs that a new entrant into the relevant market would bear, with no preset rigidities and with the ability to choose the current best available technology and the most efficient inputs."[49]

120. We agree that the standalone cost concept is forward looking and unique to each customer or group of customers. Sapere argues that the standalone cost concept used by the Authority is incorrect for regulated pricing purposes:

> "The most urgent thing the Authority should do is accept that its definition of standalone cost in its proposal paper is incorrect for regulated pricing purposes".[50]

121. We disagree. We are not aware of any objections to the definition of standalone cost used by the Authority. We also acknowledge that for many customers, the cost of self-provision is, for most customers, prohibitive, it follows that the relevant standalone cost ceiling is very high and unlikely to be a relevant constraint on pricing.

122. It is important to emphasise, however, that there are many other – lower – prices which could also represent an upper bound on efficient pricing. This is because the upper bound on efficient pricing is the price at which the connecting customer would switch to some other (lower-value or higher-cost) alternative. For example, if we knew that the connecting customer would switch to an alternative or lower value service if it was forced to pay $X in revenue, then $X would represent a valid upper bound on the charges for that customer. This alternative might be failing to connect at all (which might occur if the total value of a connection is less than the standalone cost of provision). The alternative could also be some less-valuable alternative such as an inferior connection (e.g., smaller in capacity, less reliable). This point is made by Incenta:

> "[T]he efficient upper-bound for connection charges is achieved where the charge is at a level where customers choose not to connect (or not to change their connection), even though they would do so with a connection charge at the lower bound".[51]

123. The same point is made by HoustonKemp:

> "If a price is set above the opportunity cost then the customer will choose not to connect to the network and to pursue one of these alternative options instead. If this opportunity cost exceeds the incremental cost of the connection, then this outcome is allocatively inefficient because the customer values the ability to connect at more than incremental cost and could therefore contribute to the recovery of common costs. In effect, this approach defines the bypass point as the point at which the connecting party changes his/her

[48] Authority, para 7.62.

[49] Sapere, page 23.

[50] Sapere, page 22.

[51] Incenta, para 16., page 8.

behaviour to a lower-value alternative. If price discrimination is feasible this is the relevant upper bound for pricing".[52]

124. It will not always be possible to observe the price at which a connecting customer would switch to less-valued or higher-cost alternatives. Nevertheless, where this is possible to observe (and provided it exceeds the NIC) this represents a legitimate upper bound on pricing.

125. Overall, we can find no objection to the Authority's definition and use of Bypass Point to define the upper limit of subsidy free pricing, while recognising that there can be good reasons to choose a lower price as the upper bound.

### 4.2.3. Balance Point, efficiency, and non-discrimination

126. The previous section focused on the role of incremental cost and standalone cost as setting the bounds of "subsidy-free pricing". There is a second lens or prism through which we can view the setting of connection charges. This is the prism of "economic efficiency" – that is, whether the connection charges send the right signal for connection decisions.

#### Marginal cost as the basis of efficient pricing

127. A general principle of regulatory pricing is that prices are efficient when they signal to customers the marginal cost of their decisions. The marginal cost (usually) represents the social cost of consuming an extra unit. By setting the regulated price equal to marginal cost the regime ensures that customers make a decision which balances the private benefit from their decisions with the social cost. As a consequence, a fundamental principle in regulatory pricing theory is that regulated prices should – as far as possible – be based on marginal cost.

128. Marginal cost, as a basis for regulatory pricing, is well-established in regulatory pricing theory.[53] This is reflected in the report by Frontier who write:

> "[E]conomic efficiency is achieved when the marginal benefit obtained by consuming a good or service is equal to the marginal cost of production".[54]

129. In the context of distribution connection charges there are two relevant "margins" to consider. The first is the (binary) decision whether to connect at all. The second is the decision as to how much to consume once connected. The decision as to how much to consume once connected depends on how the on-going charges are structured. If those on-going charges are well-structured the variable component of the charge will be relatively close to marginal cost, so the customer (once connected) consumes electricity at an efficient rate.

130. We will focus here on the (binary) question of whether or not to connect. This decision is efficient if the upfront and on-going charges for distribution services reflect the additional cost of providing that service. In general in economic theory, incremental cost and marginal cost refer to difference concepts. But, in the case where the "increment" is a single unit – such as the additional cost of providing a single distribution connection – the incremental cost is the same as the marginal cost.

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[52] HoustonKemp, page 4.

[53] Alfred Kahn, in his famous textbook on the Economics of Regulation, writes: "The central policy prescription of microeconomics is the equation of price and marginal cost. If economic theory is to have any relevance to public utility pricing, that is the point at which the inquiry must begin."

[54] Fronter, section 2.2, page 10.

131. It follows that (at least under the assumption that the on-going charges are relatively well structured), if we set the upfront connection charges equal to the Net Incremental Cost, the customer, in making the connection decision, will compare his/her private valuation for connection with the marginal cost of providing that service. This leads to the efficient connection decision.

132. In summary, in the same way that pricing at marginal cost is considered to be a fundamental principle in regulatory pricing theory, we consider that the use of Net Incremental Cost as a basis for pricing the upfront cost of connections is consistent with regulatory pricing theory.[55]

133. This point is echoed in some of the submissions. For example, Frontier note:

> "Customers should connect only when the benefits of electricity use exceed the costs of connection and ongoing supply. Efficient pricing signals the incremental costs of connections. … Pricing above the neutral point would mean connecting parties would pay more than the incremental costs of their connection, which might distort network connection decisions away from the efficient level".[56]
>
> Also:
>
> "[A] connection price that signals the net incremental cost of connection – which is the Authority's neutral point – can be expected to encourage the economically efficient volume of network connections".[57]

134. However, these views on the efficiency of the NIC as the upfront connection charge was directly contested by Axiom Economics on the following grounds:

> "First, the conclusions appear to deviate from established economic principles of efficient pricing or, at a minimum, overstate what can reasonably be inferred from theory alone, because:
>
> - The 'neutral point' is not a recognised concept in authoritative economic literature on efficient regulatory pricing; to the best of knowledge, it is a benchmark entirely of the Authority's own creation. We are not aware of any basis in economic theory to suggest that setting upfront connection charges at this level will maximise efficiency (in the manner Frontier implies in the extract above).
> - If connection prices fall between incremental costs and standalone costs (the 'bypass point'), it is impossible to determine whether shifting them to another point (e.g., the 'neutral point') would improve overall welfare without thoroughly evaluating the impacts on both dynamic and static efficiency. To date, no such assessment has been conducted – by the Authority, CEPA or any other party."[58]

135. On the first point we disagree with Axiom Economics. We note, as emphasised above, that the Neutral Point, reflecting the incremental cost of a connection to the network (for the purpose of the floor test) and the marginal cost of a connection to the network (for the purposes of sending efficient price signals), represents an application of well-known and widely accepted practices in regulatory pricing theory.

136. On the second point, we note that, under not-reasonable assumptions, Axiom Economics is correct. Specifically, it may be that setting all distribution charges at incremental cost does not raise enough revenue

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[55] The Authority express this point as follows: "In theory, pricing at the neutral point would be optimal if it minimised adverse effects on connection demand, and without supressing demand from existing users". Consultation Paper, para. 7.64.

[56] Frontier, section 1.2, page 5.

[57] Frontier, section 2.5.1, page 16.

[58] Axiom Letter, page 11.

to cover the total costs of the distribution network. In this context some distribution charges *must* be raised above incremental cost to ensure that the distribution network is able to break even overall.

137. However, we emphasise that the Authority is not proposing to mandate pricing at the Net Incremental Cost – that is, it is not proposing to require that connection charges are set at the Neutral Point. Instead, the Authority – at least in its longer-term reforms – is proposing to allow pricing up to the Balance Point. Let's now look at the Balance Point more closely.

**The Balance Point**

138. According to conventional regulatory pricing theory, the starting point of efficient pricing is short-run marginal cost. However, it is well understood that there are circumstances where pricing above short-run marginal cost may be required. For example, pricing above marginal cost may be required where setting prices equal to marginal cost does not recover sufficient revenue overall to cover the total costs of the distribution network and this cannot be mitigated with other tools, such as two-part pricing. In addition, including a margin above marginal cost may be valuable where prices cannot be varied in real-time to efficiently ration scarce network capacity and it is desirable to reflect the long-term cost of capital expansion in prices. In this latter case, it is common to attempt to reflect long-run capacity costs through the concept of long-run marginal cost. This is a "second-best" form of pricing – but appropriate where the "first-best" approach is infeasible.

139. In a similar way, there are circumstances where it may be necessary to set upfront connection charges above NIC. For example, it may be that the incremental cost of providing each individual network connection does not add up to the total cost of the network. In this case there is some common cost to be recovered. We agree with Frontier that pricing above the Neutral Point may deter some network connections. At the same time, pricing above the Neutral Point may be essential to allow the network to recover its common costs.

140. Those common costs must be recovered from the set of all customers somehow. One possible consideration that is frequently cited is to allocate more of these common costs to customers which are less price elastic. As set out earlier, the Authority's own Distribution Pricing Principles state that "Where prices that signal economic costs would under-recover target revenues, the shortfall should be made up by prices that least distort network use". This refers to the form of pricing known as Ramsey-Boiteux pricing.

141. We would like to emphasise that, no matter how the common costs are allocated (by Ramsey pricing or some other method) ex ante, once an allocation mechanism is determined there should be limited opportunity for the regulated business to vary prices on a case-by-case basis. The reason is that, as we have seen, customers may differ in how much investment they have made in reliance of the services of the regulated firm. If the customer finds that, once they have made a sunk investment which increases the value they place in regulated service, the regulated firm responded by increasing the price, the customer would have little or no incentive to make that investment in the first place.

142. For this reason, although regulated businesses are often given some discretion in how they structure their charges, there are usually strict limits on the ability to *change* those charges, and limits on the ability to engage in price discrimination. One of the most longstanding principles in regulatory theory is that regulated prices should be "just, reasonable, and *not unduly discriminatory*".[59]

143. In the context of distribution connection charges, a principle of non-discrimination can be valuable in limiting the ability of the EDB to price discriminate between customers. Specifically, it is common to require that like customers are treated alike. In this approach, customers are grouped ex ante into classes, with all customers

[59] This is a standard phrase used in public utility legislation in the US.

in a class (e.g., residential customers, small business customers, large industrial customers, and so on) required to pay a similar contribution to the common costs of the network. This approach prevents the regulated firm charging each customer up to its individual willingness to pay.

144. In the context of connection charging, this would require that all customers in a class pay a similar connection charge, which could be above the Neutral Point. The Authority refer to this charge as the Balance Point. The Balance Point for a customer in a given class is the Net Incremental Cost of distribution services plus a contribution to the common costs for that customer class.

145. We can define the balance point concept as follows

*BalPt = Upfront incremental cost + On-going incremental cost + Contribution to Network Common Cost - On-going Incremental revenue (of service) = NIC + Contribution to Network Common Cost*

146. Then the Authority's proposed requirement is that:

*Upfront Incremental revenue = BalPt*

147. To make this slightly more concrete, let's consider a specific example. Suppose that a new housing development services ten houses and a small business. Creating an electricity distribution network serving the development as a whole costs, say, $150,000, while the incremental cost of serving each house individually is only $10,000 and the incremental cost of the small business is $20,000 (this might be because there is a need to build infrastructure to the development that is shared across the houses). Let's assume for simplicity that the on-going distribution charges just cover the on-going distribution costs.

148. In this example, if the connection charges were set equal to the incremental cost of connection the total revenue collected would be (10 x $10,000 + 1 x $20,000 =) $120,000. There is a remaining common cost of $30,000 which needs to be allocated across the houses and the business. In this circumstance a possible allocation which treats like customers alike is to share that common cost across the ten houses equally, so that the connection charge is $10,000+$20,000/10 = $12,000 for the houses and $20,000+$10,000 = $30,000 for the small business.

149. The Authority refers to the additional charge of $2,000 for the houses and $10,000 for the business as the "network costs". The sum of the direct incremental costs and the network costs is termed the Balance Point – in this case $12,000 for the houses and $30,000 for the business.

150. The Balance Point is, of course, above the direct incremental cost (the Neutral Point) which, in this case, is $10,000. Like any charge which is above marginal cost, this could, in principle, deter a customer from connecting to the network. This would be an inefficient outcome. However, the common costs of the network must be recovered somehow and if the value of an electrical connection is large relative to its cost, the responsiveness of customers to the connection charge is likely to be low, so this possibility may not matter much.

151. The Authority writes that the Balance Point is where:

> "[T]he contribution a connection applicant will make to network costs over the life of their connection is commensurate with other users from the same consumer group".[60]

152. In principle there will (or could) be a different Balance Point for each different group or class of consumers (e.g., rural vs urban, residential vs commercial, large vs small and so on).

[60] Consultation Paper, para. 7.61.

153. By committing to charge customers in each class the same charge, the EDB makes a commitment to not engage in individualised or tailored price discrimination. Such price discrimination would allow an EDB to extract the full value of the connection to newly-connecting parties. As we have seen this would undermine the incentive to make investments to explore or develop economic opportunities which rely on access to the distribution network. We consider this a material economic harm.

154. In addition to the non-discrimination arguments in support of the Balance Point above, there is a second argument that is related to "position in queue" issues. As long as there are common costs to be recovered, they must be recovered from some of the connecting parties. If one customer is allowed to connect at incremental costs, it follows that at least some of the other connecting customers must pay higher charges. This could give rise to position-in-queue dynamics.

155. For example, suppose that, in the example above, five customers have connected and have each paid a connection charge of $13,000. With this connection charge the contribution to the common costs (of $15,000) have been fully covered. The next five connecting customers could, in principle, connect at the incremental cost of $10,000. However, recognising this, the first five connecting customers will potentially seek to delay their connections so that they can be in the second half, thereby paying a lower connection fee. This may lead to inefficient delay in connecting.

156. If we seek to avoid these position-in-queue issues, we must establish consistency in pricing customers over time (intertemporal equity). This can only be achieved by pricing similar customers similarly even when they connect at different points in time. This is what the Balance Point seeks to achieve.

157. The Balance Point concept was criticised in some of the submissions on several grounds:

- That the Balance Point is novel and an innovation[61];
- That the Balance Point is not linked to a concept of economic efficiency, but rather is based on a concept of equity[62]; and
- That the Balance Point is 'too high' as an upper limit for charges – being above incremental cost it may deter some efficient connections.[63]

158. We agree that the terminology of the "Balance Point" is, to our knowledge, original to this proposal. We also agree that the Balance Point is above incremental cost and therefore may deter some efficient connections. Frontier writes:

> "As indicated above, economic efficiency can be promoted by setting charges in a way that is least likely to distort efficient decision making; recognising that economic efficiency is concerned with the future rather than past sunk decisions. While the balance point is below stand-alone cost, and so there is no cross-subsidy involved, it is our view that a price above the neutral point up to the balance point, risks discouraging efficient connections proceeding. This is because the price would be above the costs directly caused by the connection, which are the incremental costs, and so contribute to sunk cost recovery. However, as previously noted, there is no efficiency benefit to be gained from signalling a sunk cost".[64]

159. But, in a world in which there are common network costs to be recovered it may not be possible to charge all connecting customers only the incremental cost (NIC) of connection. In other words, each customer must

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[61] HoustonKemp, section 4.1, page 14.

[62] Incenta, para 17, page 8. Axiom, section 4.3, page 23. HoustonKemp, section 4.3.2, page 24.

[63] Frontier, section 2.5.1, page 16.

[64] Frontier, section 2.5.1, page 16.

also be charged a contribution to the common network costs. As we have seen, that contribution to common costs should be chosen in such a way as to minimise any harm from pricing above the Neutral Point. If we must charge some customers above incremental cost in order to recover the full costs of the network, then the desire to prevent intertemporal price discrimination reasonably leads us to suggest that similar customers should be charged similarly.

160. In regard to economic efficiency, HoustonKemp write:

> "The balance point – contains no information about economic efficiency. Although the Authority's consideration of this 'balance point' references efficiency, the key principle motivating the role of the balance point in the Authority's framework for connection charges is not efficiency and appears to be equity. This central consideration is difficult to reconcile with the Authority's statutory objective, which refers to economic concepts of efficiency and competition".[65]

161. Similarly, Incenta writes:

> "Implicit in the Authority's analysis is that an equitable outcome between successive vintages of customers would be one where each customer contributes the incremental cost it causes and then makes a similar contribution to the common costs of the network. … [A]chieving outcomes that are broadly equitable between vintages of customers is typically seen as a key design principle of utility pricing – and connection prices in particular – and so the Authority should be given credit for the prominence it has provided to equity issues".[66]

162. We agree that it is possible to view the Balance Point through a lens of equity. However, we have emphasised the role that the Balance Point plays in providing an assurance to connecting customers that they will not experience price discrimination, which could potentially undermine any investments they have made, deterring their attempt to seek connection in the first place. This is an efficiency argument.

163. We note that the Authority mentioned efficiency when discussing the benefits of the Balance Point. We agree that there is an efficiency basis for the Balance Point concept – based primarily on allowing the EDB to recover its common costs while preventing price discrimination between customers.

164. Frontier seem to argue that any contribution to common network costs should be recovered through on-going distribution charges:

> "Based on our view that economic efficiency is promoted through customers paying for the incremental costs of their connection, it is our view that it is only the incremental revenue and incremental costs that should form part of the reconciliation and that there is no need or benefit in identifying 'network costs' that should be funded by standard ongoing network charges. From an economic efficiency perspective, we recommend that reconciliation reports focus solely on incremental costs and revenues. Recognising that these are relevant for an economically efficient signal for network connections. Identifying 'network costs' separately is unnecessary, as these should be funded through standard network charges, not connection-specific charges."

165. We disagree. While it is correct that setting connection charges equal to the NIC would promote economic efficiency in a narrow sense, this may prevent the distributor from recovering a contribution towards the common cost of providing the network. In our view it would be valuable to have the reconciliation reports separately identify both the incremental cost (the NIC) and the contribution to common costs. We understand that the Authority does not seek to mandate whether on-going charges should cover all of, part of, or more

[65] HoustonKemp, Executive Summary, page i.

[66] Incenta, para 18, page 8.

than the on-going distribution costs and the common network costs. That is a decision that is left to the distributor. We can see no reason to insist that network costs should be funded through standard network charges. In any case, if we are to ensure that similar customers are treated similarly with respect to the common costs then it remains necessary to identify the incremental costs and revenue of that customer as well as any contribution to the network common cost.

### 4.2.4. Regulation of Upfront vs Ongoing charges

166. Some of the submissions claim that the Authority's proposals to set connection charges between the Neutral Point and the Balance Point would require an EDB to set connection charges *below* the direct incremental cost of connection, which would then give rise to the need to recover the balance through the ongoing charges. For example, Axiom writes that "the Authority's calculation of the 'efficient' capital contribution is lower than the incremental cost of providing access, along with a share of common sunk costs".[67]

167. HoustonKemp similarly write:

> "The neutral point, which represents the lower bound of the Authority's preferred range of connection charges, reflects pricing below the incremental cost of connection services, which in turn can be expected to:
>
> - inefficiently transfer risks away from connection applicants by deferring the recovery of connection costs by up to thirty years and providing for outstanding costs to be recovered from other customers if the connecting party disconnects earlier than was assumed; and
> - deter competition for connection services by allowing connection charges to fall below levels that could be sustained in a competitive market, such that alternative service providers would be unable to match these charges."[68]

168. We believe that the claim that the Authority's proposals require setting connection charges below the direct incremental costs of connection reflects a misunderstanding. The misunderstanding may have arisen from the equation used in para 7.59 of the Consultation Paper. The Authority expressed this equation as follows:

$$CC = (IC - IR) + NC$$

Where:

- $CC$ is the capital contribution
- $IC$ is the total incremental cost of connection (the upfront cost of connection assets plus the on-going incremental cost of providing distribution services)
- $IR$ is the on-going incremental revenue from distribution charges; and
- $NC$ is the contribution to the common costs of the network.

169. It may be clearer to separately identify the upfront and on-going components of the cost and revenue. This yields the following formulation of the equation:

$$CC = UIR = UIC + (OIC - OIR) + NC$$

Here:

- $UIR$ is the upfront incremental revenue (which is here equal to the capital contribution)
- $OIR$ is the on-going incremental revenue (that is, the revenue from on-going distribution charges)
- $UIC$ is the upfront cost of connection (that is, the cost of connection assets)
- $OIC$ is the on-going cost of providing distribution services.

[67] Axiom, section 4.2, page 15.

[68] HoustonKemp, Executive Summary, page i.

170. Expressed in this way, we can see that the pricing proposal does not necessarily require that the connection charge $CC$ is set below the direct incremental cost of connection $UIC$. If the on-going charges $OIR$ exceed the on-going costs $OIC$, the connection charges may still exceed the direct incremental costs if there is a contribution to the common costs of the network $NC$.

171. We understand that the "full reform" pricing proposals that have been put forward to date do not specify or proscribe the balance between upfront and ongoing charges. An EDB which is currently charging connection charges which are substantially below the direct incremental cost ($CC = UIR < UIC$) would not (necessarily) be required to raise those charges; an EDB which is currently charging connection charges which are substantially above the direct incremental cost ($CC = UIR > UIC$) would not be required to lower the connection charges.

172. Several expert reports raised arguments that the Authority should *not* be indifferent in the balance between upfront and ongoing charges. These submissions argued that the Authority should actively favour a balance in which connection charges are set to cover all of the direct costs of connection ($CC = UIR \geq UIC$).

173. Specifically, the arguments raised were as follows:

- An argument based on the *stranding risk* – if the connection charges are below the incremental cost of connection the costs of connection must be recovered in on-going charges over time. If, for some reason, the connection assets cease to be useful before the end of their economic life there will be an unrecovered cost – that is, a risk of stranded assets. This risk of stranded assets must be allocated in the system (and will likely lead to higher charges for the remaining customers).
- An argument based on *contestability* – if the connection charges are below the incremental cost of connection, it is harder (and may be infeasible) to establish effective contestability (that is, competitive third party provision) of the connection assets.
- An argument based on *customisation of charges* – if the connection costs vary across customers and if the ongoing charges are not differentiated or customised to individual customers, then the connection charges must vary to reflect the varying cost of connection.

174. These arguments are discussed further below. Our view is that these arguments are not directly relevant to the policies proposed by the Authority at this stage (which, as we have noted, do not directly constrain the balance between upfront and ongoing charges). These arguments might become relevant in the future if the Authority sought to directly control the level of upfront charges. We have not carried out an analysis of such controls. At this stage we merely observe that there are also arguments in favour of lower upfront charges (e.g., based on differences in the cost of capital faced by the connecting party and by the EDB). These arguments are explored further in the box below.

**Is there a case for a constraint on up-front charges alone?**

Throughout this report we have emphasised that the concepts of the Neutral Point and the Balance Point do not directly constrain the upfront connection charges alone – rather, they act as a *joint constraint* on both the upfront connection charges and the on-going charges. In particular, we have emphasised that the concepts of the Neutral Point and the Balance Point do not necessarily require that the upfront connection charges be set at a level above or below the direct incremental cost of the connection assets. The concepts of the Neutral Point and the Balance Point are a constraint on the *sum* of the upfront and on-going charges. If the EDB has flexibility in how it sets the on-going charges for a given customer, it follows that the EDB has flexibility in how it chooses the upfront charges – provided the sum of the upfront and on-going charges satisfies the requirements of the Neutral Point and the Balance Point.

However we do not wish to leave the impression that, when pricing in compliance with the Neutral Point and Balance Point, an EDB will *always* necessarily have discretion over how to set the upfront connection charges. It

may well be the case that an EDB does not have flexibility in how it sets the on-going charges for a customer. As we noted in section 4.2.4 above, setting different on-going charges for a customer requires assigning that customer to a distinct tariff class, and maintaining the tariffs in that class at a higher or lower level relative to other tariff classes for some time into the future. It may be complex and inconvenient for an EDB (Frontier mentions "administrative difficulties") to maintain different tariffs for different cohorts or different generations of connecting customers. Instead, EDBs may prefer to have a very limited number of tariff classes and require that all new connecting customers be assigned to one of the existing tariff classes.

If the EDB is constrained, in some way, in how it sets the on-going charges, it follows that its flexibility to set the upfront charges – while maintaining compliance with the Neutral Point and the Balance Point – will also be constrained. If a connecting customer can only be assigned to a very limited number of existing tariff classes for the on-going charges, it follows that the upfront charges will also be constrained, while still maintaining compliance with the Neutral Point and the Balance Point.

Are there any other reasons why the regulator might prefer a particular level of upfront charges? That is, should a regulator prefer lower upfront charges (combined with higher on-going charges) over higher upfront charges (combined with lower on-going charges)? There are a couple of different reasons:

- **Differences in financing costs** (i.e., differences in the cost of capital). If the EDB can systematically borrow funds at a lower rate than connecting parties, it might be more efficient for the EDB to charge lower upfront charges (and to finance the connection costs through higher on-going charges) than for the connection assets to be paid for upfront by the connecting party.

- **Differences in risk exposure.** An individual connecting party may not be certain of needing an on-going connection for the life of the connecting assets. If the connecting party is required to pay upfront for the connection assets, then, in the event the business of the connecting party fails, the connecting party is highly unlikely to be able to recover the remaining cost of the connection asset. In contrast, the EDB may be able to use the connection asset to provide services to another connecting party and so will be able to recover the on-going value of the asset. In other words, a high upfront charge places greater risk on the connecting party than a low on-going charge, event when the present value of the charges is the same.

Finally, we make the observation that, under the current regulatory regime, the setting of the on-going charges is not entirely independent of the upfront charges. Since the upfront charges are subtracted from the RAB, in a steady-state equilibrium with constant charges, higher connection charges would be associated with a lower RAB, and lower on-going charges, while lower connection charges would be associated with a higher RAB, and higher on-going charges. In the status quo, in a steady-state the Neutral Point and Balance Point concepts are likely to be satisfied in the long-run. However, this is a special case.

### NIC and stranding risk

175. In regard to the stranding risk Axiom Economics writes:

> "Deferring the recovery of a significant portion of upfront connection costs – potentially for up to thirty years – would lead to higher ongoing usage prices for existing customers. Those customers would also be left to shoulder the burden of any unrecovered costs if connecting parties disconnected earlier than expected. This would inefficiently – and arguably unfairly – shift risk from new connection applicants to existing customers."[69]

[69] Axiom Letter, page 12.

176. In a world of on-going growth in demand for electricity, the risk of a standard-sized connection close to the existing network being left unemployed for an extended period is low. Stranding risk is a larger potential problem for unusually-sized connections or connections in more remote locations.

177. It is correct that setting connection charges below the direct costs of connection plus the contribution to network costs would give rise to a deficit which must be recovered through on-going charges:[70]

$$CC = UIR = UIC + (OIC - OIR) + NC < UIC + NC \Leftrightarrow OIR > OIC$$

178. When upfront costs are recovered through on-going charges, if, the connection asset ceases to be utilised before the end of its technical life, and if redeployment of those assets is infeasible, then there arises a stranding risk. This cost would need to be recovered from charges to other customers. As Axiom notes: "it would be neither efficient nor equitable for 'stranding' costs to be smeared across customers who have not caused them to be incurred."[71]

179. It is correct that the balance between upfront and ongoing charges affects the allocation of the risk of stranded assets (the risk that the connection assets will cease to provide a revenue stream before the end of their economic life). Depending on the level of the upfront charges, this risk could be borne by the connecting party, or by the broader customer base, or any combination in between.

180. However, we emphasise again that the Authority's proposals to date *do not mandate* that the connection charges are below the direct or upfront incremental costs (plus a contribution to the common costs of the network). An EDB may choose to set the connection charges equal to the upfront incremental costs plus the contribution to the common costs of the network, in which case there is no deficit to be recovered and no risk of stranded assets.

181. Even if the Authority did, in the future, mandate a specific level of the upfront charges, there are other ways of ensuring that stranding risks are not socialised to the broader set of customers. For example, connecting parties might be required to provide bank guarantees guaranteeing the revenue stream from the connection asset for a certain number of years. Another approach is to charge termination fees for disconnecting parties. The stranding risk may also be mitigated through careful choice of the economic life of the connection asset.

182. These tools could be used where the connection asset is sufficiently unusual that re-deployment of the asset is not seen as likely. Houston Kemp notes that the AER permits prepayments or financial guarantees to be sought from the access seeker. HoustonKemp quotes the AER as follows:

> "Securities fees, whether by prepayment or financial guarantee, help to insure DNSPs [distribution network service providers] 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".[73]

### NIC and competition for connection assets

183. Some submissions argued that the requirement to use the Neutral Point as a price floor would undermine competition in the market for connection services. For example, Axiom Economics writes:[74]

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[70] Or through other charges such as fees for disconnection. Axiom rightly points out that such charges are difficult to enforce.

[71] Axiom, section 4.2.2, page 17.

[73] HoustonKemp, section 6.4, page 33.

[74] Houston Kemp make the same point.

> "If upfront connection prices were set below incremental costs, only distributors – or contractors directly engaged by them – would be able to undertake such works. Independent or unaffiliated providers would be unable to match those artificially low charges."[75]

184. We agree that it is generally desirable to allow third parties (including the connecting customer) to have the option to provide the connection assets. This limits the ability of the EDB to over-charge for connection services, to over-provide the connection service (i.e., gold-plating), or to provide it inefficiently.

185. In the case where the EDB charges all of the upfront connection costs in the form of upfront charges it is clear that requiring contestability for the connection assets is relatively easy – the regulatory framework could simply require that the customer either (a) pay the upfront charge or (b) provide the connections assets (to a given specification and standard) in kind. This allows the customer the potential to seek third-party providers for the connection assets (potentially from a list of approved suppliers provided by the EDB).

186. What about the case where the upfront connection charges are *below* the upfront costs? If the upfront connection charges (by the EDB) are below the cost of the connection assets, the EDB recovers the shortfall through the on-going charges over time. In this case, allowing contestability in the provision of connection assets would require that the EDB makes a lump-sum payment to the third-party provider of connection assets in the amount equal to the difference between the present-value of the on-going revenue and the on-going costs. With such a lump-sum payment, the customer could, as before, "shop around" for the best provider of connection assets. We understand that some EDBs (which require connecting parties to provide the connection assets themselves) have a practice of making a lump sum contribution to connecting parties to assist them in the provision of connection assets.

187. In any case, as we have emphasised above, the Authority's proposals do not, at this stage, mandate the level of the upfront charge. If the level of the upfront charge was directly controlled in future, consideration could be given to the implications for contestability in the provision of connection assets.

**Customisation of charges**

188. There is another argument in favour of setting connection charges equal to the direct costs of connection. This argument is based on the observation that on-going charges are not usually differentiated according to the individual customer. If connection costs vary across customers and if on-going charges are not differentiated across customers, then it follows that any variation in the connection costs must be reflected in the connection charges. This argument is made by Frontier:

> "While, in theory, it would be possible to adjust ongoing charges to provide this signal to customers, this would introduce substantial administrative difficulties. This is because it would require every customer, or small group of customers, to have an individual tariff maintained specifically for them over the life of the connection".[76]

189. This argument does not imply that the connection charges must be set equal to the direct cost of connection, but it does suggest that variation in connection costs should be reflected in variation in the upfront connection charges, as opposed to ongoing charges.

190. Again, since the Authority is not proposing to mandate the level of the upfront charge, we do not consider this argument relevant at this stage. If, in the future, it is considered desirable to mandate the level of the

[75] Axiom Letter, page 12.

[76] Frontier, page 13.

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.

## 4.3. Could the Problem be better solved by the Commerce Commission?

191. Several parties argued that the problems identified by the Authority would be better addressed by changes to the Incremental Rolling Incentive Scheme (IRIS) regime or the price-quality paths administered by the Commerce Commission. For example, Axiom writes:

> "The Authority's proposed solution is to fundamentally reform the connection pricing framework. This proposal would have enormous ramifications for the 29 EDBs, all of which would have to spend considerable time and effort modifying their pricing methodologies. … If the 'root cause' of the alleged problem is the incentives provided via the Part 4 price paths, one might expect the optimal solution to be found in addressing the issue via the Commission's input methodologies (IMs) or the reset methodology. …
>
> Simply put, it seems counterintuitive to address alleged issues with the incentive properties of the *revenue cap* through a complete overhaul of *pricing.* Ergo, even if the initial diagnosis is accurate (which is questionable), the prescribed 'cure' (connection price reform) and the party proposed to administer it (the Authority) do not appear to be optimal. While considering alternative solutions is beyond the scope of this report, we believe it is highly likely that the Commission would be the more appropriate entity to develop and implement such solutions".[77]

192. Similarly, HoustonKemp write:[78]

> "[T]he potential concerns raised by the Authority about distributors' incentives to fund capital expenditure through connection charges can most directly be resolved through modest amendments by the Commerce Commission that ensure net capital expenditure is unaffected by increases in connection charges, rather than through the Authority changing an entirely different element of the regulatory framework and thereby creating additional concerns."

193. There is no disagreement that the Authority has the power to regulate connection charges. The Authority's power to set pricing methodologies operates alongside regulation by the Commission under Part 4 of the Commerce Act, while allowing for differences in their respective statutory functions, purposes and objectives. Section 32 of the Electricity Industry Act 2010 provides that:

> "the Authority must not purport to regulate anything in the Code that the Commission is authorised or required to do or regulate under Part 4 of the Commerce Act 1986 except for: (a) quality or information requirements for … distributors, in relation to access to … distribution networks: (b) pricing methodologies for … distributors."

194. But should the regulation of connection charges be left to the Commerce Commission? In our view, changes to the regulatory framework for EDBs administered by the Commerce Commission would not easily mitigate the market power of EDBs with respect to connection charges. Specifically, it is not clear to us that the revenue from connection charges could be brought within the existing revenue cap applying to all the other charges of an EDB administered by the Commerce Commission[79], for the following reasons:

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[77] Axiom, section 2.3, page 8.

[78] Houston Kemp re-states this point in their response to submissions.

[79] To an extent, connection charges already affect the level of the revenue cap in the status quo. This is because forecast connection charges are subtracted off the RAB, so as increase in forecast connection charges reduces long-run revenue. But this relationship does not constrain connection charges ex post (once the revenue cap is set).

195. First, the existing revenue cap applies to services that are all delivered within a specific block of time (e.g., one year). Revenue from connection charges must be traded off with revenue from on-going charges over a long period of time. It is not clear that this could be achieved by simply including revenue from connection charges within the annual revenue cap. At least careful thought would need to be given to resolving the mis-match in time dimensions.

196. Second, revenue caps are most effective for services which have a low marginal cost. Revenue caps are acceptable for many distribution services where the marginal cost is low (or where it is considered desirable to not incentivise EDBs to encourage over-consumption of electricity). But this is not the case for connection services. Connection assets can be particularly costly. Where the marginal cost of the service is high an EDB operating under a revenue cap has an incentive to reduce the provision of that service (i.e., to refuse an expansion in the service and/or to seek to reduce provision of the service). If connection charges were brought within the revenue cap in a simplistic way EDBs would have an incentive to deny and/or delay connections.

197. These problems could, potentially be addressed by implementing a more sophisticated form of cap. For example, the revenue cap could be adjusted by the volume of connections. If it were possible to establish a mechanism which made the revenue cap depend on the forecast cost of connections in some way (this could be difficult) then in principle the EDB would retain the incentive to supply new connections *and*, at the same time, any increase in the charge per connection would require a reduction in other ongoing charges. This option is discussed by Incenta:

> "The two options for aligning the EDBs incentives [regarding connection charges] would be to have the capital expenditure allowances that are used in the IRIS adjusting with the level of connection activity, or to apply a revenue-driver (i.e., an adjustment to the revenue cap) that again relates to the level of connection activity. To this end we note that during the Commerce Commission's recent review of the Input Methodologies for the EDBs, several stakeholders proposed that the capital expenditure allowances used in the IRIS should adjust with the level of connection activity, and so address the incentive issue noted earlier. While the Commission adopted this suggestion as an option where a customised price path is applied, it did not adopt it for the DPP regime. However, the Commission's decision for not applying it in the latter case stemmed from the greater difficulty of devising an appropriate adjustment in the context of a DPP, and the Commission has committed to gather more information in relation to the relevant characteristics of customer connections that may allow it to reconsidering this matter in the future".[80]

198. As Incenta notes, a scheme of this kind was considered by the Commerce Commission for inclusion in the DPP. Recently the Input Methodologies were amended to allow schemes of this kind to be included in a Customised Price Path (CPP).[81]

199. In principle, this scheme could estimate unit rates for different connection types and then allow a revenue adjustment ex post based on the out-turn volume of connection for each connection type. However, problems would likely remain, since connection costs would likely vary even with categories of connection types. The EDB would retain an incentive to refuse connection for customers with an above-average

[80] Incenta, para 21, page 9.

[81] See the discussion about a new 'connections volume wash-up mechanism' in the Input Methodologies for CPPs in the Commerce Commission's final decision on the Input Methodologies Review ("Financing and incentivising efficient expenditure during the energy transition topic paper", paragraph 3.225 and following).

connection cost for that category. In addition, the cap, based on the average connection cost could still allow significant market power to be exercised on an individual customer.[82]

200. In any case, many of the issues that the Authority is trying to address do not fit easily or simply into the existing revenue cap regime administered by the Commerce Commission. This includes, say, "position in queue" issues ("first mover disadvantage" or "last straw"), policies to spread risks (such as a "pioneer" scheme) or to require the disclosure of information to assist connecting parties in their negotiations with EDBs. It is not obvious to us that the regulation of connection charges is best addressed by changes to the Input Methodologies.

[82] To see this, let's suppose that the EDB estimates that ten customers will connect in a given category, and the average cost of connection is, say, $10,000 per connection - but could vary from $5,000 to $15,000. Let's suppose that the revenue cap is augmented so that the EDB can receive an additional $10,000 for each connection it carries out. Then, ex post, the EDB will have an incentive to refuse connection to customers with connection costs above $10,000. Moreover, in the event that the EDB connects nine customers, with a total cost of, say, $55,000, if the EDB charges each of these customers at cost, the EDB will be allowed to charge up to $45,000 for connecting the tenth customer, which could be well above cost.

# 5. OTHER ISSUES

201. In its proposals, the Authority included a proposal for a "Pioneer scheme" which aims to reduce the extent of first-mover-disadvantage by requiring that, in the event of subsequent connections which share the same assets, the EDB will pay rebates to the first mover. This proposal received some support. For example, Frontier:

> "We agree with the Authority that a pioneer scheme can address first-mover disadvantages which may distort investment and impede development of the electricity network. A pioneer scheme ensures that the first connecting party is not left exposed to the full cost of its connection where subsequent connections are anticipated. It ensures that all customers connecting to a new area contribute equitably to the costs of extending the electricity network, which in turn encourages timely and efficient network connections. Additionally, the scheme prevents subsequent connections from free-riding on infrastructure funded by the initial connecting party. This ensures that all connecting parties face appropriate cost signals, including subsequent connecting parties, thereby promoting efficient decisions about the timing and location of connections".[83]

202. Several of the expert reports noted that the Pioneer scheme proposal may be costly to administer and may yield relatively limited benefits.[84] For example, Incenta note that a Pioneer scheme involves on-going monitoring and enforcement costs.

> "[P]ioneer schemes are likely to have a non-trivial cost to operate, as the *ad hoc* nature of the projects to which they apply means that administration is likely to involve largely manual processes. In addition, pioneer schemes change the nature of the connection transaction from a transaction that occurs at a single point in time to one that must be monitored, executed and enforced over an extended period".[85]

203. Incenta also note that, even where they are available in Australia, Pioneer schemes are not used all that often. Incenta argue that if the Authority chooses to retain the Pioneer scheme proposal it should (a) involve a minimum payment requirement; (b) include a simple methodology for calculating residual asset value; and (c) not extend too far into the future. Frontier also recommend allowing the EDB to deduct a reasonable administrative fee from the refund or rebate to cover the costs of administering the process.

204. We acknowledge these concerns and agree that a final decision on the implementation of Pioneer schemes will require a balancing of the potential benefits against the administrative costs.

205. In its report, Sapere argues that the Authority could have gone further in its proposals. For example:

- Sapere argues that EDB should be required to provide information – in a digitally searchable manner – which allows connecting parties to identify potential connection locations and to trade off hosting capacity and price. This proposal seems similar to the Network Opportunity Maps that are available in Australia.[86]
- Sapere also argue for greater consistency in processes and technical standards for connection and mandatory maximum response times to connection requests.

206. We have not formed a view on these proposals.

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[83] Frontier, section 5.4.3, page 30.

[84] See Frontier, page 31.

[85] Incenta, para 34, page 14.

[86] https://www.energynetworks.com.au/projects/network-opportunity-maps/

# 6. CONCLUSIONS

207. The Authority's proposals for improving the regulatory framework for distribution connection charges attracted a number of submissions, many of which commissioned independent economic analysis. Although some of that economic analysis was supportive of the approach of the Authority, much was rather critical. We have assessed the economic expert reports in detail. Putting aside the commentary on the reliance limits, our view is that, while the export reports highlighted some weaknesses in the Authority's Consultation Paper, overall the proposals of the Authority remain well supported.

208. In regard to evidence of a problem, we accept that the Authority could have done more to document - either quantitatively or qualitatively – the problems that are arising under the current regulatory framework. At the same time, however, we note that there is little dispute that EDBs have market power over connection charges, connection charges are widely regulated in other jurisdictions, and, setting aside the reliance limits, the Authority's fast-track proposals do not impose significant regulatory constraints on the discretion of EDBs. In this light we consider that detailed investigation of evidence of a problem is unnecessary.

209. In regard to the pricing concepts (the Neutral Point and Balance Point), the respondents made a range of criticisms. Although this terminology is somewhat novel, we consider that, correctly understood, these proposals are extensions or applications of conventional concepts in regulatory pricing theory. We consider that some of the criticisms reflect, in part, a misunderstanding of the proposals of the Authority. In particular, there appears to be a misunderstanding that the proposals do not mandate a particular structure between upfront and on-going charges. There could be reasons for preferring, say, low upfront charges (and higher on-going charges) but these do not form part of the regulatory proposals being put forward by the Authority.

210. We remain of the view that this work program (both the fast-track and full reform) offers the potential to materially improve the regulatory framework for distribution charges in New Zealand, thereby facilitating electrification of the NZ economy.


**UK**

Queens House

55-56 Lincoln's Inn Fields

London WC2A 3LJ

T. **+44 (0)20 7269 0210**

E. **info@cepa.co.uk**

**www.cepa.co.uk**

**Australia**

Level 20, Tower 2 Darling Park

201 Sussex Street

Sydney NSW 2000

T. **+61 2 9006 1308**

E. **info@cepa.net.au**

**www.cepa.net.au**

**Cepa-ltd** **@cepaltd**