Distribution connection pricing proposed Code amendment

Consultation paper

25 October 2024

ELECTRICITY AUTHORITY
TE MANA HIKO

Executive summary

Distribution networks have a critical role to play in the electrification of New Zealand. This role has grown in importance and will continue to grow as more businesses – like industrial plants, EV charge point operators, and other large energy users – look to connect directly to the network.

Change is needed to ensure the regulations that underpin network connections – both pricing and processes – support more, and smarter connections, and lead to efficient investment decisions by developers and distributors.

More efficient connection prices and processes will help remove barriers to getting electrified infrastructure and businesses up and running, so New Zealanders can more quickly enjoy the benefits they bring, and at lowest cost.

The Electricity Authority Te Mana Hiko (the Authority) wants regulations that make access to distribution networks more complete, consistent, streamlined and robust. These improvements aim to facilitate the timely and efficient investment in electrification of businesses, transport and industrial processes, which over time, benefits all New Zealanders.

We expect having more efficient, more streamlined connections will flow through to a range of benefits to the electricity system, such as opening the door to more flexibility, more regional resilience, more innovation and strengthened security of supply.

This consultation paper focuses on connection pricing methodologies for energy users connecting to distribution networks. It complements our work to improve non-price access terms for network connections that is also now out for consultation.[1]

These two complementary consultations are just one part of our work to ensure the Electricity Industry Participation Code 2010 (the Code) creates the building blocks the market needs to deliver a future electricity system – one that supports New Zealand's efficient electrification, and is delivered at lowest cost to consumers.

Connection pricing is fundamental

Connection pricing is a fundamental component of network access. There are inconsistent practices across the distribution sector, adding inefficient cost and complexity for connection applicants. To date, regulation has been light touch and has not provided strong or consistent incentives for efficient pricing, which is likely slowing down electrification and adding unnecessary costs that can flow through to consumers.

In some networks, connection charges are very low, so newcomers wanting to connect to a distribution network, like a large manufacturer, are effectively being subsidised by existing users on that network. Elsewhere, connection charges can be very high, which can be a barrier to newcomers and inefficiently dampen connection demand.

[1] Electricity Authority, Network connections project: Stage one amendments, October 2024

Getting the right rules in place will help lay the foundation New Zealand needs to support more of the electric infrastructure that underpins our lives and prosperity – like manufacturers, businesses, EV charging stations, data centres and new housing developments. If we don't get these building blocks in place, we risk slowing down New Zealand's electrification; and businesses and consumers, the economy and the environment lose out on the benefits it brings.

Due to the incentives and pressures on distributors, there has been a steady trend over the last decade of an increasing reliance on up-front connection charges. This is concerning at a time when electrification of the New Zealand economy depends on affordable network access.

We want connection pricing to be efficient. Pricing should strike a balance where newcomers do not face such excessive costs that it deters efficient investment, and where existing users benefit from connection growth that spreads fixed costs across more users. Efficient pricing is one of the keys to unlocking more network connections. It also promotes competition and lowers consumer prices over the long term.

Connection pricing methodologies should ensure distributors set efficient connection charges that not only determine how much cost is allocated to newcomers, but also encourage efficient network investment. Poor connection pricing weakens incentives to ensure network connections are efficiently designed and delivered and drives applicants to shift their position in the connection queue to avoid high charges for first- or last-movers.

We consider connection pricing methodologies under the Electricity Industry Participation Code 2010 (the Code) will make connecting more efficient and drive better outcomes compared to a purely facilitative approach, such as relying on non-binding pricing principles or guidance.

In developing the proposed amendments, we have had regard to the Statement of Government Policy (GPS) to the electricity industry, issued in October 2024. The Authority's proposals for efficient distribution connection prices and processes fully aligns with the GPS, which calls for connections to enable efficient investment in new electricity use, including electrifying transport and process heat in industry.[2]

Our focus is on ensuring consumers benefit from investment across the electricity system and have access to affordable electricity solutions for generations to come, and we do not consider principles or guidance on connection pricing would achieve the timely and enduring change Aotearoa needs to support its shift towards a highly electrified economy.

In developing these proposals, we learned from mature regulatory frameworks overseas, while tailoring an approach that suits the New Zealand environment. We have used connection pricing methodologies in Australia and the United Kingdom as reference points.

We also drew on the independent Distribution Connection Pricing Technical Group to provide stakeholder knowledge as we developed our proposals. The Group was established to assist with testing the workability of related Code amendments (see box 1).

[2] Government Policy Statement on Electricity - October 2024.pdf (beehive.govt.nz) Page 4

We propose a package of fast-track measures as a stepping stone to full reform

The Authority recognises full reform of connection pricing methodologies is likely to be needed to ensure connection pricing is efficient. Our starting point is a sector with highly diverging approaches and starkly different levels of reliance on connection charges to fund network investment. That picture needs to change.

However, full reform of connection pricing methodologies will take time. Connection pricing is complex, and affects how distributors manage their networks, their businesses and their customer and contracting relationships. We need to allow enough time to get it right.

Nevertheless, we consider there is a need for some urgency to address some known barriers that can be removed swiftly. Acting now on these issues will lead to connection pricing levels and structures that support better outcomes for distributors, connection applicants and consumers, and flow through to the broader economy and environment.

We have proposed a package of fast-track measures in this paper. These are pricing methodologies designed to deliver improvements, while providing stepping stones toward full reform. The timing and pace of moving from fast-track to full reform will depend on sector progress, the Authority's future priorities and feedback we receive from stakeholders.

While not proposing Code amendments on full reform at this stage, this paper does provide a view of anticipated features.

The proposed package of fast-track elements aims to improve a number of areas

The proposed package of fast-track elements aims to:

- allocate enhancement and network capacity costs
- refund parties who fund network extensions
- improve transparency
- improve negotiations
- safeguard against distributors increasing their reliance on up-front charges
- facilitate price-quality path reviews.

Allocate enhancement and network capacity costs

We propose two new costing and allocation requirements for enhancements and network capacity.

1. Connection applicants will only pay for the 'minimum scheme' for their connection, unless they explicitly choose one or more enhancements. The minimum scheme is the least-cost technically acceptable solution for connecting the applicant to the network. Applicants can also ask for a 'flexible' connection, which may deliver a lower cost in return for allowing their demand to be managed when the network is stressed.

2. Distributors who recover network capacity costs through connection charges will need to use published rates – charging for consuming capacity rather than adding capacity. This makes charges more transparent, predictable and consistent. It also means distributors are incentivised to manage construction costs, as they cannot pass cost variations through into connection charges.

Refund parties who fund network extensions

We propose to require distributors to operate 'pioneer schemes' for network extensions where, if certain criteria are met, distributors collect a contribution from later applicants for payment to earlier funders (the 'pioneers'). This mitigates first-mover disadvantage, reducing the incentive for applicants to delay their application so they can benefit from the pioneer's earlier investment on a new connection. Many distributors already operate such schemes, so our proposal will expand coverage and ensure greater consistency.

Improve transparency

We propose requiring distributors to calculate a reconciliation for each connection that breaks down the connection charge into incremental and network costs.

The reconciliation will use a standardised approach, bringing consistency and providing a stepping stone should we progress to full reform. The breakdown will show how far above the neutral point each charge sits.

We propose the reconciliation must be provided to customers on request. Reconciliation information will also be used by the Authority to monitor connection pricing.

Improve negotiations

We propose to introduce dispute resolution provisions to encourage participants to negotiate in good faith, while providing a process for efficiently resolving deadlocked disputes. This would largely apply the current dispute resolution process for generation connection processes in Part 6 of the Code to load connection pricing methodologies. If the parties cannot resolve the dispute, the Authority or Rulings Panel can make a determination.

The dispute resolution requirements in the Code cannot be imposed on connection applicants who are not participants. In this paper, we discuss other requirements that will place incentives on distributors to apply the connection pricing methodologies and also seek to resolve complaints in respect of these applicants. We also discuss below an alternative contractual option that would reframe some requirements as contractual terms between parties, including dispute resolution terms.

Safeguard against distributors increasing their reliance on up-front charges

While we think the measures above will improve connection pricing, they do not, in themselves, prevent a distributor from setting inefficiently high connection charges. As such, there is a risk of the trend toward ever higher reliance on connection charges continuing.

To safeguard against this, we propose to introduce a pricing methodology that sets reliance limits. Distributors will be required to ensure their connection pricing approach does not result in them breaching their limit. 'Reliance' refers to how much of a distributor's connection and system growth investment is funded through connection charges. We propose a limit of 47% (the sector average across recent years) or the distributor's actual 2024 reliance level – whichever is higher for each distributor.

Facilitate price-quality path reviews

For some distributors, our proposals may mean they will need to recover less cost through connection charges and more costs through ongoing revenue. For non-exempt distributors this could have implications for determinations under Part 4 of the Commerce Act (price-quality paths) that regulate the maximum average price or total allowable revenue distributors can charge.

For these distributors, if the Authority asks, the Commerce Commission (the Commission) is required to reconsider price-quality paths potentially impacted by the connection pricing methodologies. This would likely lead to a round of engagement between the distributor and the Commission before the Commission decides whether to amend the price-quality path.

We expect impacted distributors to seek to resolve these matters with the Commission without delay, ideally before the connection pricing methodologies must be applied. If this is not achievable, a distributor has the option of applying for an exemption from compliance with the Code under section 11 of the Electricity Industry Act 2010 (the Act). The Authority publishes Exemption Guidelines to assist participants who wish to apply for an exemption. We will consider updating the Exemption Guidelines to outline how we would propose to consider applications for exemptions in these specific circumstances.

An alternative contractual model

An alternative option to the proposed drafting included in this paper is to make some of these requirements default contractual terms. This would not involve any change to the substance of requirements outlined in this paper or the underlying policy rationale. Rather, some requirements would be reframed as contractual terms. Reconfiguring some requirements as contractual terms would better reflect the contractual nature of the relationship between the parties and avoid the need for different requirements for non-participants and participants. It would also allow for private dispute resolution arrangements without the need for regulatory enforcement processes (which are not primarily designed for dispute resolution purposes).

This paper explains which requirements would be contractual terms and which would remain Code requirements. We are interested in receiving submissions on this option. If we are minded to further develop this option, the technical drafting will be released before any final decision is made.

Understanding the impacts

The impact of our proposals will vary between connection applicants, and between distributors.

One clear impact is greater consistency (between distributors) and greater use of pricing features that promote efficient investment, including by improving predictability, consistency and incentives for applicants. This should reduce barriers to new connections, helping to reduce the cost of electrification, housing development and business growth.

The Authority engaged the economic consultancy CEPA to carry out a qualitative assessment of the expected costs and benefits of its proposals. CEPA found the benefits of the proposal are likely to exceed the costs and the Authority's proposals would promote more efficient connection decisions and "facilitate the ongoing process of power system transformation".[2]

If we proceed to implement full reform, all connection pricing will be at an efficient level – sitting within a range where new connections are neither subsidised, nor deterred by excessively high charges. Within this range, existing customers are made better off as each new connection spreads fixed costs and reduces the average charge per customer.

Our proposals – particularly introducing capital contribution reliance limits – may result in an initial financial impact on some existing customers of distributors with particularly high levels of reliance on capital contributions. This is because some distributors may need to recover a reduction in capital contributions through ongoing lines charges. We expect this impact to be

relatively small, at least initially. We note this amount will grow over time as the regulatory asset base increases in subsequent regulatory periods. However, we expect our proposals would reduce charges for existing customers over time due to increases in the efficiency of connection arrangements.

The Authority is acutely aware of increased cost-of-living pressures on consumers and rising energy bills as part of this – particularly with anticipated price increases next year as a result of the reset of the price-quality path this November. As a kaitiaki of energy, affordability is a key focus across all of our work. We are using the levers we have to put downward pressure on energy prices, reduce network costs and support consumers to manage the impacts of higher prices.

Next steps

We're committed to making fast progress in these key problems to improve access to distribution networks. This is fundamental to New Zealand's energy transition, and the efficient operation of the electricity sector.

While not a silver bullet, we expect this comprehensive package will deliver major improvements in the near term. However, we are open-minded as to the best way forward and invite your input on matters of detail and overall approach.

We will provide information sessions during the consultation period, and welcome questions and queries at any time.

We will consider all feedback and decide on next steps in the second quarter of next year. If we move forward with our proposals, distributors will need to reflect the new requirements in all connection quotes for load from 1 April 2026.

Box 1. Notes on the Distribution Connection Pricing Technical Group

Finally, we would like to thank the Distribution Connection Pricing Technical Group for their assistance and commitment as we have prepared our proposal. The group's purpose was focused on providing various perspectives on the implementation practicalities of connection pricing methodology proposals as they were being developed by the Authority. These implementation perspectives informed our thinking as we developed the proposed amendments. The group has worked alongside us to our tight timeframes. This has meant the group has not had the opportunity to fully review all proposals, including the drafting of the proposed amendments. The proposals in this consultation paper do not represent the group members' individual views. Our proposals have benefited from members' valuable insights and advice. We intend to engage with the group further as we review submissions and reach decisions on next steps.

Contents

1. What you need to know to make a submission

What this consultation is about

1.1. The Electricity Authority Te Mana Hiko (the Authority) is seeking feedback on proposals to regulate pricing methodologies for connecting load to distribution networks.

1.2. In this paper, we set out our preferred option for distribution connection pricing reform and propose amendments to the Electricity Industry Participation Code 2010 (the Code) to fast-track a package of reform components. We have built on our thinking set out in the Issues paper[3], (June 2023) and the Next steps paper[4], (May 2024). We update the context of the reform and define the problem that needs to be addressed. We also discuss various possible options for addressing these issues and our rationale for our preferred approach.

1.3. We are seeking feedback on both the fast-track package which is specified and the full reform approach that is outlined. The consultation process will assist to identity issues that require further consideration and test the specific proposals set out in the paper. If we propose further reform in the future, such as the full reform, we will consult on any proposed Code amendments at that time.

How to make a submission

1.4. The Authority's preference is to receive submissions in electronic format (Microsoft Word) in the format shown in Appendix A. Submissions in electronic form should be emailed to connection.feedback@ea.govt.nz with 'Distribution Connection Pricing Consultation' in the subject line.

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

1.6. 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).

1.7. 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.

1.8. 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

3 Targeted reform of distribution pricing: Issues paper (ea.govt.nz)

4 Distribution Pricing Reform: Next steps (ea.govt.nz)

it. The Authority would normally consult with you before releasing any material that you said should not be published.

When to make a submission

1.9. Please deliver your submission by 5pm, **Friday 6 December 2024.**

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

1.11. There will be an opportunity to make cross-submissions. The two-week cross-submission period will close at 5pm on Monday 23 December 2024.

2. Introduction

2.1. This paper sets out the proposed overall approach by the Authority to reform distribution connection pricing and to consult on proposed Code amendments that introduce an initial package of pricing methodologies.

2.2. The Authority's Distribution Pricing: Next Steps paper[5] in May 2024 (Next Steps paper) included a chapter on connection pricing that covered:

(a) relevant context and current arrangements

(b) a summary of the problem and available evidence

(c) a summary of submissions received on the Authority's July 2023 consultation paper[6]

(d) our assessment that regulation is the best option

(e) our intention to convene a technical group and develop a draft Code amendment for consultation.

2.3. This paper advances two areas of that work by:

(a) setting out the Authority's preferred option for distribution connection pricing reform

(b) proposing Code amendments to fast-track a package of pricing methodologies that aim to:

(i) improve transparency and efficiency by requiring distributors to allocate enhancement costs relative to a least-cost 'minimum scheme' to the party (customer or distributor) selecting the enhancement

(ii) enhance predictability and consistency by requiring distributors who charge for network capacity to use posted rates. This removes first-mover disadvantage and other 'position-in-queue' problems with respect to network upgrade works

(iii) enhance transparency by requiring distributors to break down connection charges into incremental costs and network costs using a standardised methodology. This also provides a foundation for further reform.

(iv) mitigate first-mover disadvantage for extension works by requiring distributors to implement and administer pioneer schemes that transfer rebates to original funders

(v) safeguard against pricing becoming less efficient by establishing limits that prevent distributors increasing their level of capital contributions where there is already high reliance on capital contributions to fund network connections and growth

(vi) provide access to dispute resolution provisions to ensure parties work in good faith, while providing a process for final determination if the dispute cannot be resolved.

2.4. This paper outlines some alternative options that we are seeking views on. This includes a technical drafting alternative (where some requirements are framed as

5 Electricity Authority, *Distribution Pricing Reform: Next steps (ea.govt.nz)*, May 2024

6 Electricity Authority, *Targeted Reform of Distribution Pricing: Issues paper (ea.govt.nz)*, July 2023

default contractual terms). We also invite feedback on alternative parameters for some of the pricing methodologies from those proposed and on the option of applying a subset of the package proposed.

2.5. This paper also refers to the process for the Commission to reconsider a distributor's price-quality path if requested by the Authority, and the option for a distributor to make an exemption application if a reconsideration process cannot be completed within available timeframes.

2.6. The Authority aims to make final decisions on the proposed Code amendments in the first half of next year, with requirements to be reflected in connection quotes from April 2026. The Authority will then determine the timing to develop any further Code amendment proposals relating to a possible full reform. Depending on further analysis, the Authority's priorities and resources, and subject to consultation, full reform could be progressed and be applicable for connection quotes from April 2027.

2.7. The balance of this paper also includes:

(a) a summary of the background to this paper, context relevant to connection pricing, and the Authority's understanding of the problem that these proposed reforms aim to address

(b) a more detailed description of the Authority's proposals, including how they are intended to operate, the rationale, and expected benefits and impacts

(a) a regulatory statement

(b) analysis to demonstrate how changes in connection charges could impact ongoing charges.

Terminology

2.8. The following terminology has been used through the paper.

(a) Access seeker – see also connection applicant

(b) Connection applicant – the person who:

i. 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 a network extension including by a network extension; or

ii. is a consumer, and applies to a distributor:

- 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
- to change to or from a flexible to a standard connection; and
- includes where any of the connection applications in the two preceding sub-paragraphs involves allocating additional network security or capacity, with or without associated physical works

(c) Connection charge – means:

i. 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

ii. 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

iii. includes any connection fees or pioneer scheme contributions

iv. for the avoidance of doubt does not include line charges

(d) Connection fee – 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

(e) Connection pricing methodologies – the pricing methodologies that each distributor must use for determining connection charges, other than any connection fees, and connection pricing methodology has a similar meaning

(f) Connection works - 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

(g) Extension – connection works that tie a proposed connection to a shared network

(h) Incremental cost – the capital cost of a connection plus the cost of specific operating arrangements if applicable

(i) Incremental revenue – the additional revenue generated by a new connection to the network

(j) Network capacity – the capacity of a distribution network to convey electricity under a range of load and generation conditions in accordance with reasonable and prudent operating practice

(k) Newcomer – a newly connecting customer to the network

(l) Pioneer – means:

i. the connection applicant referred to in paragraph (b) of the definition of pioneering connection works (the first pioneer);

ii. any connection applicant who subsequently connects to the pioneering connection works (a subsequent pioneer) and –

- who makes a pioneer scheme contribution of more than the amount of $10,000 every 12 months, adjusted each year by the CPI movement with the first adjustment occurring on 1 December 2026; and
- is determined by the relevant distributor to be a pioneer under clause 6B.9(1)(b)

(m) Posted connection charge - 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

(n) Posted capacity rate – the estimated average cost per capacity unit 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

(o) Posted extension rate – 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

(p) Shared network - any part of a distribution network that is not customer-owned assets or dedicated assets

3. Framework for determining pricing methodologies

3.1. This chapter provides an overview of the statutory framework relevant to the determination of pricing methodologies by the Authority and the statutory interaction with regulation under Part 4 of the Commerce Act 1986. We also briefly outline the relationship between the proposed pricing methodologies for connecting load and the consultation on proposals to amend Part 6 of the Code to extend to non-price requirements and processes for connecting load to distribution networks.

Authority's objectives

3.2. The Authority's main objective is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers. Its additional objective is to protect the interests of domestic and small business consumers in their dealing with industry participants.[7]

3.3. The Authority may amend the Code to include provisions it considers necessary or desirable for achieving these objectives or performing its functions. The proposed amendments align with the Authority'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'.

3.4. The proposals also support the Authority's additional statutory objective to 'protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers'. An example of this would be decisions around regulating direct dealings between distributors and domestic consumers and small business consumers for new or upgraded connections to the network.

3.5. The Authority is also required to have regard to the Government Policy Statement – electricity industry (GPS), issued in October 2024. We have had regard to the GPS and our proposals are aligned with it, including with the GPS focus on optimising network capacity to avoid unnecessary costs flowing through to consumers.

Relationship with Part 4 of the Commerce Act

3.6. The Act and the Commerce Act 1986 together empower the Authority to determine pricing methodologies for distributors notwithstanding this may relate to regulation by the Commission under Part 4 of the Commerce Act.

3.7. Specifically, section 32 of the Act provides 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 Transpower or distributors, in relation to access to transmission or distribution networks:

(b) pricing methodologies for Transpower or distributors.

3.8. Under section 54V of the Commerce Act, the Authority is required to consult with the Commission before amending the Code in a manner that is likely to affect the Commission's exercise of its functions and powers in relation to distributors. The Commission must also take account of the Authority's pricing methodologies when

[7] Electricity Industry Act 2010, section 15. The additional objective applies only to the Authority's activities in relation to the dealings of industry participants with domestic consumers and small business consumers.

exercising its powers and must reconsider a section 52P determination for distributors if requested to do so by the Authority.

3.9. In this way the Authority's power to set pricing methodologies is designed to operate alongside regulation by the Commission under Part 4 of the Commerce Act, while allowing for differences in their respective statutory functions, purposes and objectives.

3.10. As explained below, the pricing methodologies proposed could potentially impact on a distributor's revenue allowance regulated by the Commission, for example, if a distributor is required to reduce the extent of its projected reliance on capital contributions for network connections used to set its price-quality path. The pricing methodologies also interact with the Part 4 requirements in other ways, for example the information disclosure requirements. The Authority has engaged with the Commission since June 2024, including where the Commission's representative has attended the DPCTG meetings. Formal consultation on the proposed amendments has also commenced and will continue during and after the consultation process.

Interaction with Part 6 reforms

3.11. The Authority is also consulting on proposed amendments to Part 6 of the Code to regulate non-price terms and processes for connecting load to the distribution network. These reforms extend and update existing requirements for connection of distributed generation.

3.12. These proposed amendments will set regulated and prescribed terms for load connections. Among other things, the proposals introduce an obligation on the distributor to connect load where certain conditions and requirements are met.

3.13. The connection pricing methodologies are related to these Part 6 proposals as they stipulate the pricing methodologies that must be applied when determining connection charges for load connection.

3.14. While we are consulting on the pricing methodologies under a new proposed Part 6B, it is possible the proposed amendments will be incorporated within Part 6 at the final decision stage (similar to distributed generation connections where non-price terms and pricing principles are included in the same Part 6).

4. Background and context

4.1. This chapter details the work leading up to this paper and provides updated information on the context for reform.

4.2. New Zealand's energy system is changing to meet the demands, and address the challenges, of an increasingly electrified economy. Over the short, medium and long term, we need more and faster investment in a mix of generation, storage and technologies. We also need smarter systems, more innovation, more flexibility and more options for consumers and opportunities to participate in the market.

4.3. The Authority has a role to play and is getting the right regulations and rules in place across the system to help set the market up to evolve. This consultation is one part of the Authority's work programme that is focused on laying the regulatory building blocks for a future-ready electricity market, while maintaining a reliable, secure, sustainable and affordable supply. Some of the Authority's key areas of work include:

- *strengthening security of supply* – by improving the accuracy and frequency of short-term generation forecasts, disclosing hedge information to better manage risks and investment decisions, and enabling demand-side flexibility to promote transparency and understand trends.
- *encouraging more investment and deployment of new generation* – through the generation investment data and dashboard[8] to improve investment confidence and inform decision-making, developing standardised flexibility products and investigating strengthening the Power Purchase Agreements market to enable more renewable generation investment.
- *enabling flexibility across the system* – from supply to demand – by promoting market mechanisms, reducing regulatory barriers to investment and innovation, and enabling flexibility through transparency and access to information.
- *boosting regional resilience* – by investigating whether wholesale contract arrangements can be improved to better support new solar and wind, and encouraging rooftop solar and batteries. The Authority also recently recommended Transpower engage with stakeholders in areas vulnerable to high-impact electricity supply events to develop electricity generation[9].
- *enabling consumers to be active market participants* – we're investigating incentives that better reward consumers with home rooftop solar through the work being completed by the new Energy Competition Task Force[10].
- *empowering consumers to better manage their own electricity use and costs* – by investigating a measure to increase uptake of Time of Use pricing plans and making it easier for consumers to find the best pricing plan, which encourages more competition in the retail market and better prices and services for all consumers.

8 See Generation investment data and dashboard – now and in the future | Electricity Authority (ea.govt.nz)

9 Electricity Authority, Our energy future involves a redistribution of power | Electricity Authority (ea.govt.nz)

10 Electricity Authority, Energy Competition Task Force | Our projects | Electricity Authority (ea.govt.nz).

- *encouraging more innovation and new technologies* – through initiatives like the new Power Innovation Pathway[11] to accelerate new ideas that can bring wider benefits to the system and communities.

4.4. While each of these focus areas and workstreams aims to future-proof specific parts of the electricity system, they contribute to the Authority's overarching drive towards a sustainable, affordable, secure and resilient future electricity system that contributes to productivity, growth and wellbeing.

The Authority has a dedicated work programme to improve access to distribution networks

4.5. New Zealand's energy transition also places changing demands on distribution networks, and we need future-ready regulations that better serve consumers, distribution businesses and those wanting to connect to the network.

4.6. The Authority envisions a future where connecting to the network is efficient, practical and helps New Zealand speed towards realising the benefits of greater electrification.

4.7. We want regulations that encourage more investment in important infrastructure – like new housing developments, manufacturers and solar farms – and help larger energy users switch from fossil fuels to an electric alternative.

4.8. To ensure this occurs, 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.

4.9. Distribution connection pricing needs to be efficient and balance interests of newcomers and existing users.

4.10. The regulatory framework needs to support an effective access regime, while being flexible so good practice can evolve and be adopted by others.

4.11. These proposals aim to support more efficient investment in infrastructure, which lowers overall costs to consumers and supports a growing, thriving and electrified New Zealand.

4.12. As noted above, the Authority is currently consulting on amendments to Part 6 of the Code which relate to processes for connecting distributed generation and new provisions that specify connection arrangements for large load applications. This work, combined with requirements for pricing methodologies for load connecting to distribution networks, will significantly improve arrangements for parties accessing distribution networks.

4.13. Distribution networks play a critical role in the energy transition. Electrification unlocks significant benefits to consumers and the wider economy. Rapid and widespread electrification of transport, process heat, space and water heating, and urban housing development will lead to a significant increase in electricity demand and support a low-emissions future.

4.14. Much of this transition will take place at the distribution network level with new and upgraded connections, and changes in electricity usage at existing connections. We are already seeing an increase in connection activity and from a diverse range of

[11] Electricity Authority, Power Innovation Pathway | Electricity Authority (ea.govt.nz

connection applicants. For example, customer connections have experienced a three-year compound annual growth rate of 1.4%.[12]

4.15. Other context for distributors is that:

(a) resilience and renewal expenditure may also increase in the coming years due to increasing severe weather events and age profiles of some network assets

(b) a material increase in allowable revenue under the Commission's 2025 default price-quality path reset, which smooths the revenue increases over the regulatory period.[13]

4.16. As part of the 2025 default price-quality path reset, the Commission applied a financeability sense check. The results of their financeability sense check did not support the view of a widespread financeability problem for the next default price-quality path that applies from April 2025 (DPP4).[14]

Connection pricing has efficiency impacts

4.17. Efficient distribution pricing plays a crucial role in guiding investment and usage patterns through this transition by signalling the cost consequences of network usage and avoiding deterring usage that does not add to costs. We refer to this as 'cost-reflective pricing' and it is a core component of the Authority's Distribution pricing principles.[15] Cost-reflective pricing provides incentives to use the network and make investment choices that lower costs and promote the long-term benefit of consumers.

4.18. The Authority's cost-reflective pricing principles are relevant to up-front and ongoing distribution prices as they promote efficiency, which leads to lower costs for consumers over time. Efficient connection pricing benefits both access seekers, existing consumers and distributors. It sends cost-reflective signals to connection applicants, which supports efficient connection growth. It also encourages distributors to be more efficient in their network planning, investments and operations.

4.19. Connection pricing methodologies determine the up-front cost for connection applicants to connect to an electricity network or alter an existing connection. The up-front costs include fees, (recovery of administrative costs to process an application), and capital contributions.[16] Any connection costs not recovered up-front are recovered over time through ongoing distribution tariffs.

4.20. In a 2023 issues paper, the Authority examined connection pricing and consulted on three broad regulatory approaches for addressing the issues it had identified:[17]

12 Commerce Commission. Trends-in-local-lines-company-performance-25-June-2024.pdf (comcom.govt.nz)

13 Commerce Commission. Default price quality paths for electricity distribution businesses from 1 April 2025. Draft reasons paper (comcom.govt.nz), 29 May 2024,

14 Commerce Commission. Default price quality paths for electricity distribution businesses from 1 April 2025. Draft reasons paper (comcom.govt.nz), 29 May 2024, 457

15 Electricity Authority, Distribution pricing practice note (ea.govt.nz), 2022

16 We propose to deal with fees under Part 6 of the Code as they are considered administrative recovery and are prescribed by individual distributors.

17 Electricity Authority, *Targeted Reform of Distribution Pricing: Issues paper (ea.govt.nz),* July 2023

(a) continuation – an approach that would allow distributors to voluntarily coordinate improvements potentially supported by guidance and extension of the scorecards to address connection pricing methodologies

(b) control – amending the Code to prohibit or mandate specific pricing approaches

(c) call-in – review and approve pricing polices either for specific distributors or all distributors.

4.21. The Authority assessed connection pricing to be a significant issue as a growing share of connection investment is being funded through capital contributions. There is also a wide variation in distributors' reliance on capital contributions and considerable variation in distributors' approaches, philosophies, terminologies and capabilities.

4.22. In May 2024, the Authority outlined its intention to develop a proposal to regulate connection pricing methodologies in its 'Distribution Pricing Reform: Next Steps' paper:[18]

> *We have decided to develop, for consultation, a draft Code amendment to mandate efficient connection pricing. We are concerned that inefficiently high up-front charges will act as a barrier to access seekers looking for the best option to connect to the network or existing consumers wanting to upgrade their connections.*

4.23. The Authority has developed, and is now seeking feedback on proposed connection pricing methodologies to allocate costs to connection applicants at an efficient level, and in an efficient form. The scope of the proposed reform is all load customers on distribution networks. These load customers include, new housing and business connections, manufacturers, public and private EV charging facilities, and process heat conversions. The connection framework proposed is technology agnostic and designed for all types of load connections. The proposed requirements for connection charges do not apply to distributed generation and energy storage systems. Part 6 of the Code includes pricing methodologies in the form of pricing principles for these types of connections.

Context – capital contributions

4.24. Regulatory allowances and regulatory asset bases for distributors are net of capital contributions. This means capital contributions generally fall outside the Commission's efficiency incentives. Investments funded through capital contributions are akin to a pass-through cost, with no regulatory incentive for the distributor to minimise the cost of the work.

4.25. Distributors currently set connection charges for load to reflect their own preferences but must disclose, under the Commission's information disclosure requirements:

(a) their policy – typically described as a 'capital contributions policy'[19]

(b) their methodology for setting prices[20]

---

18 Electricity Authority, *Distribution Pricing Reform: Next steps (ea.govt.nz),* May 2024

19 Commerce Commission, Electricity Distribution Information Disclosure Determination, clause 2.4.6

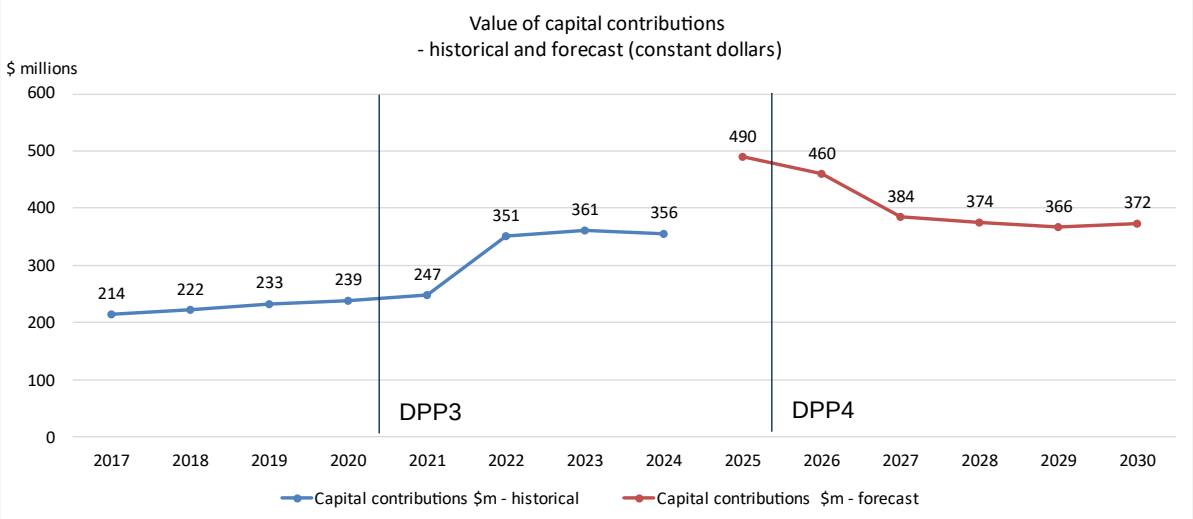
20 Commerce Commission, Electricity Distribution Information Disclosure Determination, clause 2.4.1

(c) how their pricing aligns with the Authority's Distribution pricing principles[21]

(d) historical and forecast expenditure breakdowns, including the value of capital contributions and vested assets.[22]

4.26. In absolute terms, the value of capital contributions has trended up in recent years and is forecast by distributors to peak in 2025, and then track back to current levels. Figure 4.1 uses data disclosed by distributors for the year ending 31 March 2024, adjusted to 2024 dollars.[23]

Figure 4.1: The value of capital contributions has increased recently, and is forecast to peak in 2025 before tracking back to current levels, 2017 – 2030 (constant 2024 dollars)[24]



Source: Electricity Authority analysis of Commerce Commission Information Disclosure data

4.27. A similar trend is apparent when considering up-front funding as a share of growth expenditure, as shown in Figure 4.2Figure 4.2 below.[25] Growth expenditure includes:[26]

(a) connection expenditure – network extensions, plus related upgrades and modifications

(b) system growth expenditure – adding capacity to the network to accommodate changes in peak demand or injection.

21 Commerce Commission, Electricity Distribution Information Disclosure Determination, clauses 2.4.3(2) and 2.4.6(1)(c)

22 Commerce Commission, Electricity Distribution Information Disclosure Determination, clauses 2.3.1 and 2.6.6

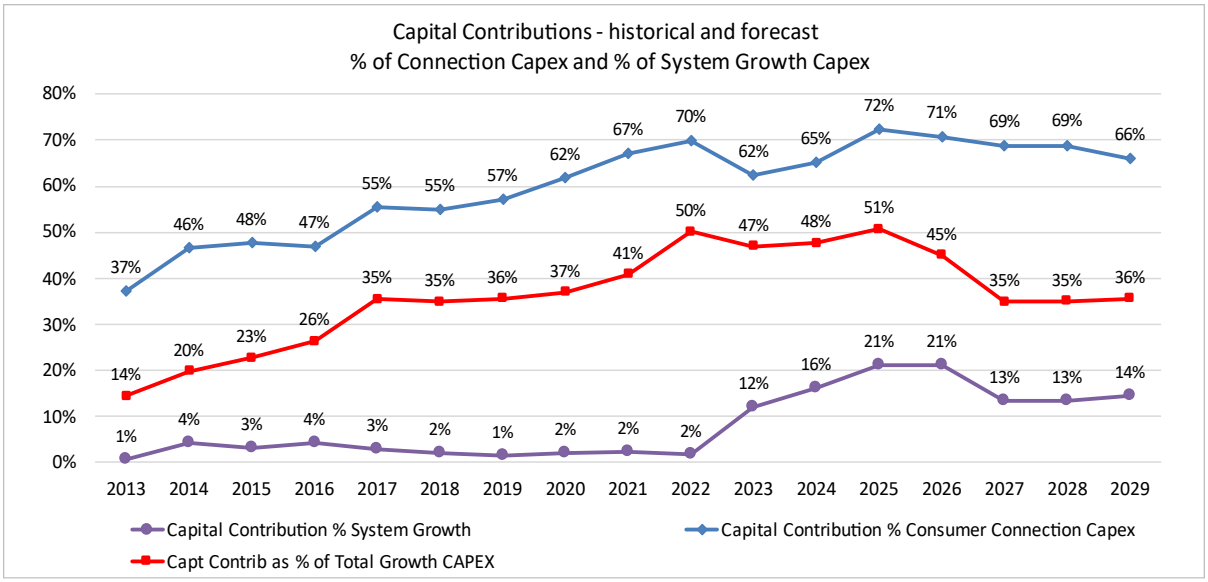
23 Historical data for the years 2013 to 2023 and forecasts for 2025 to 2034 is sourced from the Commerce Commission's Information disclosure database and restated to 2024 using the Commission's capex index of cost inflator (with incremental adjustment) as presented in the DPP4 draft decision models. For 2024 the data is sourced from individual distributors' annual disclosures to 31 March 2024 published in August 2024.

24 The $134m increase between 2024 and 2025 is largely driven by a significant forecast increase by Vector.

25 Historical data for the years 2013 to 2023 and forecasts for 2025 to 2034 is sourced from the Commerce Commission's Information disclosure database. For 2024 the data is sourced from individual distributors' annual disclosures to 31 March 2024 published in August 2024.

26 As defined under the Commerce Commission's Information Disclosure Determination Electricity-Distribution-Information-Disclosure-Targeted-Review-2024-Amendment-Determination-29-February-2024.pdf (comcom.govt.nz)

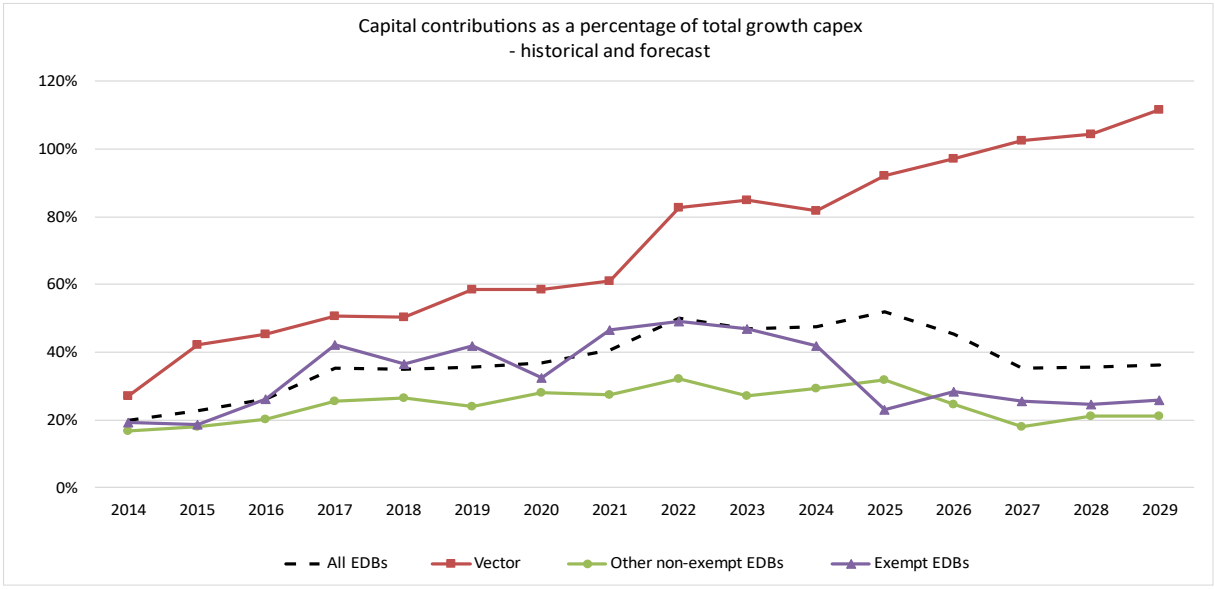
Figure 4.2: Capital contributions by category has grown as a respective share of capital expenditure by category, 2013 – 2029



Source: Electricity Authority analysis of Commerce Commission Information Disclosure data

4.28. Figure 4.3 shows there is significant variation among distributors with respect to the degree of reliance on up-front funding. The trends observed above are heavily influenced by a small number of distributors with high capital contributions.

Figure 4.3: Capital contributions as a percentage of total growth capital expenditure varies among distributors, 2014–2029



Source: Electricity Authority analysis of Commerce Commission Information Disclosure data

Developments since the Authority's May 2024 'Next steps' paper

4.29. Since May 2024, there have been developments across government and the electricity sector that are relevant to connection pricing.

(a) *2025 price-quality path reset* – The Commission released draft decisions for DPP4 for non-exempt electricity distributors on 29 May 2024. Final decisions for DPP4 must be set by 29 November 2024 and will lead to determinations

that will be relevant to implementing any Code amendments that restrict up-front funding for connections.[27]

(b) *Review of network connection processes* – The Authority is currently consulting on proposed changes to the Code to improve application processes for larger-capacity distributed generation and load (69 kVA and above) to connect to distribution networks. The new provisions will also address connection lead times, key aspects of connection process, and increase information on available distribution network capacity.[28] This work is complementary to work on connection pricing for distribution networks. When combined, these adjacent programmes of work will help ensure connecting to the network is efficient and create an environment that supports efficient investment and business decisions.

(c) The Authority and the Commission have jointly established an Energy Competition Task Force with representatives from the Ministry of Business, Innovation and Employment as observers to investigate short- and medium-term measures to strengthen the electricity market. In particular, the Task Force is considering potential measures that would promote more generation, and subsequent flexibility, at the distribution level.

(d) The Government's second emissions reduction plan for the budget period (2026–2030) will be set by 31 December 2024.[29] The plan includes actions to "introduce options to manage first mover disadvantage" and to "change cost recovery rules to allow a share of new connection costs to fall under the Commission's price-quality regulatory regime".[30] The plan also proposes to boost EV infrastructure through the development of a co-investment model to maximise private investment in charging infrastructure.

4.30. Earlier this year, the Minister for Energy set out his expectations in this area in the annual Letter of Expectations to the Authority:[31]

> *Ensure the Authority's work is aligned with and enables priority outcomes set out in Electrify NZ … and address[ing] challenges relating to connection costs, connection processing delays and grid capacity information.*

4.31. Some distributors' submissions on the Commission's draft DPP4 decisions highlighted uncertainty over the timing and volume of customer-driven expenditure and its inclusion under the Incremental Rolling Incentive Scheme (IRIS). For example:

> *More generally, we have little control over the quantum of customer driven capital expenditure, and it is inappropriate to penalise EDBs where there is greater demand for their service (or indeed, to reward EDBs where demand for their service diminishes). – EA Networks*

4.32. The submission by Electricity Networks Aotearoa (ENA) noted:

---

27 Commerce Commission, Default price quality paths for electricity distribution businesses from 1 April 2025. Draft reasons paper (comcom.govt.nz), 29 May 2024

28 Network connections | Our projects | Electricity Authority (ea.govt.nz)

29 Ministry for the Environment. *New Zealand's second emissions reduction plan (2026-2030): Discussion document.* July 2024.

30 These actions are part of the Electrify NZ policy which is a core component of the second emissions reduction plan.

31 New Zealand Government, 2024/25 Letter of Expectations (ea.govt.nz), 2 April 2024

any cap [on up-front capital contributions] would shift the cost from the beneficiary and causer of this expenditure onto existing customers who do not benefit from it. This would add to future price increases for existing consumers including those experiencing energy hardship.

Q1. Do you agree with the assessment of the current situation and context for connection pricing? What if any other significant factors should the Authority be considering?

5. Problem definition

5.1. Current settings have led to some connection pricing inefficiencies, including:

(a) an overall trend toward higher connection charges, which risks deterring new connections and weakening distributor incentives to ensure costs are efficient. Where inefficiently high costs result in fewer connections, consumers miss out on the benefits of connection growth, both in terms of higher network cost per connection and less access to the services that growth provides – such as electrification, housing developments and new businesses and services. Weak distributor incentives can lead to more expensive designs and construction costs for network investments which also flow through to higher costs for consumers

(b) large inconsistencies between distributors in how they set and communicate connection charges. This increases costs for connecting parties and discourages new connections and growth on the network which could have resulted in lower costs to all users

(c) inconsistent up-take of pricing structures and features[32] that promote consistency and predictability, compounding the impact of (b)

(d) instances of inefficiently low connection charges that are not cost-reflective and result in existing users subsidising newcomers

(e) instances of wealth transfers resulting from methodology changes that increase connection charges without offsetting reductions in ongoing charges for newcomers, compounding the impact of (a).

5.2. More details are below on the factors that influence connection pricing and the resulting problems and potential for improvement.

Influences

5.3. Under the current settings, distributors develop their own connection pricing methodologies with limited oversight. In doing so, distributors may be influenced by a range of considerations including:

(a) distributors 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.

(b) high connection charges that can enable a distributor to:

i. allocate the financing burden for connection and capacity investment to access seekers – This means access seekers pay for assets up-front, rather than the distributor recovering costs over the life of the asset.

ii. reduce exposure to prudential risk – If costs are recovered up front, then the distributor (or existing customers)[33] has less exposure to the risk

---

32 Such as rebate schemes (pioneer schemes) or posted rates.

33 If a stranded connection asset remains in a distributor's regulatory asset base, then the distributor can continue to recover the cost of those assets from its remaining customers. Distributors can also, within limits, make up for a revenue shortfall in one year by increasing target revenue in a later year (with

around whether the new connection continues to produce ongoing revenue.

iii. reduce construction cost risks – Connection charges can allow a distributor to pass on the difference between forecast and actual cost of construction. In contrast, for assets funded through regulated revenue, this risk is shared between the distributor and consumers using a fixed sharing ratio.[34]

iv. reduce connection volume risk – For non-exempt distributors, forecast connection demand factors into the capital expenditure forecasts used as an input to revenue paths. If connection demand is higher than forecast, then a distributor may have to re-prioritise across other capital expenditure programmes or risk not fully recovering their costs.

(c) altering settings to increase connection charges can enable a distributor to:

i. benefit from incentive gains – For non-exempt distributors, increasing connection charges reduces net capital expenditure, which generates an incentive payoff.[35] Because all regulated capex can be substituted, distributors can also increase connection charges to offset cost overruns in any part of their capex programme. At the margin, this amounts to the same outcome, which is increasing connection charges improves incentive outturn.

ii. shield existing customers – Increasing connection charges produces a windfall gain for existing customers (provided connection demand is not turned away by high prices). This occurs because it takes decades for higher capital contributions from new connections to flow through to a smaller regulatory asset base overall, which results in a lower target revenue and lower ongoing charges. This means increasing connection charges leads to newcomers making a disproportionately high contribution to network costs compared to earlier connectors.[36]

(d) low connection charges can enable a distributor to:

i. subsidise connection growth at the expense of existing customers – If the incremental revenue from a new connection – including from connection charges and ongoing charges – does not cover the incremental cost of adding that connection, then existing users are made worse-off by new connections.

ii. grow their regulatory asset base – This can be attractive for a distributor who believes available returns exceed their cost of capital, or where

compensation for the delay). As such, it is often a distributor's wider customer base (rather than the distributor) that bears prudential risk.

34 The ratio is reset each regulatory period to maintain symmetry between opex and capex expenditure incentives. In its draft DPP4 decision, the Commerce Commission indicated a capex IRIS incentive rate (also referred to as a retention rate) of one-third, meaning distributors would pass-through two-thirds of construction cost risk and retain one-third. Default-price-quality-paths-for-electricity-distribution-businesses-from-1-April-2025-Draft-reasons-paper-29-May-2024.pdf (comcom.govt.nz) para 3.10

35 The payoff is a function of the capex IRIS incentive rate. For DPP4, the payoff to a distributor will be around one-third of the value of the resulting reduction in net capex.

36 The windfall does not arise if ongoing charges for a customer are directly linked to the capital contribution made by that customer. This is common for very large customers and is commonly referred to as "special pricing". For most connections it would be impractical to link tariffs to historical contribution policies.

management (or investors, owners or governance bodies) view growth as a primary objective (rather than returns)

(e) altering connection pricing methodologies can be costly, disruptive and unpopular. This deters distributors from making changes that do not produce a financial or other type of benefit eg, consumer benefit.

Inefficiencies

5.4. This set of influences has resulted in connection pricing inefficiencies, including:

(a) excessive inconsistency – It may not be optimal for all distributors to have the same connection pricing methodology due to differences in circumstances and the cost of attaining complete alignment. However, divergence across distributors appears excessively high and spans differences in terminology, presentation, methodological approach and overall reliance on connection charges. This results in:

i. costs for access seekers (and their advisors and suppliers) associated with learning, uncertainty and unpredictability. Costs can be especially high for those who need to engage with multiple distributors.

ii. additional costs within the sector, as inconsistency can present a barrier to staff mobility and the rate at which practice improvements are able to diffuse between distributors.

(b) instances of inefficiently low connection charges – several distributors have extremely low charges. 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

(c) a trend toward higher connection charges, with overall reliance on connection charges to fund growth increasing from one-fifth to one-half over the past decade. High connection charges can result in:

i. inefficiently suppressed connection demand due to the high total costs allocated to newcomers. In the current context, this can include deterring electrification projects that are sensitive to the total cost of electricity compared to alternative fuels[37]

ii. inefficiently suppressed connection demand due to the cost or unavailability of financing. High connection charges place a financing burden on access seekers, which may present a barrier to connecting for some.

iii. weak incentives on distributors to ensure connection costs are efficient in terms of their design and construction, including because expenditure funded through connection charges is not subject to regulatory expenditure incentives

(d) pricing approaches that contribute to poor coordination, including:

[37] High total costs could be avoided if newcomers with higher capital contributions were assigned lower ongoing tariffs than existing customers. This is common for very large connections, but impractical for most connections.

i. ‘position-in-queue’ dynamics which occur when otherwise similar connection applicants face different charges depending on the timing of their application relative to other applicants. This can result in inefficient jockeying for position, or otherwise efficient demand being turned away by high charges. This also contributes to making connection charges difficult to predict, adding to transaction costs.[38]

ii. piecemeal network development where heavy reliance on connection activity to fund investments makes it difficult for a distributor to proactively invest in capacity ahead of demand, even where this may result in a lower overall cost.

(e) difficulty resolving disputes as connection applicants encounter a range of practices and can find it difficult to understand whether quoted charges are reasonable. Applicants may not always have clear and complete requirements against which they can raise a dispute, and often do not have access to low-cost dispute resolution outside bilateral negotiation with the distributor.

Potential for improvement

5.5. The Authority believes there is considerable scope to improve the efficiency of connection pricing, and that regulatory reform is the necessary key to driving change due to the factors that influence distributor pricing preferences.

5.6. Improving connection pricing efficiency could in turn deliver:

(a) reduced transaction costs, stemming from greater consistency, predictability, and access to dispute resolution

(b) removal of subsidies and windfall gains, leading to fewer instances of demand being turned away by inefficiently high-cost allocation

(c) improved incentives for distributors and access seekers to manage costs and optimise network development.

5.7. In the current environment, improved connection pricing efficiency would help facilitate electrification investments across transport, housing, manufacturing and other businesses.

Q2. Do you agree with the problem statement for connection pricing?

[38] While the existence of position-in-queue dynamics is influenced by pricing approaches, their severity is worse if connection charges are higher.

6. Options and pathway

6.1. Earlier this year, the Authority evaluated high-level options and decided to develop, for consultation, a draft Code amendment to mandate efficient connection pricing.[39]

6.2. Since then, it has developed proposals by:

(a) further developing its understanding of the problem

(b) examining arrangements in other jurisdictions, with a focus on Australia's connection rules and the United Kingdom's Common Connection Charging Methodology (CCCM)

(c) developing a high-level view of what full reform could look like in a New Zealand setting, and the timeline for implementing it

(d) identifying and developing fast-track elements for early implementation

(e) engaging with the Commission on interfaces between the Authority's regulation of connection pricing methodologies and the Commission's regulatory arrangements

(f) convening the Distribution Connection Pricing Technical Group (DCPTG) to assist the Authority with workability considerations

(g) engaging an external expert to critique the problem definition and evaluate proposed interventions.

6.3. This chapter briefly summarises approaches in Australia and the United Kingdom and provides an overview of the path to full reform.

Consideration of approaches in the United Kingdom and Australia

6.4. The United Kingdom and Australia have contrasting approaches that provide useful templates from which to draw options for New Zealand. They each differ in their institutional arrangements, contexts and methodologies as summarised in Table 6.11.

Table 6.1 Summary of approaches in the United Kingdom and Australia

Aspect	United Kingdom	Australia
Institutional arrangements	Detailed CCCM is part of an industry code (DCUSA)[40] for licensed suppliers Regulator monitors licenses, codes and sets revenue paths and information disclosure requirements	Reflects what is outlined in the National Electricity Rules and connection charge guideline Regulator enforces guideline, including through approving methodologies as part of revenue determinations and providing dispute resolution

39 Electricity Authority, *Distribution Pricing Reform: Next steps (ea.govt.nz)*, May 2024

40 Distribution Connection and Use of System Agreement

Aspect	United Kingdom	Australia
Context	Small number of very large distributors with comparatively dense networks Comprehensive arrangements for ensuring contestability of connection works Major electrification transition well underway Recent changes largely removed access seeker contributions to network upgrades (for load)	Diversity of large and small, urban and rural, dense and sparse networks Tapestry of national and state-level regulation and policy Mature arrangements, with recent changes focussed on distributed generation access
Methodology	Connectors pay 100% of extension costs, and any new capacity at connection voltage Deeper contributions only for very high-cost connections Minimum scheme rule and pioneer scheme	Connectors pay incremental cost net of incremental revenue For larger connections, capacity cost allocated using approved posted rates. For smaller, more basic connections, only extension costs are allocated Minimum scheme rule and pioneer scheme
Key outcomes	Highly consistent nationwide, and supportive environment for contestability and predictability Pricing cost-reflective with respect to extension costs, but not upgrade costs Variable outcomes in terms of newcomers' contributions to network costs (ie, difference between incremental revenue and incremental cost) Reasonable mitigation of 'position-in-queue' inconsistencies	Moderate consistency across National Electricity Market (NEM) states, and supportive environment for contestability and predictability For larger connections, cost-reflective pricing, consistently low contribution to shared costs for newcomers For smaller connections, cost-reflective extension costs, consistently low contribution to network costs for newcomers Good mitigation of 'position-in-queue' disadvantages

6.5. The Authority is not attempting to replicate either approach due to:

(a) our context and institutional arrangements are not the same as either jurisdiction

(b) both regimes are mature, having evolved and embedded over many years, with deep links to business processes and other industry arrangements

(c) it is better to draw inspiration from both regimes and the existing practices of New Zealand distributors, to develop a package of measures that is tailored specifically to the New Zealand context.

Pathway to full reform

6.6. The Authority's preference for full reform is to adopt:

(a) a formula-based approach that provides for the setting of connection charges based on net incremental cost (ie, incremental cost less incremental revenue) plus a contribution to 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

(b) allocation of network capacity costs using posted rates representing the average cost of capacity at each upstream network tier. This provides predictability and removes 'position-in-queue' disadvantages for upgrade costs

(c) a 'minimum scheme' approach to identify and allocate enhancement costs that ensures appropriate incentives for the construction of enhancements, regardless of whether they're selected by the customer or distributor

(d) consistent pioneer schemes for extension costs, which mitigates first-mover disadvantage with respect to network extension

(e) improved access to dispute resolution for application of connection pricing methodologies.

6.7. This full reform package provides:

(a) a principled approach to connection pricing grounded in network cost allocation concepts

(b) cost-reflective signalling for extensions, enhancements, and network capacity

(c) predictable network capacity cost allocation, with no 'position-in-queue' dynamics

(d) flexibility to accommodate contestability.

6.8. To implement a full reform package is a major undertaking. Full reform would include:

(a) developing rules and guidelines that balance competing interests and objectives and achieve the best balance of efficient pricing, regulatory and administrative burden, and outcomes for access seekers, distributors and existing customers. These rules and guidelines would need to achieve these outcomes for access seekers and be adaptable to support access seekers with a unique set of circumstance, such as large customers with special tariffs and developers who build and vest assets.

(b) distributors making changes to implement new pricing, including updating their commercial processes, customer communications, asset management plans, and business plans. Some distributors may also need to engage with the Commission on reconsideration of revenue allowances.

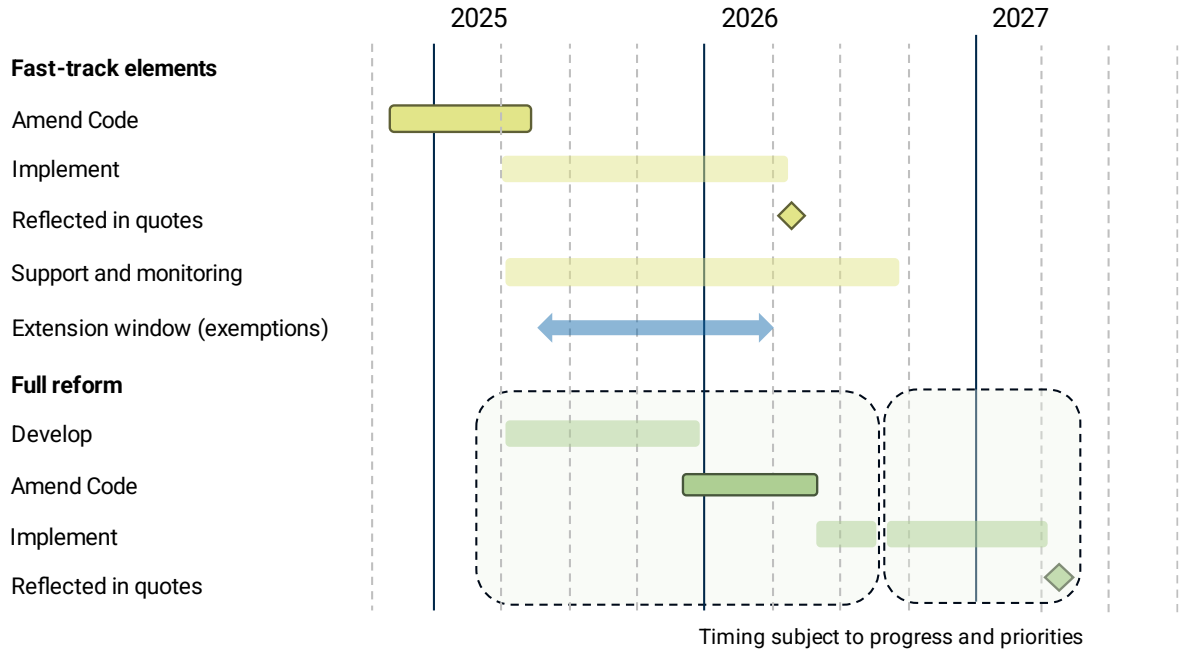
(c) resolving introductory issues, including clarifying applications to novel or complex situations and resolving disputes and disagreements.

(d) managing transition between the status quo and full reform, including where connection applications have been lodged or connection offers made under earlier pricing rules, but not yet executed.

6.9. As such, the Authority is proposing a package of fast-track elements for immediate implementation, including safeguard measures to protect consumers and guidance on use of exemptions to accommodate extended implementation timelines where needed by distributors.

6.10. The indicative timeline is illustrated belowFigure 6.1, noting the timing for full reform could be earlier or later depending on progress and prioritisation and stakeholder feedback.

Figure 6.1 Indicative timeline for fast-track and full reform



6.11. The indicative timeline is subject to this consultation (and future consultations, and Code amendment processes and decisions). Key features of this timeline are:

(a) fast-track elements, which we are consulting on now, must be reflected in all quotes provided from 1 April 2026

(b) full reform follows on a slower track, taking effect for all quotes provided from 1 April 2027 at the earliest. Actual timing may depend on sector progress and performance in response to fast-track elements, and on the Authority's allocation of resourcing across competing priorities

(c) distributors may apply for an exemption under section 11 of the Act from the requirement to comply with the Code, for example where engagement with the Commission on a modified price path is required and cannot be completed in time to flow into quotes provided from 1 April 2026.

6.12. The timing for considering full reform is not finalised and will depend on the Authority's progress and priorities. In addition, there could be a longer period between a possible amendment of the Code for full reform and requiring pricing to be reflected in quotes. For example, the Authority could amend the Code in 2027, so that:

(a) distributors can factor it into expenditure forecasts in 2028

(b) the Commission can set appropriate revenue paths in 2029, and

(c) full reform can be reflected in quotes and revenue paths in 2030.

6.13. Overall, the Authority's aim is to balance the following:

(a) timely improvement in the efficiency of connection pricing, including where connection prices are high and may be dampening connection growth, with potential for adverse impacts on decarbonisation, housing and economic growth)

(b) allowing for necessary and prudent implementation steps, including regulatory and business change processes

(c) providing, by exception, extra time where new rules will materially impact the sufficiency of approved revenue paths.

6.14. The following sections provide details on the fast-track elements and alternatives, and then discussion on the pathway from fast-track to full reform.

Q3. Do you have any comments on the Authority's proposed pathway to full reform?

7. Proposed solution: fast-track proposals

7.1. Full reform of connection pricing methodologies, should it be progressed, will take time given its complexity. But the Authority recognises it can move swiftly in some areas, and proposes these fast-track measures designed to deliver improvements to distribution pricing, and act as stepping stones toward full reform, if it occurs.

Table 7.1 Summary of fast-track proposals

Element	Description	Benefits
Connection enhancement cost requirements	Prices to be determined with reference to a least-cost scheme, with enhancement costs (if any) allocated to selecting party	Transparency and alignment of incentives for enhancements
Network capacity costing requirements	Upgrade contributions (if any) to be based on published rates and applied as network capacity headroom consumed	Transparency, predictability and consistency from one customer to the next, which removes position-in-queue problem for upgrades
Pioneer scheme pricing methodology	Extension costs partly refunded as other customers connect to those assets	Reduces first-mover disadvantage and position-in-queue problem for network extensions
Connection charge reconciliation pricing methodology	Distributor to provide break down of connection charges into incremental and network components using standardised methodology	Transparency, stepping stone to possible full reform
Dispute resolution	Extend dispute resolution provisions for distributed generation to cover application of connection pricing methodologies (for disputes between participants). Enhancing the Code breach complaint process available to non-participants.	Improved enforcement to support effectiveness of other elements.
Reliance limits methodology	Restrictions on distributors' ability to amend methodologies to increase capital contributions	Guards against worsening pricing efficiency

Element	Description	Benefits
Exemption Guidelines	Distributors have an existing ability to apply for exemptions under section 11 of the Act. The Authority will consider updating the Exemption Guidelines to cover how it will approach exemption applications where the Commission reconsiders a revenue path.	This provides an opportunity for distributors to manage implementation including where distributors need to engage with the Commission on possible revenue path revisions.

7.2. The following sections provide detail on each proposal and assessments of the benefits and customer impacts. Alternatives to these proposals are discussed, as well as several issues relevant to the overall package:

(a) pricing for distributed generation

(b) obligation to supply

(c) vested assets

(d) contestability.

7.3. Appendix B sets out the proposed Code amendments to give effect to the fast-track elements (excluding the exemption guidelines).

7.4. Section 9 provides a regulatory statement assessing the costs and benefits of the proposed Code amendments.

Connection enhancement cost requirements

7.5. Connection pricing methodologies in the United Kingdom and Australia both incorporate requirements for distributors to:

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

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

(c) not allocate any of the costs of distributor-selected enhancements to the customer, or example, bundling associated works or reconfiguring the network to suit future expansion.

7.6. The Authority proposes to implement a similar requirement as a fast-track element. To future-proof the requirement, we propose to distinguish between:

(a) minimum scheme – the least-cost design that meets the distributor's usual standards for security and firmness of capacity, or a lower standard if preferred by an applicant and acceptable to the distributor[41]

(b) minimum flexible scheme – an alternative design that uses some form of load control to deliver reduced security or firmness in return for a lower cost. This

[41] For example, a large customer may prefer to have an "N-security" connection in a case where the distributor's usual design standard would be N-1.

may be requested by the customer, and must be priced by the distributor if feasible.

(c) relevant minimum scheme – the scheme selected by the customer such as the minimum scheme or the minimum flexible scheme.

7.7. Examples of a flexible scheme could include when a:

(a) customer enrols in a demand control programme where the distributor can quickly reduce demand when the network is constrained so the connection will not consume any upstream network capacity. This would allow the distributor to confidently disregard demand from that connection when assessing the need, timing and sizing of network capacity upgrades.[42]

(b) customer configures their site to drop load if there is an outage in the upstream zone substation. This allows the distributor to disregard the customer's demand when assessing network security – ie, the connection makes use of redundant (N-1) capacity without reducing network security for other customers.[43]

7.8. While the connection enhancement cost requirements are intuitive, its application may not be straightforward for more complex scenarios,[44] for example where:

(a) determining the minimum scheme requires considerable engineering design work

(b) a customer's minimum requirements are unclear in comparison to their requested service level

(c) facilitating the connection naturally involves developing a network reconfiguration package that optimises across multiple objectives, or

(d) there is disagreement between the access seeker and the distributor about the design requirements of the minimum scheme or as to whether there is a flexible option.

7.9. Practice guidance – and dispute resolution processes – should help provide clarity for complex cases as the connection enhancement cost requirements become established.

7.10. In addition, the Authority proposes:

(a) a distributor and connection applicant may opt-out of the requirement to determine and cost the minimum scheme, if both parties agree. This could be particularly useful in cases where both parties consider the cost of developing minimum scheme costings – which may be passed on as fees – would not be outweighed by the benefits.

(b) where a distributor provides posted connection prices or rates for a type of connection, they do not need to re-cost the minimum scheme for each of those connection types.

---

42 An example of this kind of approach is Vector's use of its Distributed Energy Resource Management System (DERMS) to reduce the network impact of electrifying Auckland's bus fleet. Vector Electrifies Auckland Bus Depots | Vector Limited

43 Transpower operates dozens of "special protection schemes" on the transmission system that trigger post-contingent events to enable higher pre-event capacity limits. Special Protection Schemes | Transpower

44 The potential for complexity is neatly illustrated by the set of worked examples provided in the UK's common connection code. DCUSA v14.4

(c) a distributor and connection applicant may mutually agree to share the cost of an enhancement. This may be beneficial where the enhancement provides a benefit to both parties, but neither party would build the enhancement if they were allocated the full cost.

7.11. The Authority's proposal complements existing obligations under the Commission's information disclosure rules, which require distributors to provide "… within 10 working days … reasonable explanation to any reasonable query … of the components of [a quoted connection] charge and how those were determined".[45]

Benefits of including connection enhancement cost in fast-track measures

7.12. The proposed connection enhancement cost requirements have a number of benefits for both parties, including:

(a) providing access seekers with a clear reference design for their cost of connection, which supports transparency and dispute resolution

(b) potentially resulting in a connection applicant being made aware of, and presenting, a lower-cost connection option, including flexible connection options

(c) providing cost-reflective incentives for enhancements and flexible connections

(d) enhancing nationwide consistency of approach and terminology

(e) setting out clear expectations and requirements against which parties can pursue dispute resolution if required (and for non-participants enhancing the ability to resolve disputes under existing processes for reporting breaches of the Code).

(f) providing early implementation of an element that is highly likely to feature as part of any full reform package.

7.13. Including the connection enhancement cost as a fast-track element will provide a stepping stone to full reform, enabling knowledge and experience to accumulate early. Early progress will improve consistency across distributors' methodologies by embedding a common conceptual approach to identifying and allocating enhancement costs. The proposed Code amendments will also alter connection charges (up or down) for some access seekers.

7.14. In the current context, connection enhancement cost requirements will improve access to lowest-cost solutions, including flexible connections, for process heat conversions and EV charging infrastructure.

Customer impact of including connection enhancement cost in fast-track measures

7.15. At the fast-track stage, distributors retain discretion of their overall approach to setting connection charges. As such, the connection enhancement cost requirements will not result in consistent outcomes across distributors. For example, distributors may vary in:

(a) how much of the minimum scheme cost they allocate to access seekers

(b) whether, or how much, network cost contribution they allocate, and

(c) whether, or how much, they adjust for incremental revenue when setting connection charges.

[45] Refer to clause 2.4.7 of the Electricity Distribution Information Disclosure Determination (February 2024).

7.16. Nonetheless, assuming a distributor does not make other offsetting changes to their capital contribution policy, the impact of the connection enhancement cost requirements on connection applicants could result in the following scenarios:

(a) Distributors who do not charge for customer-selected enhancements experience an increase in connection charges for applicants who decide to go ahead with enhancements. Alternatively, fewer customer-selected enhancements may be built.

(b) Distributors who bundle distributor-selected enhancement costs into charges experience a decrease in connection charges. If the distributor still elected to proceed with the enhancements, then costs would be recovered over time through ongoing charges. Alternatively, fewer distributor-selected enhancements may be built.

(c) Connection applicants have an improved ability to discover the least-cost connection option, including flexible connection options.

7.17. Where parties decide not to build an enhancement, this is likely to be an efficient outcome as it indicates the benefit of the enhancement does not outweigh the cost.

Q4. Do you consider the proposed connection enhancement cost requirements would improve connection pricing efficiency and deliver a net benefit?

Q5. Are there variations to the proposed connection enhancement cost requirements you consider would materially improve the proposed Code amendment?

Network capacity costing requirements

7.18. Australian connection pricing methodologies include a requirement that costs relating to the capacity of the shared network upstream of a connection are assessed and allocated using rates that are approved by a regulator and published by the distributor.

7.19. The rates are approved by the regulator as part of each revenue determination and reflect the average cost of adding capacity to the network at each of five network tiers.[46]

7.20. In effect, this means all connection applicants are charged on a consistent basis for the consumption of network capacity. This contrasts with a project-based approach where costs are only allocated to an applicant who triggers a capacity upgrade. As such, network capacity costing removes the ‘position-in-queue’ lottery that can deter efficient connection investment.

7.21. We propose to implement a similar approach as part of the fast-track package where:

(a) if a distributor allocates network capacity costs, this must be done using published rates, and not by charging for network upgrade projects

(b) if published rates are used, they must reflect the average cost of adding capacity at each of the following network tiers:

- sub-transmission line
- zone substation

[46] The network tiers are sub-transmission line, zone substation, high voltage feeder, distribution substation, and low voltage mains.

- high voltage feeder
- distribution substation
- low voltage mains

(c) rates for the current disclosure year and following four years (ie, allowing for cost escalation) must be published on a distributor's website with an explanation of the basis for the rates

(d) rates only apply to shared network elements and are charged regardless of whether a given connection directly prompts – or alters the timing of – a capacity upgrade project. This means the charge is for consumption of capacity rather than construction of capacity.

7.22. In this proposal, rates do not apply to:

(a) *customer-owned assets* – assets that remain customer-owned, rather than transferring to network ownership. The demarcation between customer and network assets currently varies by network, with examples including the property boundary, the meter or an on-site transformer.

(b) *network extension (new connection)* – the cost of tying a new connection back to the existing network. Network extension costs can include the cost of reconfiguring existing shared assets to establish the connection, for example adding a new switch.

(c) *network extension (connection upgrade)* – the cost of upgrading an existing connection at the connected-party's request. This includes, for example, adding or upgrading a dedicated transformer, or adding an extra phase or a new higher-capacity dedicated line.

(d) *network development* – the cost of a distributor electing to extend network footprint in anticipation of future connection demand. An example of this is a distributor choosing to proactively establish a new zone substation in an undeveloped area or run a new line through an undeveloped valley.

7.23. Distributors may choose to have different published rates for different networks, or different parts of each network (costing zones). For example, a distributor may have different rates for urban, suburban and rural areas, or for overhead and underground network areas.

7.24. Published rates are based on two components:

(a) applicable rates – the rates that apply to the network tiers for which the connection will consume capacity. For example, a new connection to a high voltage feeder may consume capacity at high voltage feeder level, zone substation level and sub-transmission level

(b) applicable design demand – typically coincident demand but may be anytime maximum demand at one or more tiers if more relevant to network capacity planning.

7.25. To apply the published rates for the connection applicant, a distributor would multiply the applicable rate(s) by the applicable design demand(s).

7.26. The published rates must reflect the expected cost per unit for capacity increases at the applicable network tier. Notably, the estimate should reflect the cost of adding capacity to an existing network, not the cost of establishing new network coverage.

7.27. Ideally, cost estimates used for setting rates would be based on a sample of historical capacity upgrade projects with:

(a) costs for each project, adjusted for historical inflation

(b) costs for each project adjusted, if needed, to strip out any works not essential to a typical capacity upgrade project, eg, bundled renewal works or atypical enabling works

(c) the adjusted cost for each project divided by the added design capacity (kW or kVA) for that project to derive a rate

(d) rates averaged across projects to derive a mean rate in current dollar terms

(e) current dollar rates multiplied by forecast cost escalation factors to derive published rates for each year.

7.28. In practice, we expect many distributors will not have suitable project data to derive rates. As such, distributors may choose to rely on rates established through an independent engineer's report.[47]

7.29. Distributors, or the independent engineer, must also identify a nominal capacity increment for each tier, that is, the capacity added by a typical upgrade at that tier.

7.30. In addition, the Authority proposes:

(a) a distributor may adopt a zero rate for one or more network tier if they do not foresee any need to increase capacity at that tier within their network planning horizon. Zero rates may apply network-wide, or for particular network costing zones. For example, a distributor may:

i. be confident their LV design capacity will cover any foreseeable growth in connections numbers (eg, from infill) or after-diversity demand per connection, for example, from at-home EV charging

ii. have lost one or more large customers, leaving excess capacity in their sub-transmission lines

iii. anticipate declining connection numbers, leading to steadily increasing capacity headroom at all network tiers.

(b) for the upper network tiers (HV feeder and above), distributors may nominate an upper capacity limit beyond which they may elect to allocate a share of actual project costs, rather than using posted rates. A project-based approach may be preferable where the demand increment from a connection project is large relative to the nominal capacity increment at that tier. We propose a threshold of 80%, beyond which a distributor may choose to allocate a portion of estimated project costs, rather than using published rates. This means, if the capacity consumed by the project is more than 80% of the nominal capacity increment for the tier, then estimated project costs may be used in place of the published rates for that tier.

(c) distributors may apply a modified rate if costs for an upgrade project needed to accommodate a connection are estimated to be materially higher than average. For example, the HV feeder to be upgraded may be much longer than average, or the distribution substation to be replaced may be in a location with exceptionally high access costs. We propose a threshold of 50%

47 Distributors may wish to collaborate to fund a shared reference report.

so that if the unitised cost of adding capacity is more than 150% of the published rate, then the actual rate may be used instead.

(d) distributors may not revise published rates for the current disclosure year or the following year, other than to correct errors. This balances stability with accuracy by ensuring applicants can rely on near-term rates.

7.31. The threshold in 7.307.30(b)) recognises a consumption-based approach may be less suited to very large connections that require sizeable investments to provide network capacity.

7.32. The threshold in 7.307.30(c)) allows for departure from the capacity cost averaging approach for connections that require completion of high-cost capacity upgrade projects.

Benefits of including network capacity costing in fast-track measures

7.33. Published rates for network upgrade costs have three main benefits:

(a) *predictability* – access seekers can use published rates to estimate a key component of their connection charges. This can help with planning, including understanding the sensitivity of connection charges to peak demand.

(b) *consistency* – published rates mean charges are consistent from one connection applicant to the next, avoiding the 'position-in-queue' issue. This removes incentives, for example, for an applicant to wait for another party to connect and fully fund an upgrade before applying for their connection

(c) *risk allocation* – published rates mean the upgrade component of connection charges is firm, rather than subject to revision based on actual construction costs. This allocates risks associated with procurement and construction costs to the distributor, who should be better placed than the access seeker to manage those risks.

7.34. The network capacity costing requirements will:

(a) provide a stepping stone to full reform, enabling knowledge and experience to accumulate early

(b) improve consistency across distributors' methodologies by embedding a common conceptual approach to allocating network capacity costs

(c) provide early access to the efficiency gains associated with removing the position-in-queue problem with respect to network capacity costs[48]

(d) alter connection charges (up or down) for some access seekers.

7.35. In the current context, network capacity cost requirements will increase predictability and reduce cost variation for electrification projects, including process heat conversions and EV charging infrastructure.

Customer impact of including network capacity costing in fast-track measures

7.36. At the fast-track stage, distributors retain discretion of their overall approach to setting connection charges. As such, the network capacity costing requirements will not result in consistent outcomes across distributors. For example, distributors may vary in:

[48] At least with respect to cost allocation. Position-in-queue dynamics may persist with respect to capacity access management (eg, where earlier connectors have priority access to available capacity).

(a) whether they allocate network capacity costs to connection applicants at all, and if so, for which network tiers[49]

(b) whether, or how much, shared costs they allocate, other than those relating to capacity consumption, and

(c) whether, or how much, they account for incremental revenue when setting connection charges.

7.37. The impact of the network capacity costing requirements on connection applicants is listed below. These impacts are from distributors who currently apply a build-based approach to their pricing, and assumes a distributor does not make other offsetting changes to their capital contribution policy:

(a) more predictable and firm charges for network upgrade costs ie, charges can be readily looked up and are not dependent on outturn costs. This may reduce fees associated with producing connection offers and connection applicant planning costs, which could in turn support more connection.

(b) more consistent network capacity contributions, removing 'position-in-queue' dynamics that can cause connection applicants to delay their connections until someone else has funded an upgrade.

(c) higher connection charges for parties consuming capacity without triggering an upgrade, and lower connection charges for a party who triggers an upgrade.

7.38. In terms of allocating network capacity costs between connection applicants and existing users, the overall outcome depends on the drivers for capacity consumption. For example, a network with no organic (per connection) growth in peak demand may allocate all upgrade costs to connection applicants over time.

7.39. Allocation of network capacity costs may also be higher or lower than the status quo, depending on how the distributor currently allocates network capacity costs between connection applicants and existing users.

Q6. Do you consider the proposed network capacity costing requirements would improve connection pricing efficiency and deliver a net benefit?

Q7. Are there variations to the proposed network capacity costing requirements you consider would materially improve the proposed Code amendment?

Pioneer scheme pricing methodology

7.40. In the United Kingdom and Australia, distributors are required to operate schemes for transferring contributions from connection applicants to earlier funders of network extensions.[50] In Australia, these are called 'pioneer schemes'.

7.41. Such arrangements are also common amongst New Zealand distributors, though with a range of names, such as 'rebate' or 'reassignment schemes', and settings.

[49] For example, some distributors may adopt a "shallow" approach, whereby they only allocate capacity costs associated with the network tier at which the applicant is connecting.

[50] For Australia, refer to Chapter 6 of the AER's connection charge guidelines. Report template (aer.gov.au). For the UK, refer to The Electricity (Connection Charges) Regulations 2017. The Electricity (Connection Charges) Regulations 2017 (legislation.gov.uk)

Information collected by Electricity Networks Aotearoa indicates that 17 distributors operate some form of pioneer scheme.[51]

7.42. A pioneer scheme helps mitigate first-mover disadvantage – ie, the high-cost burden that the 'pioneer' connection applicant faces if their connection requires a costly network extension that could later be accessed by other connection applicants. If the first-mover, or 'pioneer', faces a much higher charge than later connection applicants, this can encourage the pioneer to delay their application until another party has funded the extension. This is an example of an applicant's 'position-in-queue' determining their charge, leading to coordination challenges that distort the timing or suppress the number of connections.

7.43. Pioneer schemes are particularly relevant for networks that serve rural areas. In these areas, a new connection can require a network extension that, even when built to the minimum practical capacity, could accommodate additional connections in the future.

7.44. The Authority proposes requiring all distributors to have a pioneer scheme policy in place and published by 1 April 2026. The pioneer scheme policy is a template that will be the basis for each pioneer scheme on their network so each eligible network extension has its own scheme based on the template.

7.45. We propose requiring distributors to publish the details of each pioneer scheme. This is to ensure a party seeking to connect to an area of the network is aware of the scheme and their obligation to contribute towards the historical costs, should they choose to connect to the network extension assets funded by the pioneer.

7.46. Each pioneer scheme that begins after 1 April 2026 must be consistent with the pioneer scheme pricing methodology set out in the Code.

7.47. Distributors must administer the pioneer schemes on their network. These obligations include calculating the pioneer scheme contribution to be paid by a subsequent connecting party, collecting the contributions and forwarding the payment collected to the pioneers.

7.48. We recognise administrating pioneer schemes likely has some costs for distributors. We have proposed *de minimus* thresholds and timeframes to balance administrative costs with the benefits of mitigating first-mover disadvantage. The thresholds and timeframes also reduce the number of active pioneer schemes, which assists with providing predictability and consistency for access seekers as they are less likely to encounter an active scheme.

7.49. We propose the following requirements for pioneer scheme policies:

(a) pioneer schemes are required to recognise the original funder and subsequent funders as pioneers.

(b) payments to pioneers will be calculated with reference to the original cost of the minimum scheme – network capacity costs will not be reallocated.

(c) scheme duration is 10 years from the date of the original funder's first capital contribution.

(d) the original capital contribution is to be depreciated using a 20-year straight line rate. This has the effect that the extension is still worth 50% of its original value when the scheme ends.

[51] Electricity Networks Aotearoa. EDB connection factsheets and contribution policies | ENA. Accessed 2 September 2024.

(e) payments to pioneers are based on the share of line length and share of capacity.

(f) schemes must survive a change in network ownership, meaning a distributor who sells a network must transfer information to the buyer to enable them to administer the scheme.

(g) if a connection applicant builds an extension and vests it to a distributor, they may request the distributor implement a pioneer scheme. In such cases, the applicant must supply cost information to the satisfaction of the distributor.

(h) the *de minimus* thresholds are:

i. pioneer schemes will only be required where the original cost of a network extension exceeds $30,000 in 2025 dollars

ii. subsequent parties connecting to a pioneer scheme only become a pioneer if their pioneer scheme contribution exceeds $10,000 in 2025 dollars

iii. distributors are not required to collect or make payments where the calculations determine a pioneer scheme contribution is less than $1,000 in 2025 dollars.

7.50. For distributors who already have a similar policy and existing schemes in place, there may be contractual obligations or understandings between parties that mean the existing arrangements should be observed until these schemes conclude. Only new schemes that begin after 1 April 2026 would need to be consistent with these requirements.

7.51. Where a connection applicant funds a network extension that could be subject to a pioneer scheme, the distributor must make the connection applicant aware of their pioneer scheme policy. The connection applicant and the distributor may agree there is no requirement for the distributor to set up a pioneer scheme. Any such agreement should be recorded in writing.

7.52. When a pioneer scheme is in place for a real estate development, a party connecting to the network within the boundary of that development is not required to pay a pioneer scheme contribution to the pioneer.

Benefit of including pioneer scheme in fast-track measures

7.53. Pioneer schemes that are offered by all distributors on a common basis will have benefits for access seekers:

(a) enhance nationwide consistency of approach and terminology

(b) provide early access to the efficiency gains associated with mitigating the position-in-queue problem with respect to network extension costs.

7.54. Distributors may also benefit by having prescribed parameters which can be administered confidently.

Customer impact of including pioneer scheme in fast-track measures

7.55. Pioneer schemes mitigate first-mover disadvantage. Access seekers are more likely to invest in a network extension and benefit from that service earlier if they are confident that any other connecting party will be required to rebate them for a portion of that cost. Customers will benefit from the certainty and transparency

provided by the pioneer scheme requirements, which ensure the basis of the rebate is easily discoverable by the pioneer and any subsequent connection applicant.

7.56. The requirement for schemes to have defined parameters may also encourage access seekers to collaborate to fund a network extension. This may reduce the cost for both parties and potentially result in a connection to the network occurring earlier than if parties were required to negotiate without the baseline of the specified parameters.

Q8. Do you consider the pioneer scheme pricing methodology would improve connection pricing efficiency and deliver a net benefit?

Q9. Are there variations to the proposed pioneer scheme pricing methodology you consider would materially improve the proposed Code amendment?

Connection charge reconciliation pricing methodology

7.57. We use the term 'net incremental cost' to refer to the incremental cost of a connection less the (present value of the) incremental revenue the connection will generate over its lifetime.

7.58. Conceptually, if the charge for a connection is equal to its net incremental cost, then existing customers are not made any worse off by the new connection. We refer to this as the 'neutral point'. The difference between the net incremental cost for a connection and the actual charge can be thought of as a contribution to network costs, as follows:[52]

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

$$Where:$$
$$CC = connection\ charge$$
$$IC = incremental\ cost$$
$$IR = incremental\ revenue$$
$$NC = contribution\ to\ network\ costs$$

7.60. It is undesirable to set connection charges below the neutral point (ie, with NC < 0) because this means existing users are inefficiently subsidising new connections. However, it can be desirable to set charges slightly above the neutral point (ie, with NC > 0).

7.61. Conceptually, there is a 'balance point' where the 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.[53]

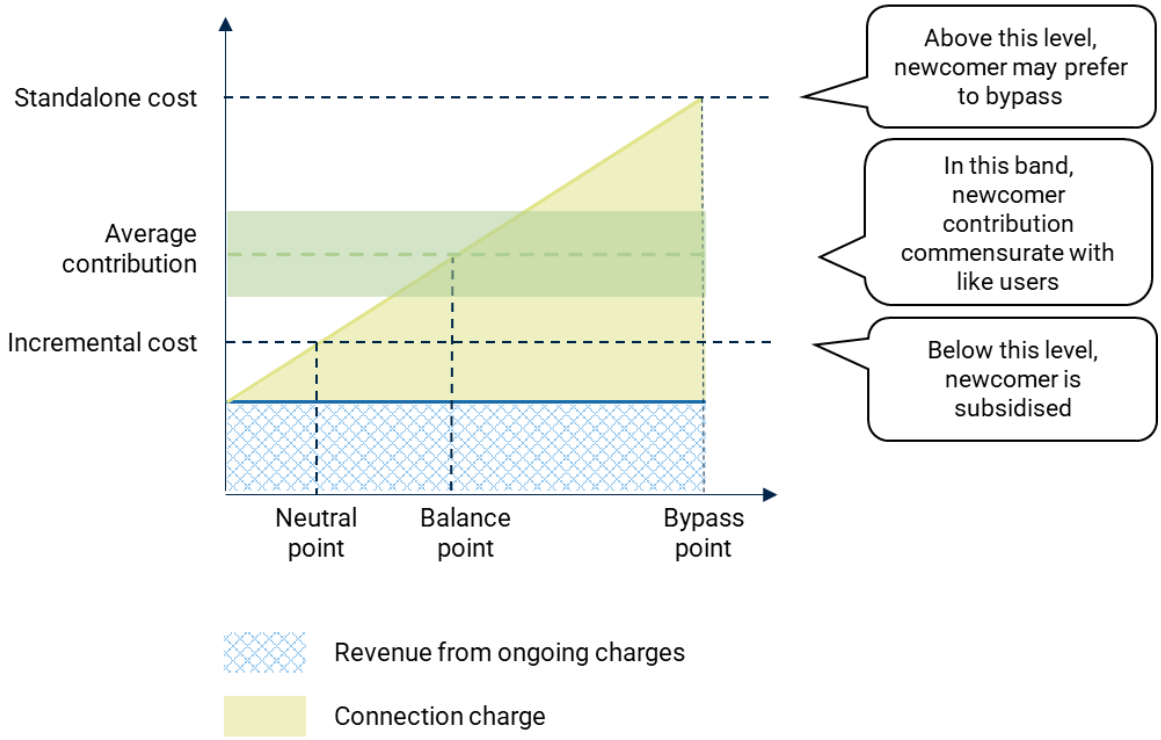
7.62. The other key reference point is the 'bypass point' where the payments a connection applicant will make over the life of their connection is higher than the standalone cost for that connection applicant (ie, the cost of that applicant establishing a dedicated connection to the transmission grid). For smaller users,

[52] In this context we use the term "network costs" to mean all the costs that would continue to exist if the connection were not made. This includes recovering the cost of all existing assets, the cost of renewing assets (including network-owned dedicated assets used by other parties), some of the cost of upgrading assets (ie, that portion not allocated to connection applicants), and costs associated with maintenance, operations and administration.

[53] Contribution to network costs can vary widely across members of a consumer group. For example, between high and low use connections, between recent and more established connections, or between consumers in high- or low-cost areas of the network. As such, the "balance point" can only align with some point (such as the median) within the distribution of contributions made by members of a consumer group.

connected at the fringe of the network, the standalone cost is typically very high.[54] For large users located near a grid exit point, the standalone cost can become a salient reference.

Figure 7.1 Illustration of neutral, bypass and balance points



7.63. The Authority considers:

(a) connection charges below a connection's neutral point are inefficient, because existing users are subsidising the new connection.

(b) connection charges above a connection's bypass point are inefficient, because the connection applicant would be better off inefficiently bypassing the network.

(c) connection charges between the neutral and bypass points are within the subsidy-free range for that connection.

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

(e) connection charges between the neutral and balance point are beneficial to existing users, without inefficiently penalising connection applicants.

7.64. 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. However, this involves newcomers avoiding costs or underpaying for costs that are covered by existing users, which may be unpopular and unsustainable.

[54] In such cases, the bypass cost may be capped by the cost of establishing a standalone self-supply solution (eg, with solar and batteries) with some adjustment for the inevitable trade-offs in flexibility and reliability that exist between network-based and standalone solutions.

7.65. Conversely, pricing well above the neutral point would be efficient if it minimised disconnection and rationing – as it would lead to lower ongoing charges for all users – without deterring new connections.

7.66. In practice:

(a) distributors cannot tailor charges to each newcomer's willingness to pay. Distributors do not have this information, this approach would be unpopular as it would exacerbate coordination challenges and reduce transparency, and make pricing inefficiently difficult to predict and administer

(b) likewise, distributors cannot assess the relative elasticity of newcomer connection demand versus existing user demand

(c) accordingly, setting charges somewhere between the neutral and balance points is likely most efficient, with the lower end better supporting electrification, housing growth and business growth, and the upper end better supporting affordability for existing users.

7.67. Further to the conceptual model set out above in Figure 7.1:

(a) the various reference points (neutral, balance and bypass) depend on cost and revenue values specific to each connection application so they vary by connection

(b) there is a range of methodologies and assumptions parties could reasonably use to estimate the cost and revenue values needed to determine the various points.

7.68. The balance point depends on a range of network and consumer group-specific[55] factors, including historical contribution policies, average incremental costs, network age, the residual revenue allocations used in tariff setting,[56] and relates to a consumer group average. Individual consumers within a consumer group would vary in how much they contribute to network costs because there are variations in connection assets and annual charges, among other factors.

7.69. We propose introducing a requirement on distributors to:

(a) prepare a reconciliation that shows the incremental cost, incremental revenue and 'network cost' components of a quoted connection charge – if requested by a connection applicant

(b) use standardised methodologies (as described below) when assessing the incremental cost and incremental revenue

(c) report on the breakdown of quoted connection charges into incremental cost, incremental revenue and contribution to network cost, on an aggregate annual basis and by consumer group, when requested by the Authority.

7.70. In the reconciliation, 'network cost' is a balancing item representing the amount an applicant is charged beyond, or below, their neutral charge. Conceptually, this represents the applicant's contribution to costs that are unaltered by their connection, such as:

---

55 Consumer groups can typically be categorised as residential and small commercial, commercial, and large commercial/industrial customers.

56 In an annual tariff setting context, each consumer group is first allocated its avoidable (annualised) costs (ie, the cost that would not exist if the entire group did not exist). Since the sum of the consumer group avoidable costs is typically lower than a distributor's target revenue, there is typically a residual revenue requirement to be allocated across consumer groups.

(a) operating expenditure (other than incremental maintenance costs)[57]

(b) the cost of having established network coverage and capacity

(c) the cost of renewing network assets

(d) transmission charges.[58]

7.71. Making the requirement 'on request' reduces the administrative cost of explaining the reconciliation to every connection applicant, while ensuring it is available to connection applicants when there is a need.[59] Also, we expect distributors will perform the reconciliation for every connection, so it is available when requested by the connection applicant or the Authority (and to streamline business processes).[60]

7.72. The Authority will communicate with distributors in advance to set out the specific reconciliation information it requests, including the reporting format and timing. Reporting could be more frequent than annually during the initial post-implementation phase as processes become established.

7.73. As with the proposed network capacity costing requirements, the reconciliation proposal complements existing obligations under the Commission's information disclosure rules, which require distributors to provide "…within 10 working days…reasonable explanation to any reasonable query…of the components of [a quoted connection] charge and how those were determined".[61]

7.74. The standardised methodology for assessing incremental cost builds on other elements of this fast-track package. When calculating incremental cost, a distributor must:

(a) *exclude fees and any costs associated with assets that will remain customer-owned* – these items are also excluded from the revenue and network cost components of the reconciliation, meaning they are fully out of scope.

(b) *exclude the cost of any distributor-selected enhancements, consistent with the minimum scheme rules* – these costs are not allocated to the connection applicant, so they are one of the many costs that contribute to the general pool of network costs.

(c) *include the estimated cost of network extension* – this may include the cost of establishing new assets and modifying existing assets, including existing shared assets. It does not include the cost of work specifically aimed at increasing network capacity. Network extension costs may be adjusted to present value if needed, using an approach consistent with incremental revenue.

(d) *include the cost of network capacity, calculated consistent with the network capacity costing rules* – this recognises the cost of distribution network

---

57 Incremental maintenance costs are included in the net incremental cost terms. The proposal is that they are deducted from incremental revenue, rather than added to incremental cost. This means there is consistency between assumed revenue life and assumed duration of maintenance costs.

58 The methodology treats transmission as a fixed cost, so part of the revenue gathered by a new connection contributes to the (unchanged) transmission charges associated with the distribution network.

59 The proposed drafting in the Code requires the distributor to either provide the connection charge reconciliation in writing or notify the applicant of their right to request a written connection charge reconciliation.

60 Noting the calculation would not need to be re-performed for each connection that is charged only a posted rate. In practice, distributors may perform the reconciliation only once per year for posted rates as the rates and their underlying assumptions are updated.

61 Refer clause 2.4.7 of the Electricity Distribution Information Disclosure Determination.

capacity consumption, regardless of whether the connection triggers, or alters the timing of, a network capacity upgrade project. The cost should be included in the reconciliation, even if the distributor does not charge connection applicant for network capacity. However, components of the network capacity cost may be zero-rated, as per the capacity costing requirements.[62] Network capacity costs are not adjusted to present value.[63]

(e) *include incremental transmission costs for large connections only* – for most connections, transmission should be treated as a fixed cost that is unaltered by connection growth. The exception is where there is an identifiable step change in transmission costs associated with a particular connection. Examples would include where the capacity of the connection is such that it will directly trigger:

i. upgrades to a grid exit point or other transmission connection assets

ii. application by Transpower of the "notional customer" provisions in the transmission pricing methodology, with associated step changes in benefit-based charges

(f) *not apply loadings for incremental opex* – incremental opex is accounted for through a revenue adjustment (instead of a cost adjustment).

7.75. When assessing incremental revenue, a distributor must:

(a) estimate the revenue the distributor expects to earn in the first full year of operation from ongoing charges, this excludes connection charges and fees.

(b) estimate distribution revenue from future years, in real terms, by allowing for forecast changes, if any, in:

i. *demand at the connection* – This may flow through to changes in revenue if tariffs have one or more demand components (eg, $ per kWh).

ii. *target revenue per connection* – This is the revenue target for the distributor that may be set out in a price-path determination for non-exempt distributors. Changes in a distributor's target revenue are expected to flow through to changes in revenue from a connection. However, there may be instances where this isn't practical, for example, a distributor may need to adjust for anticipated connection growth, which reduces target revenue per connection. The relevant target revenue may also be specific to a pricing area, rather than the distributor's total revenue[64]

iii. *tariff structures or levels* – For example, a distributor may be planning to rebalance between fixed and variable components, or between consumer groups

(c) discount the stream of revenue to a present value. This would use:

i. a connection revenue life – starting with the first full year of operation – of 30 years for residential connections and 15 years for other connections.

---

62 This occurs where capacity headroom on a network is so abundant that there is no cost to consuming capacity – for example, on a network with declining demand.

63 The network capacity costing approach accounts for capacity consumption at the contemporaneous average cost of capacity.

64 For example, some distributors allocate costs to pricing areas in such a way that each area may have a different revenue path.

Alternatively, the distributor may use a lower number if it reasonably believes the connection will have a shorter revenue-generating life

ii. a discount rate based on the Commission's latest annual cost of capital determination [for the mid-point vanilla weighted average cost of capital (WACC) for distributors], adjusted for inflation.[65] For example, for a quotation prepared in disclosure year 2025, the relevant figure would be 6.90% less [CPI].[66]

(d) multiply the present value figure by an incremental opex adjustment factor of 90%. This step recognises new connections drive incremental maintenance costs. Rather than adjusting incremental cost estimates upwards (ie, with an opex loading), the Authority proposes applying a consistent sector-wide figure to adjust revenue downwards. The proposed figure is based on disclosures from the five years to 2023.[67] Adjusting incremental revenue (rather than adding a loading to incremental costs) aligns assumptions regarding revenue connection life and the duration of incremental operating costs.

7.76. The methodology attempts to strike a balance between accuracy and complexity, and between flexibility and prescription. For example:

(a) the sequence of steps for deriving incremental revenue are set out, but distributors retain discretion on areas where a level of judgement is required, such as revenue movement and tariff evolution assumptions

(b) key parameters are prescribed, including connection revenue life assumptions, the discount rate and the incremental opex adjustment factor

(c) the shorter revenue life for commercial connections accounts for their relative risk profile, while allowing flexibility to alter this assumption where reasonable.

7.77. The reconciliation adjusts incremental revenue to remove transmission charges. This is consistent with a scenario where connection charges do not include a transmission component. We note:

(a) the fast-track measures do not actually prevent a distributor from having a connection pricing methodology that allocates transmission charges. In this scenario, the reconciliation would present this as a component of 'network costs'. A distributor could, if it wished, show a further breakdown of network costs into 'transmission' and 'other' components.

(b) if the Authority proceeds to full reform, the approach of not allocating transmission charges would usually be appropriate. However, for large customers that directly trigger a change in a distributor's transmission charges, it would be preferable to require distributors to pass on those costs.

Benefits of including cost reconciliation in fast-track

7.78. The calculations involved in the cost reconciliation are an essential step in setting charges with reference to the neutral or balance points. While the fast-track

65 This means the calculation uses a real discount rate and a real revenue forecast for consistency.

66 Commerce Commission, Cost of capital determination for disclosure year 2025 for information disclosure regulation. 1 May 2024.

67 The formula is: ratio = 1 – (selected opex / line charge revenue). Selected opex is for service interruptions and emergencies ($435.84m), vegetation management ($306.59m) and routine and corrective maintenance and inspection ($585.49m). Line charge revenue over the period is $13,906.52m (constant price terms).

measures do not go as far as requiring charges to be set in this way, the reconciliation requirement will provide:

(a) a conceptual framework for analysing the economics of new connections, with alignment across the sector on the meaning of incremental cost, incremental revenue and network cost

(b) standardised methods for estimating incremental cost and incremental revenue, improving consistency and clarity for distributors, connection applicants and interested parties, including regulators and policymakers

(c) a reference point to inform capital contribution policies, connection negotiations and dispute resolution

(d) a stepping-stone to full reform, enabling knowledge and experience to accumulate early to build progress and sector capability ahead of full reform

(e) improved consistency of reporting by embedding a common conceptual approach and methodologies for identifying incremental cost, incremental revenue and network cost

(f) improved transparency in the level of connection charges, providing connection applicants greater certainty

(g) potentially influence on how distributors set connection charges, leading to fewer charges that are inefficiently low or high.

Customer impact of including cost reconciliation in fast-track

7.79. The cost reconciliation requirement does not directly alter how distributors set connection charges. However, it may:

(a) provide connection applicants with improved clarity as to the basis for their charges, especially for applicants who deal with multiple distributors

(b) assist distributors to assess and improve the efficiency of their connection charging, leading to greater consistency and fewer distributors with inefficiently low connection charges (ie, existing customers subsidising newcomers) or inefficiently high connection charges (ie, dampening connection growth).

Q10. Do you consider the cost reconciliation methodology would improve connection pricing efficiency and deliver a net benefit?

Q11. Are there variations to the proposed cost reconciliation methodology you consider would materially improve the proposed Code amendment?

Reliance limits methodology

7.80. We expect the fast-track pricing methodologies discussed above to improve connection pricing efficiency. However without limits on changes to reliance on capital contributions, the fast track measures do not prevent distributors from continuing the historical trend of increasing connection charges.

7.81. We expect the drivers that contribute to this trend will continue in the foreseeable future. These drivers include:

(a) growing capital expenditure programmes, including due to connection growth, organic (demand per connection) growth, and asset renewal cycles

(b) elevated real and nominal financing costs

(c) revenue paths profiled to limit year-on-year movement in consumer bills

(d) regulatory incentives to under-spend assumed capital expenditure envelopes

(e) exposure to connection volume risk.

7.82. The Authority therefore considers the risk remains that distributors will manage pressures on their businesses by inefficiently increasing connection charges. To mitigate this risk, we propose a further fast-track pricing methodology, referred to as *reliance limits*, in cases where reliance on up-front contributions is already high.

7.83. Distributors will also have the option to apply for an exemption for these requirements, for example, where the Commission is reconsidering a distributor's price-quality path settings.

7.84. This safeguard will require distributors to ensure their connection pricing methodologies applied in the 2024 year are maintained so that their reliance level does not exceed the relevant cap.

7.85. For the 2024 disclosure year, the sector average reliance on capital contributions was 48% of growth capex, where capital contributions to connections and system growth are included, and other capital contributions and the value of vested assets are excluded. This came to $322.7 million across all distributors.

7.86. We compare capital contribution amounts above to capital expenditure on connections and system growth. This came to $678.4 million across all distributors. The reliance level measures capital contributions as a source of funding for growth – ie, $322.7 million divided by $678.4 million, which comes to 48%.

7.87. The sector reliance figure peaked at 50% in the 2022 disclosure year and averaged 47% across the past four years. The sector reliance level had earlier plateaued at 35% in 2017 and 2018, after rising steadily from 14% in 2013.

7.88. Given this trend, we propose two thresholds:

(a) *individual thresholds* – distributors whose reliance in 2024 was above 47% must ensure their connection pricing methodologies are unlikely to result in reliance exceeding their 2024 level in a typical year

(b) *sector threshold* – all other distributors must ensure their connection pricing methodologies are unlikely to result in reliance exceeding 47% in a typical year.

7.89. We consider 47% is an appropriate level for a sector-wide cap given it is consistent with the most recent plateau and is not far below the most recent available level.

7.90. For distributors whose reliance exceeds the sector-wide cap, we propose individual caps based on their 2024 level. This recognises distributors who have built up to a position of high reliance may have limited ability to reduce their reliance in the near term.

Table 7.2: Proposed sector and individual reliance thresholds

Threshold	Value
Buller Electricity*	100%
Counties Energy*	79%
Firstlight Network	69%
Northpower*	74%
The Lines Company	62%
The Power Company*	54%
Top Energy	87%
Vector Lines	82%
Wellington Electricity	53%
Sector (all other distributors)	47%

* indicates price-quality regulation exempt distributor

7.91. We propose framing reliance in terms of aggregate growth capex (ie, connection and system growth capex combined) because:

(a) the incremental cost of a connection includes both network extension and network capacity costs

(b) an aggregate measure is less likely to be influenced by variations in distributors' policies for classifying expenditure. However, we acknowledge there may be some variation between distributors and over time, in how they allocate project costs between growth and non-growth expenditure categories.

7.92. We recognise reliance outcomes can be volatile – ie, without making any methodology changes, the mix of connection projects may cause variations in reliance from year to year. As such:

(a) the definition of capital contribution reliance limit for load provides for an upper limit based on reasonably anticipated capital contribution reliance for load and assuming 'typical connection activity'

(b) this means that atypical connection activity will not result in a distributor exceeding its reliance limit

(c) distributors are required to use best endeavours to stay within their relevant reliance limit.

7.93. We note that:

(a) distributors whose reliance is near the relevant threshold may need to make offsetting changes to their methodology when implementing the fast-track measures

(b) a distributor who determines their current methodology is likely to deliver a reliance outcome above the threshold may need to unwind changes from recent years

7.94. In their more recent disclosures, some distributors forecast reliance above their threshold in coming years. Where this is due to atypical connection demand – for example, a very large connection project – those distributors may not need to alter their methodologies. In other cases, distributors may need to revisit their planned pricing methodology updates or pursue implementation extensions.

7.95. The information disclosures used to assess reliance limits include capital contributions and expenditure relating to distributed generation connected in accordance with requirements in Part 6 of the Code. We note:

(a) distributed generation is outside the scope of our proposed pricing requirements

(b) distributed generation pricing requirements can be interpreted as requiring connection pricing to be at the neutral point (the bottom of the subsidy-free range) and are commonly interpreted as requiring payments to be in the form of capital contributions

(c) as a result, distributed generation connections could be a material source of reliance level volatility.

7.96. Given the above, we propose:

(a) reliance limits are set using disclosed figures that include distributed generation

(b) the reliance requirements are applied using figures adjusted to remove distributed generation.

7.97. This ensures reliance limits are unambiguous, as they are based on audited disclosed figures, while allowing distributors to focus on load connections when assessing whether their connection pricing methodology is compliant. In practice, we expect this will also have the effect of making the limits more relaxed, so there is greater headroom to increase connection charges.

7.98. We acknowledge there is a risk of unintended consequences whereby distributors with low reliance may see this measure as validating a 47% reliance level and increase their contributions to target this level. However, we note:

(a) for some distributors, increasing reliance is likely to enhance the efficiency of their connection pricing. For example, six distributors reported a reliance level below 2% for 2024. This may be a result of extensive use of vested asset approach by these distributors. Where it is not a result of an approach to require assets to be funded by connecting parties and then vested to the distributor, it is likely to result in existing users inefficiently subsidising newcomers.

(b) the other fast-track measures have a restraining effect on connection methodologies, including the cost reconciliation requirement. There is also heightened regulatory and stakeholder scrutiny of connection pricing.

(c) distributors will need to consider the prudency of their financing arrangements if they choose to build up a reliance position that is unlikely to be permissible once full reform is implemented.

7.99. The Authority has considered the risk that changes to capital contributions could increase the financeability challenges distributors have highlighted.[68] Distributors have the option of applying for an exemption from compliance with the Code under section 11 of the Act. The exemption process provides the opportunity for price - regulated distributors to work through the adequacy of their revenue allowances with the Commission. In its recent draft default-price path decision,[69] the Commission outlined its approach to financeability, which involves undertaking a notional financeability sense check. (The actual financeability position of a distributor or its owner can differ from the analysis on a notional basis). We expect these matters can be worked through and resolved, as the legislation anticipates under s54V of the Commerce Act.

Benefits of including reliance limits in fast-track

7.100. The measures above will improve connection pricing, but they do not, in themselves, prevent a distributor from setting inefficiently high connection charges.

7.101. The reliance limits prevent worsening of efficiency in the near term by preventing distributors with high reliance levels from further increasing their reliance on up-front charges. This will have a number of benefits for connection applicants and consumers including:

(a) reduction in up-front charges on networks that had otherwise planned to exceed the applicable reliance limit (including potentially to increase charges to inefficient levels)

(b) preserving scope for increases in up-front charges on networks with low reliance levels, to the benefit of existing users. This may be efficiency enhancing for those networks.

7.102. Reliance limits will also act as a backstop, as full reform could be later than the indicative timeline shown in Figure 6.1, depending on progress and prioritisation.

Customer impact of including reliance limits in fast-track

7.103. Capital contribution reliance limits may result in an initial financial impact on some existing customers of distributors with particularly high levels of reliance on capital contributions. This is because some distributors may need to recover a reduction in capital contributions through ongoing lines charges.

7.104. We expect this impact to be relatively small, at least initially. We note this amount may grow over time as the regulatory asset base increases in subsequent regulatory periods. However, we expect our proposals would reduce charges for existing customers over time due to increases in the efficiency of connection arrangements (refer to Customer impact analysis section below).

7.105. Reliance limits are framed in terms of a typical year and connection applicants retain discretion to tailor the balance between capital contributions and ongoing charges through commercial negotiation for customers with special pricing. Distributors would then assess the impact on their reliance limit.

Q12. Do you consider the reliance limits would improve connection pricing efficiency and deliver a net benefit?

68 Vector-Submission-on-EDB-DPP4-draft-decisions-12-July-2024.pdf (comcom.govt.nz)

69 Commerce Commission. Default-price-quality-paths-for-electricity-distribution-businesses-from-1-April-2025-Draft-reasons-paper-29-May-2024.pdf (comcom.govt.nz). Attachment G.

Q13. Are there any variations to the proposed reliance limits you consider would materially improve the proposed Code amendment?

Proposed parameters for pricing methodologies

7.106. The Authority has proposed parameters for some of the fast-track measures.

Table 7.3 Proposed parameters for some of the fast-track measures

Setting	Value	Comment
Capacity costing requirements		
Capacity threshold (%)	80%	Level at which project costing approach may be used in place of capacity consumption approach. Reflects that large capacity increments are highly likely to drive specific investments.
Cost threshold (%)	150%	Level at which bespoke rate may be used in place of published rate. Limits use of cost averaging for outliers (ie, for very expensive capacity).
Connection charge reconciliation requirement		
Connection revenue life – residential (years)	30	Relatively long assumed life to reflect relatively low risk of idle residential connections. Note, 30 years is nonetheless lower than assumed asset life of 45 years. Consistent with Australian settings.
Connection revenue life – commercial (years)	15	Shorter assumed life to reflect higher risk profile of non-residential consumers. Reduces risk of existing users subsidising connection but leads to higher connection charges.[70] Consistent with Australian settings.
Discount rate (%)	6.90 less CPI%	Updates annually based on the Commission's assessment of cost of capital and prevailing inflation rate (to adjust from nominal to real return). Brings revenue and cost cashflows back to present value[71].
Incremental opex adjustment (%)	90%	Reduces assumed revenue to account for incremental opex (as alternative to applying opex loading to capex). Value based on sector average opex values.[72]
Pioneer schemes		

70 Risk rests with users because distributors can retain unused assets in their regulatory asset base and can wash-up under-recoveries.

71 The current rate is 6.90% as per the Commerce Commission's determination of WACC. Refer to page 4, Cost of capital determination for disclosure year 2025 for information disclosure regulation.

72 Based on opex categories most likely to be sensitive to number and value of connections – service interruptions and emergencies; vegetation management; routine and corrective management and inspection.

Setting	Value	Comment
Duration (years)	10	Longer life extends administrative burden and complexity, while shorter life diminishes effectiveness of scheme (ie, less attractive to pioneer).
Depreciation life (years)	20	Longer life improves effectiveness, while shorter life mitigates an abrupt drop-off in value at end of the scheme.[73] Proposed life much shorter than economic life of the assets.
Entry threshold – cost ($)	$30k	Minimum extension cost value eligible for pioneer scheme. Balances effectiveness with administrative burden and predictability for later connection applicants.
Entry threshold – contribution ($)	$10k	Minimum payment that makes a connection applicant eligible for rebates. Balances effectiveness with administrative burden.
Minimum contribution	$1k	Minimum contribution a distributor must administer. Balances effectiveness with administrative burden.

Opportunity to seek exemptions

7.107. Where the 2024 reliance limits are lower than the distributor's forecast used for setting its revenue path, this will allocate a greater share of the financing burden for growth to distributors. All things being equal, this means distributors require a higher allowable revenue over time to recover higher net (of contributions) capital expenditure. We note this does not translate into higher customer bills provided new connections are priced above the neutral point.[74]

7.108. For non-exempt distributors revenue paths for the five years from April 2025[75] will be set by the Commission later this year, based on forecasts distributors developed before the fast-track elements were proposed. For some non-exempt distributors, this will mean their revenue path assumes lower net capital expenditure than would be consistent with our proposals.

7.109. The statutory framework anticipates that price-quality paths may be impacted by the Authority determining pricing methodologies or information requirements. As noted in section 3 above, there is provision under section 54V of the Commerce Act for the Authority to ask the Commission to reconsider price-quality paths that apply to non-exempt distributors. When asked by the Authority, the Commission must reconsider the relevant determination. To the extent the Commission considers it necessary or desirable do so, it must amend the price-quality path. When exercising its powers, the Commission is required to take into account any provision in the Code that relates to pricing methodologies.

[73] With proposed settings, asset is 50% depreciated in final year of the scheme. This influences how much an applicant can save by deferring this connection application from year 10 to year 11.

[74] In the short-term there may be an increase, as new assets have a revenue requirement that is higher initially and reduces as the asset ages. This dynamic is explored further in the customer impact section.

[75] Aurora Energy is on a customised price-path and will have its price path reset the following year.

7.110. How the Commission considers any request received from the Authority is a matter for it to determine.[76] We are continuing to engage with the Commission on any likely timing and process as part of our section 54V consultation. If any amendment to a price-quality path is determined by November 2025, this would align the application of fast-track requirements to quotes (from 1 April 2026) with a revised target revenue and tariffs. If it is not possible to complete a redetermination process with the Commission by November 2025, there will be a delay of a year before fast-track requirements align with a revised target revenue and tariffs. This could create material financial uncertainty.

7.111. Given the above, the Authority recognises some non-exempt distributors may consider they require an exemption from implementing some or all fast-track measures (for example, the reliance limit) while resolving engagement with the Commission on their DPP settings.

7.112. Distributors are able to seek an exemption from compliance with the Code under section 11 of the Act.

7.113. Under section 11 of the Act, the Authority may exempt a participant from compliance with the Code, including from, for example, from the reliance limits, if satisfied that:

(a) it is not necessary, for the purpose of achieving the Authority's objectives under section 15, for the participant to comply with the Code or the specific provisions of the Code; or

(b) exempting the participant from the requirement to comply with the Code or the specific provisions of the Code would better achieve the Authority objectives than requiring compliance.

7.114. Under this test, the Authority could consider the impact of compliance on a distributor (compared to the granting of an exemption) and the extent to which compliance is necessary, or may work against the achievement of its objectives. For example, an exemption from the reliance limit may better achieve reliability and efficiency objectives if the distributor otherwise is unable to meet its capital expenditure and operating expenditure requirements within its price-quality path.

7.115. This test under section 11 of the Act will not necessarily apply to all distributors and applications would need to be balanced against the drawbacks of later implementation, which may include among other things:

(a) less efficient connection pricing continues

(b) slower progress towards nationwide consistency

(c) access seekers continue to be incentivised to defer connection applications in anticipation of more favourable pricing.

7.116. The Authority has published Exemption Guidelines that set out the process to be followed with additional guidance provided for exemptions relating to industry trials. The Authority will consider whether to update the guidelines to provide additional information on any exemptions sought because of a reconsideration under section 54V of the Commerce Act.

7.117. While each exemption application is considered on a case-by-case basis, guidelines can assist distributors provide the right information and speed up the

[76] Potentially, their needs as they understood them in early 2024 – ie, this would isolate the update to connection pricing changes only and exclude updates due to new information on underlying costs or volumes.

application timeframes. While any update to the guidelines is yet to be developed, examples of information requested might be:

(a) the distributor's proposed transition plan, which may include a series of steps towards a deferred full transition date

(b) with reference to the Authority's statutory objectives, evidence that demonstrates why an extended implementation meets the test in section 11 of the Act

(c) evidence of the distributor's engagement with the Commission, including evidence that any reconsideration has been progressed on the part of the distributor without delay.

7.118. This process provides flexibility where needed on a case-by-case basis, and the ability for the Authority to impose conditions, with the onus on a distributor to demonstrate why an exemption meets the statutory test.

Q14. Do you consider the exemption application process (together with guidelines) can be used to achieve the right balance between improving connection pricing efficiency and managing transitional impacts on non-exempt distributors?

Dispute resolution

7.119. The Authority is proposing to apply the dispute resolution process in Schedule 6.3 of the Code that currently applies to generation connection requirements in Part 6 including the application of pricing principles. It applies processes in the Electricity Industry (Enforcement) Regulations 2010 (Enforcement Regulations), but with an additional requirement to seek to resolve issues in good faith and the option for the Authority to make a determination on connection charges applying pricing methodologies.[77] These processes place incentives on the distributor to apply the pricing methodologies and seek to resolve issues early.

7.120. Under the statutory framework, this dispute resolution approach can only apply to disputes between distributors and other participants.[78]

7.121. We consider connection applicants who are not participants will remain able to resolve disputes through the process set out in the Enforcement Regulations (a non-participant can report a breach of the Code, following which a process must be followed). We propose imposing a good faith requirement on distributors which will provide a further incentive on distributors to apply the connection pricing methodologies and seek to reach early resolution with any connection application should a complaint be made.

7.122. While the processes in the Enforcement Regulations do not provide for determination by the Authority for non-participants, and include the provisions

[77] Note that the Authority determination is not binding under the Code or Electricity Industry (Enforcement) Regulations 2010. If not complied with it would need to be referred to the Ruling Panel. However, there would be a strong incentive to comply given the Rulings Panel will consider the determination.

[78] 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).

excluded from dispute resolution under Schedule 6.3, they are otherwise generally similar to the dispute resolution process in Schedule 6.3.[79]

7.123. Both participants and non-participants are able to make a complaint to Utilities Disputes Limited, which operates as a designated dispute resolution scheme under the Act.

7.124. Ideally the same dispute resolutions could apply to both participants and non-participants. This could be achieved under the contractual terms option set out in paragraphs 7.127 to 7.134 below. This has the added advantage of allowing parties to agree to private dispute resolution processes which may be more flexible and faster than a regulatory model.

Q15. Do you consider the dispute resolution arrangements proposed (for both participants and non-participants) will provide the right incentives on distributors and connection applicants to resolve disputes about the application of pricing methodologies to connection charges and improve connection pricing efficiency and deliver a net benefit?

Q16. Are there variations to the proposed dispute resolution arrangements you consider would materially improve the proposed Code amendment?

Alternative options

7.125. We have considered a range of variations and alternatives to our proposed package of measures. The key alternatives are:

(a) contractual terms alternative

(b) reliance limit reductions – bringing individual reliance limits in line with the sector average over time

(c) subset of measures – implementing only some of the proposed measures

(d) alternative parameters – selecting different settings for some of the proposed measures

(e) excluding Large Connection Contracts (LCC) from the application of pricing methodologies.

7.126. These alternatives are discussed below.

Contractual terms alternative

7.127. We are considering an alternative approach 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.

7.128. The contractual approach would not change the substance or underlying rationale of the connection pricing methodology proposals discussed in this paper (or the

[79] The Authority can approve any settlement proposed by the investigator. Because of this process, and because the Rulings Panel can require compliance with the pricing methodologies, there should be strong incentives on the distributor to ensure the pricing methodologies are applied when setting connection charges. Failure to comply with the proposed requirement to resolve complaints in good faith would be a breach of the Code in itself.

substance and rationale for the Code changes discussed in the Part 6 consultation paper).

7.129. The benefits of adopting a contractual terms approach include:

(a) draft contractual terms best reflect the contractual nature of the relationship between the parties and would be more accessible to parties

(b) for the non-price connection terms being considered in the Part 6 reform consultation paper, it avoids the need for separate terms to apply to non-participants and participants (the prescribed terms for non-participants and the regulated terms for participants)

(c) the approach has precedent: the default transmission agreement (DTA)[80] and the default distribution agreement (DDA).[81]

7.130. The approach would also allow for private dispute resolution arrangements to apply to the contractual terms without the need for regulatory enforcement processes (which are not primarily designed for dispute resolution purposes and could be more protracted or less flexible). This dispute resolution approach has been used in the DTA and DDA and is understood by the industry.

7.131. We note that the dispute resolution and enforcement approach referred to in paragraphs 7.119 to 7.124 above would provide the Authority with better visibility of outcomes and a consistent adjudicator compared to contractual dispute resolution terms.

7.132. To address this, and to enable the Authority to maintain oversight of disputes (including over application of connection charge pricing methodologies), we are considering requiring the provision of any arbitration decisions under the contractual dispute resolution terms to the Authority. This is similar to a requirement under the DDA (see clause 14 of Schedule 12A.4 of the Code).

7.133. *What requirements would remain Code requirements?* The following requirements in the proposed drafting could remain Code requirements:

(a) the process for entering into connection contracts for load and distributed generation (see the Part 6 consultation paper) and the requirement to apply the regulated terms and the pricing methodologies (and pricing principles for generation)

(b) the pricing methodologies (and current distributed generation pricing principles) - the contractual terms would then refer to these Code requirements for the purposes of the connection charges

(c) a new Code provision would require the distributor to:[82]

i. include a default contractual term that agreed / warranted that the connection charges have been calculated by the distributor using the connection pricing methodologies

ii. use all reasonable efforts to obtain agreement to / inclusion of this default term in the contract; and

80 Electricity Participation Code 2010, Schedule 12.6.

81 Electricity Participation Code 2010, Schedule 12A.1, Appendix A.

82 This replicated the effect of the draft Code amendments discussed in this paper, where the pricing methodologies must be applied by the distributor.

iii. refuse to enter into a connection contract unless the connection applicant agrees to the default term in subparagraph (a) being included in the contract[83]

(d) the dispute resolution proposals described at paragraphs 7.119 to 7.124 (which would continue to apply to the pre-contractual Code requirements)

(e) most definitions– the contractual terms would provide that the same definitions apply for the purpose of a connection agreement.[84]

7.134. *What requirements would be contractual terms?* The following requirements in the proposed drafting would be reframed as contractual terms*:*

(a) the regulated terms proposed for Part 6 for load customers with connections above 69kVa (and the regulated terms in Part 6 that apply to generation customers) - the same terms would apply to both participants and non-participants (it would not be necessary to include separate prescribed terms)[85]

(b) terms requiring the distributor, post-contract, to calculate the connection charges in accordance with the pricing methodologies specified in the Code and / or to warrant that the connection charges have been calculated applying the pricing methodologies

(c) a default dispute resolution process (for all connections) – this would include usual processes such as requirements to resolve the dispute in good faith, mediation and arbitration.

7.135. The default regulated non-price terms would only apply if parties were unable to agree to different terms (see the Part 6 consultation paper). An alternative to the default dispute resolution terms could also be agreed. The default regulated non-price terms would only apply if parties were unable to agree to different terms (see the Part 6 consultation paper). An alternative to the default dispute resolution terms could also be agreed.[86]

Q17. Do you consider the alternative contractual terms option would be better than the approach in the proposed drafting attached to this paper? Please give reasons.

Reliance limit reductions

7.136. The Authority proposes the reliance limits are fixed, while noting they will be superseded if the Authority later implements full reform that further constrains connection pricing levels.

---

83 This reflects the position that the Code cannot impose obligations on a non-participant. We propose adopting the same approach for participants and non-participants to avoid unnecessary complexity. The requirement is on the distributor not the consumer, prescribing the circumstances when a connection must be refused. Note also that, under the status quo, a distributor can currently refuse to connect a load applicant.

84 See for example the Transmission Agreement Template which uses a similar approach.

85 Note that for load customers at or below 69kVA, only default terms for calculating connection charges in accordance with the pricing methodologies and dispute resolution would be required.

86 This reflects the position that the Code cannot impose obligations on a non-participant. We propose adopting the same approach for participants and non-participants to avoid unnecessary complexity. The requirement is on the distributor not the consumer, prescribing the circumstances when a connection must be refused. Note also that, under the status quo, a distributor can currently refuse to connect a load applicant.

7.137. We recognise if full reform of this type is not progressed, then the limits could become an enduring feature. This would have the effect of locking in higher limits for nine distributors, while other distributors are limited to 47% reliance.

7.138. An alternative approach would be to set out now that individual reliance limits will reduce to bring them in line with the 47% sector-wide limit. Two options for this approach would be a:

(a) sinking lid – each year, individual limits reduce by an amount that will bring them down to 47% for the first year of the next control period (ie, the year starting 1 April 2030)

(b) step change – from 1 April 2030, individual limits are replaced by the 47% sector limit.

7.139. We expect the first option would increase the number of distributors needing to engage with the Commission on the adequacy of their current price-quality paths. It would likely result in more and larger changes to price-quality paths, and increase the likelihood of some distributors needing temporary exemptions from the reliance rules. On the other hand, it would more quickly:

(a) reduce inefficiently high connection charges

(b) improve alignment between distributors

(c) weaken incentives for connection applicants to delay their applications.

7.140. On balance, the sinking lid approach is the Authority's preferred alternative within this option.

7.141. Our key reservation regarding this alternative is that harmonising reliance limits at 47% is not a substitute for full reform. In particular:

(a) full reform is likely to set limits relative to neutral and balance points, which do not correspond to specific reliance levels. To illustrate, consider:

i. a network whose connection activity is dominated by low-cost residential infill projects (extension costs are low), has ample built capacity (capacity costs are low or zero), has relatively high residential tariffs (incremental revenue is high)[87] and sets connection charges near the neutral point. This network would have an efficient reliance level well below 47%

ii. in contrast, a network whose connection activity is dominated by remote connections far from an existing network, has relatively low tariffs[88] and sets charges near the balance point may have an efficient reliance level above 47%.

(b) a rapid transition from high reliance levels down to 47% will have wealth effects – especially if high reliance levels have been in place for a long time.

Q18. Do you think a sinking lid approach to reliance limits would be preferable to the proposed static limits approach described in sections 7.80 – 7.105 above?

87 This could reflect some combination of a tariff-setting policy that allocates residual costs to residential consumers, low historical reliance levels, or recent network renewal investment.

88 This could reflect some combination of tariff-setting policy, high historical reliance levels, or heavily depreciated assets.

Subset of pricing methodologies could apply

7.142. The Authority has proposed a package of pricing methodologies that work together. It is possible to omit one or more element of the overall package or phase in the requirements. This is not a preferred option as we consider that the pricing methodologies, together as a package, will provide the greatest benefits and best meet our statutory objectives.

Q19. Do you think any element of the fast-track package should be omitted, or should begin later than the rest of the package?

Alternative parameters for some of the pricing methodologies

7.143. The Authority has proposed parameters for some of the fast-track measures in Table 7.3. While these parameters reflect our preferred options, we are interested to receive feedback on whether different parameters could achieve the objectives of our proposal.

Q20. Are there other parameters you think the Authority should consider for the proposed connection pricing methodologies? If so, which ones and why?

Application of pricing methodologies to large connection contracts

7.144. From 1 April 2025, non-exempt distributors and their customers will have access to the large connection contracts (LCC) mechanism. The mechanism provides a way for a distributor to pursue connection work outside their regulatory allowance where:

(a) the expenditure has not been allowed for in regulatory allowances

(b) the connection is at least 5 MW and above specified value thresholds

(c) the distributor and connection applicant agree to terms and conditions, including pricing.[89]

7.145. The Authority considers proposed connection pricing methodologies could apply to LCC connections.[90] The key considerations are:

(a) the LCC mechanism provides an option for distributors and connection applicants to adopt if they agree the terms are reasonable. The connection pricing requirements assist with pricing transparency, and with establishing the counterfactual pricing that would occur under a standard (non-LCC) connection agreement. As such, they remain valuable for connection applicants weighing up whether to accept an LCC

(b) the pricing requirements also improve transparency on the impact of an LCC on other customers, because they support the Authority gathering information about the contribution an LCC customer makes to network costs

(c) the proposed requirements include features aimed at ensuring workability for large connections. These include the option to agree not to design the minimum scheme, to use actual project costs instead of posted rates for large-capacity increments, and to remove atypical connections when assessing reliance levels.

89 For more detail, refer to Attachment B of the Commerce Commission's draft DPP4 decision. Default-price-quality-paths-for-electricity-distribution-businesses-from-1-April-2025-Draft-reasons-paper-29-May-2024.pdf (comcom.govt.nz)

90 Noting that payments received under LCC contracts count towards the reliance limit calculation as these fall outside the definition of capital contributions.

Q21. Do you agree pricing methodologies should apply to LCC contracts? If not, please explain your rationale.

Other matters

7.146. We have considered a range of related issues, including:

(a) pricing for distributed generation

(b) obligation to supply

(c) vested assets

(d) contestability.

Pricing methodologies for distributed generation

7.147. The proposed pricing requirements in this consultation paper would only apply to load customers. They would not apply to distributed generators, whose connection costs are set according to the distributed generation pricing principles (DGPPs) in Schedule 6.4 of the Code.

7.148. Notwithstanding this scope limitation, these proposals may have implications for distributed generation pricing in the future, including:

(a) The DGPPs refer to incremental costs. Distributors and distributed generators might see the arrangements for load as providing a reference methodology for incremental cost determination.

(b) The DGPPs can be understood as requiring pricing at the neutral point – that is, at the bottom of the subsidy free range. The concepts of neutral, balance and bypass points might be considered useful concepts in considering any future revision to distributed generation pricing arrangements.

(c) Likewise, if these proposals are implemented for load customers, then it might be considered beneficial in future to extend them to distributed generators so arrangements are harmonised. This could be done with or without maintaining the requirement to price at the neutral point and could include pioneer scheme requirements (for example).

Obligation to supply

7.149. For distributed generation, regulation of access terms, including pricing, is accompanied by an obligation on distributors to make connection offers. This limits the risk that distributors will respond to access regulation by rejecting connection demand.

7.150. For load:

(a) this paper proposes to introduce restrictions on connection pricing

(b) in parallel, the Authority is consulting on proposals to regulate non-price access terms.

7.151. The parallel ‘Network connections project – stage one’ consultation on non-price access terms includes a proposal to extend the obligation on distributors to offer connections to encompass load. The ‘Network connections project’ consultation is open for the same time period as this consultation and we encourage submitters to consider both sets of proposals in parallel.

Vested assets

7.152. A connection applicant may be required by some distributors to construct assets but may otherwise opt to construct assets themselves, for example:

(a) An applicant may build their own on-site assets and retain ownership of them. We propose to define these as 'customer-owned assets' and exclude them from the definition of 'connection works'. These assets are entirely outside the scope of connection pricing arrangements, as their construction, renewal (or disposal) costs are all the responsibility of the site owner.

(b) An applicant may contribute to construction of connection works, for example, by undertaking trenching that can be used for multiple utilities, including distribution extension assets. In this case, the applicant incurs some costs directly, while the distributor incurs lower costs and does not have visibility of some trenching costs.

(c) An applicant may build, or independently contract for, construction of assets they then 'vest' to the distributor to own, operate and maintain. In this case, the applicant incurs costs in place of the distributor and the distributor does not have visibility of that cost. Typically, the applicant will transfer ownership of the assets at some nominal cost, which may be a fraction of the construction cost.

7.153. In all the scenarios above, there are costs that are not visible to a distributor, are not reported in information disclosures (and therefore not visible to the Authority) and do not enter a distributor's regulatory asset base.

7.154. Table 7.4 sets out how each of the proposed requirements would apply to vested assets. Generally, vested assets do not present any challenge to the implementation or intent of the proposed requirements. The possible caveat is that reliance limits could incentivise distributors to increase the prevalence of asset vesting.

Table 7.4 Application of requirements to vested assets

Requirement	Application	Comment
Enhancement cost application	Distributor may pay applicant for costs associated with constructing distributor-selected enhancements.	Applicant and distributor would have to agree on costing of enhancement works. Alternatively, parties may agree not to determine minimum scheme for vested works.
Network capacity costing	If applicant is upgrading and vesting shared assets, then parties could calculate payment based on the difference between actual cost and assessed network capacity charge.	Typically, distributors would not allow applicants to upgrade existing shared assets and vest the improvements back to the distributor.
Pioneer scheme	Pioneer scheme obligation still applies.	Distributor may not have direct visibility of the cost of the connection works. Proposed Code amendments accounts for this by allowing the distributor to use the estimated costs of the works.

Requirement	Application	Comment
Connection charge reconciliation	Distributor performs reconciliation using a smaller incremental cost and (typically) a smaller connection charge.	Higher likelihood of zero or negative connection charge if applicant is vesting assets.
Reliance limits	Metrics only measure reliance on capital contributions, not vested assets.	A distributor could reduce its reported reliance level by increasing the prevalence of asset vesting.

7.155. We have not proposed any measures to directly counter possible incentives to increase prevalence of asset vesting, but welcome views on whether this would be desirable and how it could be achieved.

Q22. Do you agree the proposed requirements, other than reliance limits, can be applied satisfactorily to connections with vested assets? If not, please explain your rationale.

Q23. Do you have any comments on the impact of reliance limits on incentives to increase prevalence of asset vesting?

Contestability

7.156. Distributors vary in the degree to which they restrict access seekers from engaging a third party to construct connection works (or doing the work themselves). This means that contestability, and hence the degree to which competitive rivalry helps discipline construction costs, varies.

7.157. In addition, the degree of competitive rivalry varies by location, with more potential suppliers in large centres and less in smaller communities.

7.158. As a general principle, it is desirable to ensure contestability is not unreasonably restricted. The Commission recognises this with its requirement that distributors publicly disclose:

> *A statement of whether a **person** can use an independent contractor to undertake some or all of the work covered by [a] **capital contribution** sought by the [distributor].*[91]

7.159. There are two scenarios for a connection applicant using a third party to complete connection works:

(a) ownership of the completed works is retained by the connection applicant (or another third party). This means the distributor does not gain control of the assets, nor responsibility for their maintenance and eventual replacement. The distributor does not have to recover the cost of the assets, but will enjoy incremental revenue from the connection that the assets facilitate

(b) the applicant vests ownership of the completed assets to the distributor. The distributor may make a payment to the applicant for the vested assets, but this is typically much lower than the cost of construction. Once vested, the distributor gains control of the assets and responsibility for their maintenance and eventual replacement. The distributor may also use the assets to support future connections – ie, dedicated assets may become shared assets.

[91] Clause 2.4.6(2) at -Electricity-Distribution-Information-Disclosure-Targeted-Review-2024-Amendment-Determination-2024-red-line-version-29-February-2024.pdf (comcom.govt.nz)

7.160. Table 7.4 assesses how our proposed requirements apply to vested assets and is relevant to considering the impact of our requirements on contestability. Key observations are that:

(a) distributors must operate pioneer schemes for extension that include vested assets if the extension meets the usual criteria (including the extension cost threshold). This ensures that lack of access to a pioneer scheme is not a barrier to contestability

(b) connection works that include vested assets are more likely to result in a negative connection charge – ie, where the incremental revenue exceeds the incremental cost and contribution to network costs. To support contestability in such cases, distributors should make a payment to the applicant (or their contractor).

Q24. Do you agree the proposed methodologies are compatible with contestable connection works? If not, please explain your rationale.

Embedded networks

7.161. An embedded network is a network with registered connection points that is indirectly connected to the grid via one or more other networks. Examples include some apartment buildings, retirement villages, and airports.[92]

7.162. Embedded networks have different obligations under the Code to other networks, including with respect to contractual arrangements. As such, we propose that the fast-track measures do not apply to embedded networks which convey less than 5GWh of electricity per year consistent with Part 6. We expect we would consider connection pricing for embedded networks as part of any longer-term reform.

Q25. Do you agree that fast-track methodologies should not apply to embedded networks? If not, please explain your rationale.

92 Embedded network is a defined term in clause 1.1 of the Code.

8. Anticipated solution: longer-term reform

8.1. The proposed fast-track elements are expected to:

(a) produce a step-change in the degree of alignment across distributors

(b) improve pricing efficiency for enhancement costs

(c) remove the position-in-queue problem for network capacity

(d) mitigate first-mover disadvantage with respect to extension costs

(e) improve clarity on the economic basis for connection charges

(f) improve the ability for connection applicants to challenge connection quotes

(g) arrest deterioration in connection pricing efficiency.

8.2. While these benefits are significant, the 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. To ensure efficient connection pricing for the long term, the Authority expects to undertake a more comprehensive programme of reform ('full reform').

8.3. For full reform, the Authority envisages tightening discretion by requiring distributors to estimate the neutral and balance points and set charges within a band relative to those points.

8.4. If adopted, this will bring a material shift in connection charges for many distributors, as well as increasing the importance of the concepts and calculations introduced at the fast-track stage.

8.5. To support full reform, we anticipate we will need to:

(a) ensure fast-track elements are becoming established as intended

(b) establish a methodology for estimating the balance point

(c) establish a clear and principled position on the allowable band, including where customers have contributed vested assets and where distributors have shortened the assumed connection revenue life

(d) design appropriate transition arrangements that facilitate business change and revenue path alignment, while avoiding overly distorting applicant incentives as to the timing of connection projects

(e) ensure rules accommodate the full range of connection scenarios, including large customers with special pricing, staged developments with vested assets, cost-sharing for network footprint extensions, hybrid sites with mixes of load, generation and storage technologies.

8.6. The importance of ensuring these concepts are robust and well embedded would increase with a shift from cost reconciliation requirements to a requirement to price within a specific band. Many of these issues are nuanced or complex and will take time to understand and resolve.

8.7. As such, the timing for moving to full reform will depend on:

(a) progress with implementation of the fast-track elements

(b) indications on how connection pricing practices are evolving

(c) allocation of resources across the Authority's competing priorities.

Q26. Do you have any comments on the Authority's anticipated solution for longer-term reform?

9. Regulatory statement for the proposed amendments

Objective of the proposed amendments

9.1. The objective of the proposed amendments is to improve the efficiency of distribution network connection pricing.

The proposed amendments

9.2. The Authority proposes, subject to the results of consultation, to introduce new Code provisions as described in preceding chapters and set out in Appendix B.

The benefits of the proposed amendments are expected to outweigh the costs

9.3. The proposed amendments will introduce costs for all parties, but most predominately distributors relating to:

(a) for all distributors:

i. developing and implementing amendments to their existing connection pricing methodologies

ii. working through the implications of the changes on their business plans

iii. reduce ability to tailor connection pricing arrangements to suit their circumstances. At the extreme, this could result in some distributors turning away connection demand[93]

(b) for some distributors:

i. engaging with parties such as funders, customers and the Commission on changes to revenue, pricing or financing settings

ii. conducting additional analysis and providing additional information as part of their ongoing pricing activities

iii. managing increased uncertainty or volatility in one part of their regulated capital expenditure

(c) for access seekers and their advisors, developing an understanding of new arrangements and their implications

(d) for the Authority, post-implementation costs including providing guidance, monitoring, dispute resolution and enforcement

(e) for the Commission, reconsidering price-quality paths.

9.4. We expect the proposed amendments will introduce benefits relating to:

(a) for distributors, benefits from reduced administrative costs due to greater consistency and commonality of connection pricing across the sector

(b) for access seekers and their advisors, reduced costs associated with navigating inconsistencies between distributors, including in terminology and overall approach

(c) for access seekers, planning and decision-making benefits from improved predictability of connection charges, both between distributors and between similar connections with one distributor

93 The Authority is currently consulting on an amendment to Part 6 of the Code which would require distributors to connect loads to their network if certain conditions are met.

(d) in some cases, removing inefficiently high connection charges will lead to reduced incidence of efficient connection demand being deferred or suppressed

(e) in some cases, removing inefficiently low connection charges, leading to reduced incidence of inefficient subsidies, and therefore lower network charges for existing customers and fewer inefficient connections

(f) removing the 'position-in-queue' problem for network upgrades, leading to reduced incidence of connections being inefficiently delayed or cancelled

(g) mitigation of first-mover disadvantage for network extensions, leading to reduced incidence of connections being inefficiently delayed or cancelled

(h) for some distributors, improved customer and distributor incentives regarding the selection of enhancements, leading to more efficient connection solutions, including flexible connections in some cases

(i) for some distributors, improving the cost-reflectivity of connection charges, leading to more efficient connection solutions

(j) for some distributors, improving incentives to manage the cost of connections and upgrades where connection demand is a driver, leading to more efficient network planning and delivery, and therefore lower network costs.

9.5. Costs and benefits are difficult to estimate given the wide-reaching nature of these proposals and the diversity of impacts across distributors and connection projects.

9.6. To gauge relative costs and benefits, the Authority has considered the relative magnitude of distributors' operating costs and their connection and growth costs:[94]

(a) sector-wide operating expenditure on business support has averaged $262.5 million per year over the most recent five reported years.

(b) sector-wide capital expenditure on consumer connections and system growth has averaged more than $803.5 million per year in the same timeframe (comprising $273.7 million of capital contributions, $345.5 million regulated expenditure on consumer connections and $184.3 million regulated expenditure on system growth and excluding expenditure on vested assets).

9.7. The ratio between these two areas of expenditure is 3.1:1. Assuming costs to access seekers are neutral (ie, transition costs are offset by ongoing savings), then to produce a net reduction in sector costs, the proposals would need to deliver a 0.12% reduction in connections and growth capital expenditure for every $1,000,000 in additional administrative costs.

9.8. We anticipate the profile of operating costs may involve:

(a) first year – change costs for distributors

(b) second year – change costs for distributors and access seekers (including advisors)

(c) third year – costs reduce as arrangements become established

(d) ongoing – return to neutral as costs balanced by savings.

9.9. In contrast, we expect the profile of capital costs may involve:

[94] We note that this is only one aspect of the costs and benefits on distributors that could be assessed quantitatively.

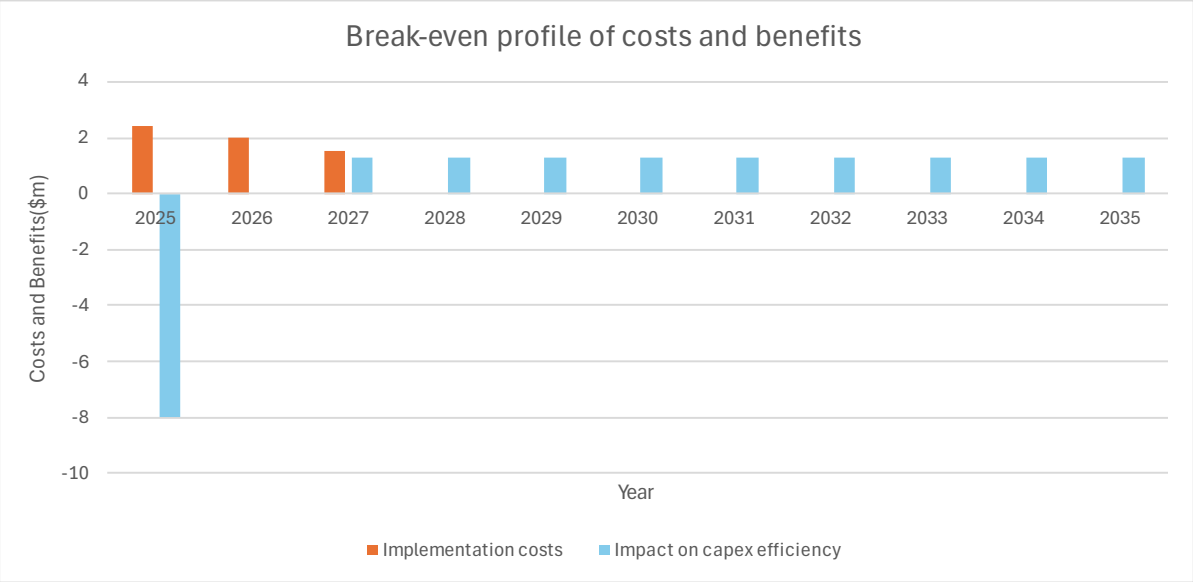
(a) first year – potential for some access seekers to adjust the timing of their work to access more favourable connection pricing, with minor efficiency impacts (negative)

(b) second year – neutral impact as timing effects (negative) balance out early efficiency benefits (positive)

(c) ongoing – efficiency benefits continue year-on-year (positive).

9.10. Figure 9.1 illustrates the above profile, using figures that correspond with total implementation costs $5.6 million (ie, 2% of the amount the distribution sector historically spent on business support operating costs per year) and a break-even cost outcome.[95]

Figure 9.1 Break-even point for implementation costs of fast-track measures



9.11. In this scenario, the magnitude of ongoing savings amounts to 0.18% of historical average annual connection and growth capex. In contrast to this historical period, the period following introduction is widely expected to feature:

(a) higher connection volumes, including for price-sensitive fuel-switching investments

(b) growth investment pressures from both connection growth and growing demand at existing connections

(c) growing opportunities to optimise investment programmes, including through pricing signals, access to flexible resources, and proactive asset management, such as co-optimising renewal and growth investments.

9.12. As such, the Authority considers it is highly likely benefits will significantly outweigh costs.

Independent expert assessment

9.13. The Authority engaged the economic consultancy CEPA to carry out a qualitative assessment of the expected costs and benefits of its proposals (refer to Appendix C). CEPA considers the benefits of the reform are likely to exceed the costs,

95 The analysis uses a 7% discount rate and counts benefits to 2050.

particularly in light of increasing demand for new and upgraded connections from electrification of transport and process heat and population growth.

> *We consider that the one-off initial implementation costs are likely to be minor relative to the lasting ongoing efficiency gains that the reform is expected to generate in terms of more efficient connection decisions and network expenditure. In the medium term, the cost for access seekers of familiarising with the new arrangements is likely to be more than offset by the reduced transaction costs linked with greater degree of pricing certainty and consistency, and the harmonisation of connection charging approaches across EDBs.*[96]

9.14. CEPA considers the fast-track elements will materially improve the regulatory regime for connection charges in New Zealand and facilitate the ongoing process of power system transformation. The main benefits of the proposed fast-track package are:

(a) improved alignment between the upfront and ongoing change and the costs attributable to the connecting parties, promoting more efficient connection decisions

(b) improved customer protections in relation to connection charges through greater transparency over expected charges and a mechanism for dispute resolution.

9.15. Additionally, based on the Authority's view of anticipated features for full reform, CEPA considers the signalled direction for full reform is sensible. Transitioning connection charges to lie between the neutral and balance point will help to ensure connecting customers only pay an efficient price for connection. The features of full reform are also anticipated to support fairness and horizontal equity across customer classes.

Alternative means of achieving the objective

9.16. We compare our proposal to three alternatives of doing nothing, developing guidelines and undertaking full reform on a faster track.

Do nothing

9.17. Compared to the fast-track proposals, we would expect doing nothing to result in:

(a) less up-front costs associated with implementing fast-track rules, and ongoing dispute resolution and enforcement costs.

(b) higher ongoing costs for distribution businesses and access seekers associated with managing disparate approaches to connection pricing. The sector may make some gains in lower-level harmonisation, but we would expect this to be slower and less comprehensive.

(c) improved pricing efficiency for some distributors, but not where distributors have financial drivers for adopting inefficiently high or low connection charges.

(d) continued deterioration in pricing efficiency for many distributors as the sector continues to respond to incentives around the allocation of financing burden.

96 CEPA. Appendix C: Regulation of distribution connection charges in New Zealand. page 29.

9.18. Overall, we expect doing nothing would deliver similar administrative costs over time with lower benefits, principally because the incentives that drive distributors to adopt inefficiently high or low connection charges would remain in place.

Developing guidelines

9.19. We expect guidelines would deliver a similar outcome to doing nothing, but with:

(a) higher up-front costs for the Authority and participants associated with developing the guidelines and higher up-front costs for distributors and access seekers responding to the guidelines

(b) potentially some improvement in the pace of low-level harmonisation and overall efficiency of pricing for some distributors.

9.20. Overall, we expect this option would be marginally better than do nothing, but largely ineffective at overcoming the incentives that drive distributors to adopt inefficiently high or low connection charges.

Faster full reform

9.21. This option involves progressing directly to full reform. Distributors would be required to implement the fast-track options and set connection charges from April 2026 that recover net incremental cost, plus a contribution to shared costs that sits within a prescribed band.

9.22. Compared to the fast-track proposal, we would expect faster progress to full reform would result in:

(a) more distributors needing to seek exemptions while they work through their price-quality path and financing options. This is because new rules would apply to a larger portion of the current regulatory control period and there would be less time available to work through design and implementation (for the Authority, the Commission and distributors).

(b) greater front-loading of development costs for the Authority and business support costs for distributors associated with developing and implementing full reform, with more risk of exhausting change capacities. This could lead to some mix of higher-cost contingent resources, displacement of other priorities, or reduced quality.

(c) as a result of the above, potentially slower improvement in pricing consistency and efficiency.

9.23. Overall, the Authority's view is faster reform would carry higher risks and may not deliver benefits any earlier.

Alternative options for achieving the objectives of our proposed amendments

9.24. We are seeking feedback on alternative options for achieving the objectives of our proposed amendments. Note that:

(a) The contractual terms alternative would achieve similar outcomes to the proposed amendments (it would be better than doing nothing, developing guidelines or faster full reform). We consider this is a strong alternative and we will make decisions following consideration of feedback.

(b) In relation to other alternatives (within the proposal), our preferred approach is to apply the sinking lid approach for reliance limits, apply the complete package of pricing methodologies and apply the parameters specified in Table

7.4. However, we are interested in receiving feedback on the alternative approaches discussed above.[97]

The proposed amendments comply with section 32(1) of the Act

9.25. Section 32(1) of the Act says the Code may contain any provisions that are consistent with the Authority's objectives and are necessary or desirable to promote one or all of the items set out in Table 9.1.

9.26. The Authority's main objective under section 15 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 is to protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers. The additional objective applies only to the Authority's activities in relation to the dealings of industry participants with domestic consumers and small business consumers.

9.27. The Authority considers the proposed amendments are consistent with its main objective for the reasons set out in this paper (by promoting competition, reliability, and efficiency). The amendments in this case are not primarily intended as measures to promote the protection of the interests of domestic consumers and small business consumers (small consumers), as per 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. Mandating pricing methodologies and other requirements, supported by access to the Code and Act's complaints and dispute resolution processes also provides some protection to small consumers by creating a more level playing field by reducing the power imbalance between distributors and small consumer connection applicants.

Table 9.1 How the proposed amendments promote the items in section 32(1) of the Act

Item	How the proposed amendments promote the item
competition in the electricity industry	The proposed amendments aim to preserve the opportunity for contestability of connection work.
the reliable supply of electricity to consumers	The proposed amendments aim to support incentives for distributors to optimise upgrade investments, and for access seekers to optimise their connections (including with respect to flexible connections and enhancements).
the efficient operation of the electricity industry	The proposed amendments aim to improve the efficiency of connection pricing, which in turn encourages efficient connection expansion and network development.

97 See paragraphs 7.136 to 7.143 above.

Item	How the proposed amendments promote the item
the protection of the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers	The proposed amendments are not intended as measures to protect the interests of small consumers, though the amendments are for the long-term benefit of consumers, which includes small consumers generally. Mandating pricing methodologies and other requirements, supported by access to the Code and Act's complaints and dispute resolution processes also provides some protection to small consumers by creating a more level playing field by reducing the power imbalance between distributors and small consumer connection applicants.
the performance by the Authority of its functions	Proposed safeguard measures support the Authority's Code exemption function (16(1)(c)) and proposed dispute resolution and reporting obligations support the Authority's compliance and investigation functions (16(1)(d)).
any other matter specifically referred to in this Act as a matter for inclusion in the Code	The proposed amendments set information requirements for distributors (s32(4)(a)) and pricing methodologies for distributors (s32(4)(b)).

The Authority has complied with section 17(1) of the Act

9.28. Under section 17(1) of the Act, the Authority, in performing its functions, must have regard to any statements of government policy concerning the electricity industry that are issued by the Minister. Table 9.2 below sets out our consideration of the Government Policy Statement on Electricity. [98]

Table 9.2 How the proposed amendments comply with section 17(1) of the Act

Clause	Consideration
14. Efficient network pricing is essential:	
a. To find the lowest cost solution, which may include demand-side response and flexibility to avoid or defer the need for network capacity augmentation; and	Agree. Supported by proposed: • inclusion of minimum flexible scheme, which provides for connection applicants to secure lower-cost connections by implementing flexibility arrangements • design of network capacity costing provisions, which send a cost-reflective signal to connection applicants regarding network capacity costs.
b. For connections to enable efficient investment in new electricity consumption, including electrifying transport and process heat in industry.	Agree. Proposed fast-track measures provide significant first set of improvements to the efficiency of connection pricing for distribution networks.

98 New Zealand Government. Government Policy Statement on Electricity - October 2024.pdf (beehive.govt.nz). Accessed 11 October 2024.

Clause	Consideration
32. The Electricity Authority is expected to work collaboratively with other agencies across the wider regulatory regime, acknowledging the scope of each agency's remit.	Agree. Proposal has particularly close interaction with the Commerce Commission's regulation of electricity lines services. We have collaborated at the policy development phase and anticipate collaborating through implementation - including via the Commerce Act s54V mechanism for price-quality path reconsiderations and the Electricity Industry Act s11 mechanism for Code exemptions.

The Authority has applied Code amendment principles

9.29. The Authority's Consultation Charter states that to provide greater predictability about decision-making on Code amendments the Authority applies certain Code amendment principles. Table 9.3 below sets out our consideration of the Code amendment principles.

Table 9.3 Consideration of Code amendment principles

Principle	Comment
Clear case for regulation: The Authority will only consider amending the Code when there is a clear case to do so	Problem definition is set out in this paper.
Costs and benefits are summarised	The costs and benefits of this proposal are summarised above.
Preference for small-scale 'trial and error' options	Not applicable – only applies where analysis demonstrates a clear benefit to a Code amendment proposal, but there is no clear best option in terms of a solution
Preference for greater competition	As above
Preference for market solutions	As above
Preference for flexibility to allow innovations	As above
Preference for non-prescriptive options	As above

Q27. Are there other alternative means of achieving the objective you think the Authority should consider?

10. Consumer impact analysis

10.1. The analysis in this chapter details the consumer impacts of the fast-tracked proposals in this paper. However, it is also important to consider these impacts in the context of the Authority's full work programme.

10.2. The Authority's work programme is underpinned by its statutory objectives, which includes ensuring the Code works for the long-term benefit of consumers, as we promote a competitive, reliable and efficient electricity industry.

10.3. Distribution network access arrangements, including connection pricing, are important for the evolution of the electricity system, and to wider economic outcomes supported by the electricity system. By improving connection pricing, we aim to achieve benefits for consumers that include:

(a) streamlining connection processes, leading to more timely and lower-cost growth in new connections and connection upgrades

(b) enhancement of incentives for distributors and access seekers, leading to better network planning and lower-cost network development

(c) no distributors with very low connection charges that result in existing users subsidising newcomers. Fast-track measures provide a stepping stone to full removal of such subsidies. This means every new connection (or connection upgrade) will benefit existing users – spreading network costs across a wider customer base

(d) no distributors with excessively high connection charges that inefficiently elevate the cost of new housing, business growth and electrification. Fast-track measures provide a stepping-stone to full removal of such pricing.

10.4. On the final point, we note there is a superficially appealing logic to loading costs onto newcomers, because on first blush this creates a windfall gain for existing users. However, it also creates costs and risks that may be less obvious but are nonetheless important.

10.5. While electricity network connection may be a small portion of the overall cost of new housing, it is not insignificant and it's reasonable to assume connection costs (and coordination frictions) flow through to housing costs and supply.

10.6. For business growth, the materiality of network connection as an input cost varies significantly. However, nearly every new business premises will require a network connection, so high connection charges have a pervasive impact on business growth.

10.7. Many households (and smaller businesses) can electrify without needing to alter their connection – eg, they can charge an electric vehicle and switch from gas to electric heating without incurring connection charges. Provided distributors have cost-reflective tariffs, the cost impact of such electrification is sheeted home through ongoing charges. Connection charges should not allocate these non-connection growth costs to newcomers.

10.8. For most other electrification investments, network costs are a material input cost component that can alter the viability of decarbonisation. This includes electrification of public transport and shipping, public EV charge-points, fast charging at depots and workplaces, and process heat electrification.

10.9. The impact of our proposals on consumers will vary between distributors, and between consumers (including between connection applicants, and between newcomers and existing users). In Section 7 we discuss the impact of:

(a) each proposed fast-track measure

(b) pricing at neutral, balance and bypass points.

10.10. This section provides two additional analyses that may assist submitters to understand the impact of our proposals:

(a) The first illustrates the incremental impact through time of each new connection.

(b) The second illustrates the overall impact of our proposed reliance limits.

Incremental impact of a new connection on existing customers

10.11. When a new customer connects, typically:

(a) new assets are created

(b) the connection applicant pays a connection charge, which provides up-front revenue to cover part of the cost of the new assets

(c) the net cost of the asset (after deducting the connection charge contribution) is recovered over the life of the assets via ongoing lines charges – ie, the asset increases the distributor's target revenue (which they recover from all their customers through lines charges)

(d) the new customer pays ongoing charges each year, contributing a new source of revenue for the distributor. This reduces the amount the distributor must recover from other customers (ie, it reduces target revenue per connection).

10.12. If connection charges are set at the neutral point, which is the lowest they can be while still being subsidy-free, then existing customers are not made any worse off because the up-front and ongoing revenue will match the cost of the assets, in present value terms.

10.13. However, the resulting cashflows do not have the same profile through time. While they are equivalent in present value terms, there will be years when costs exceed revenues and vice versa.

10.14. To illustrate how this plays out, we have prepared two stylised cashflow profiles – one with a connection charge at the neutral point, and one with a connection charge equal to 47% of the asset cost (consistent with the proposed industry-wide reliance limit).

Zero connection charge profile

10.15. The first profile is based on no connection charge and assumes:

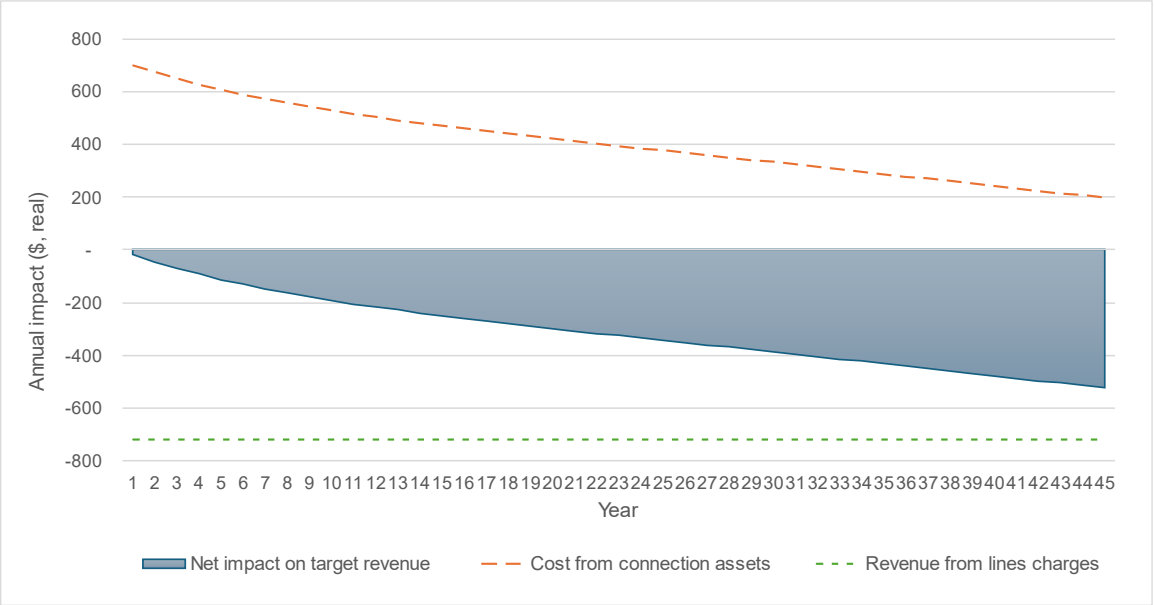
(a) the connection requires new assets costing $7,900. This is based on the average cost per new residential connection from a sample of distributors, based on their Information Disclosure data.

(b) ongoing revenue from the new connection of $720 per year. This is based on $800 in total lines charges, scaled down to adjust for incremental opex costs from the new connection ($80 per annum).[99]

(c) a connection charge of $0. This is above the neutral point, because the PV of lines charges materially exceeds (by 36%) the up-front cost in this case (assuming a 30-year revenue life and 5.24% real discount rate).

(d) the asset value of $7,900 is recovered over 45 years, with a time profile that aligns with the Commerce Commission's revenue model for non-exempt distribution businesses. This includes recovery of the invested capital over time, plus financing costs and adjustments for tax effects. The profile includes indexation at 2%, which re-values the asset each year with an offsetting revenue adjustment.

Figure 10.1 Even with no up-front charge, new connections can be beneficial



10.16. Figure 10.1Figure 10.1 10.1 presents the resulting cashflow profiles, which show:

(a) ongoing revenue from the new connection (green dotted line) is constant through time (in real terms). In this simulation, we assume revenue continues for the life of the connection[100]

(b) the impact of the new assets on the costs the distributor must recover (red dotted line) is highest when the assets are new, and declines over time as the assets depreciate

(c) in this case, the benefit to existing consumers from new connection revenue outweighs the additional cost of the connection from the first year and the benefit grows as the connection assets age.

10.17. This analysis shows the incremental impact of a single new connection with a particular cost structure, relativity between costs and ongoing revenue, and connection pricing policy. If the connection cost were higher, or ongoing revenue

99 Annual bills and transmission components vary by distributor and consumer group, so these are intended to be broadly representative figures only.

100 Revenue from years 31 to 45 are not used in the assessment of incremental revenue (ie, the neutral point assessment errs on the side of a higher connection charge, recognising there is some risk of early exit).

lower, then a new connection could produce a net uplift in charges for existing consumers in the early part of its life.

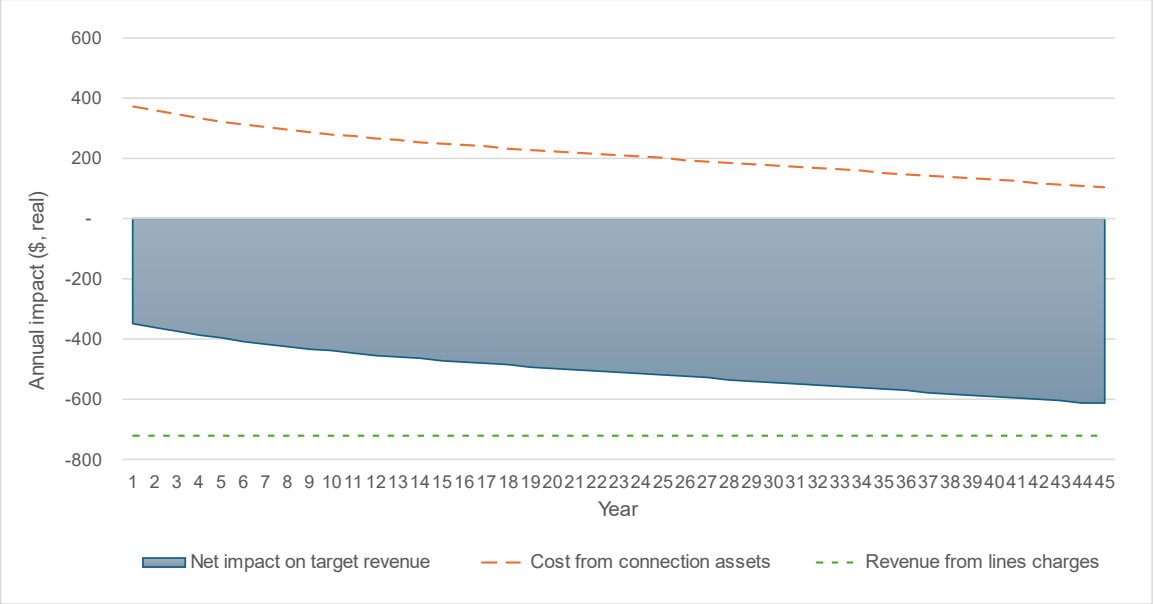
Reliance limit profile

10.18. The second profile adopts the same assumptions as above, except for:

(a) the connection charge is 47% of the asset cost, consistent with the proposed sector reliance limit. This means the connection charge is $3,713.

(b) accordingly, the net asset value recovered over time through lines charges is reduced to $4,187.

Figure 10.2 With pricing at reliance limit, there is a large benefit from the outset



10.19. Figure 10.2 presents the resulting cashflow profiles, which show:

(a) ongoing revenue is unaltered from the earlier example. This reflects that tariffs are not tailored to each connection, except in the case of large customers with special pricing.

(b) the cost recovery profile for the new assets has the same shape but sits 47% lower than the earlier example due to the lower net cost of the assets.

(c) from the outset, revenue from the new connection materially outweighs the cost, such that the connection benefits existing customers substantially throughout its life.

Outcomes will vary

10.20. Both the profiles above assume a connection cost in line with reported averages, and incremental revenue broadly in line with a typical residential connection.

10.21. Connection cost structures can vary, depending on factors such as network extension distance and connection capacity. Ongoing revenue levels can also differ, including between distributors, between consumers groups, and between consumers in the same group. This means:

(a) neutral points can vary by connection, being higher or lower than this example

(b) costs can outweigh revenue in the early years of a connection, even with pricing at the neutral point or at a 47% reliance level.

10.22. In addition, both analyses provide a simplified view. Some nuances to note are:

(a) if the connection cost includes a network capacity component, there may be a mismatch between the timing of the connection charge and the timing of investment to upgrade network capacity. This would typically result in a larger benefit to existing consumers early in the connection life (ie, until such time as capacity investment occurs).

(b) there is a feedback loop between the net impact and ongoing tariffs, the strength of which depends on connection volumes relative to existing customer numbers, the overall age profile of connections, and how target revenue is allocated across customer types. We have not simulated these second-order effects.

(c) existing and new connections eventually incur renewal capex, which we have not simulated. Typically, distributors do not recover capital contributions for renewal work, such that renewal costs for existing connections are fully recovered through lines charges.

Overall impact of reliance limits

10.23. Proposed reliance limits will prevent some distributors from proceeding with forecast increases in reliance levels, which may in turn result in those distributors obtaining revised revenue paths that cover higher net capital expenditure.[101]

10.24. To illustrate the impact of such an outcome, we have:

(a) reviewed the Commission's DPP4 draft decision models released on 29 May 2024 to identify distributors whose reliance level would exceed our proposed reliance limits in any year[102]

(b) for those distributors, used the same models to test the impact on allowable revenues if capital contributions in excess of the applicable reliance levels are converted to regulated capital expenditure

(c) applied the revenue impact to indicate the average impact for a residential customer.

10.25. The results of the first step are shown in Figure 10.3Figure 10.3, which identifies three non-exempt distributors as potentially exceeding the proposed limits:

(a) Vector would have an individual limit, which its forecast show it would exceed by a material (and growing) amount each year[103]

(b) Alpine Energy's forecast indicates it would exceed the proposed sector limit in 2028 and 2029

101 Note that we cannot prejudge this outcome, as it depends on a range of considerations for the distributors and, if applicable, the Commerce Commission.

102 Commerce Commission, Draft decision models for 2025 reset of the electricity default price-quality path (comcom.govt.nz), 29 May 2024

103 Note that we are aware of an error in the Commerce Commission's DPP4 modelling for Vector relating to its capex allowance – shown in Table B1 of its draft decision paper (Default-price-quality-paths-for-electricity-distribution-businesses-from-1-April-2025-Draft-reasons-paper-29-May-2024.pdf (comcom.govt.nz)). We tested adjusting for this and it did not appear material, so for simplicity we have used unadjusted figures.

(c) Unison Network's forecast indicates it would exceed the sector limit in 2028, but not by a material amount.

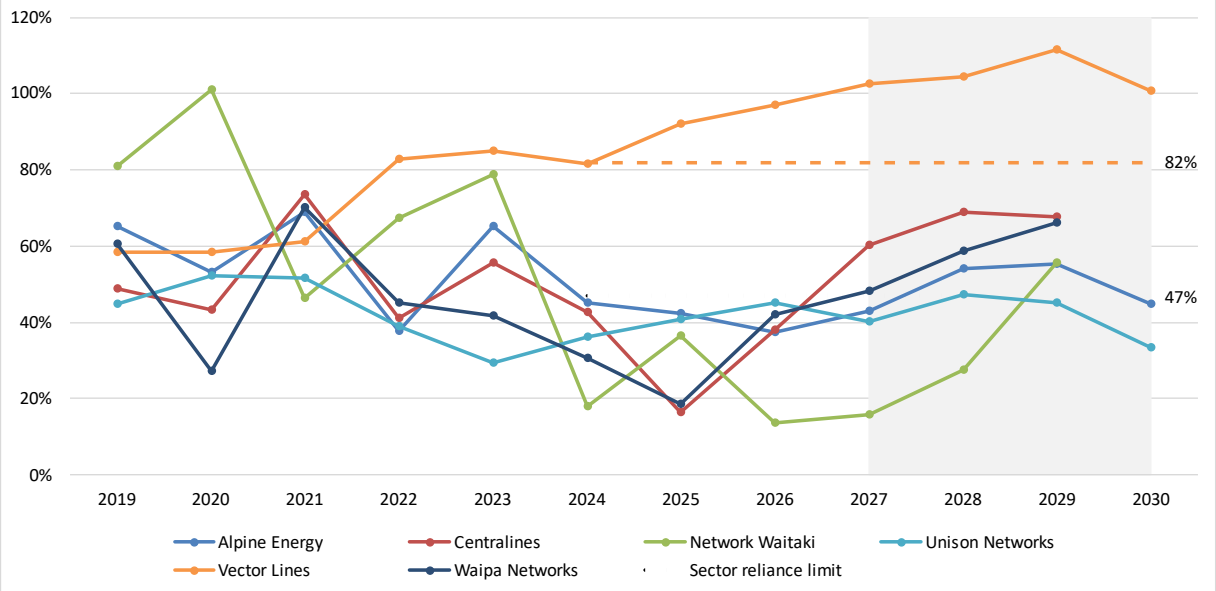
10.26. We have also identified three exempt distributors forecasting above-limit reliance levels:

(a) Centralines forecast low reliance in 2025, followed by a rebound that would place them materially above the sector limit from 2027

(b) Waipa forecast a similar dip and rebound pattern, with reliance forecast to exceed the sector limit later in the period

(c) Network Waitaki have had notably volatile reliance level outturns, with a declining trend overall. They forecast reversal of this trend from 2027, with reliance levels exceeding the sector limit by 2029.

Figure 10.3 Three non-exempt and three exempt distributors forecast above-limit reliance levels[104]



10.27. Points to note about this analysis are:

(a) The Authority does not have visibility of how capital contributions break down between load and generation. This means our analysis likely over-estimates how far above the limits each distributor may be

(b) Similarly, we do not have visibility of whether forecasts include any atypical connections. For example, these could explain the above-trend forecast for Alpine Energy in 2028 and 2029, Vector's above-trend forecast in 2029, and at least some of the volatility observed for Network Waitaki.

(c) The proposed limits do not apply until 2026. This could influence distributor and connection applicant behaviour in the lead-up, potentially shifting some connection activity from 2025 to 2026.

104 Capital contribution values for the year ending 31 March 2030 have been estimated by the Commerce Commission for non-exempt distributors as part of resetting the default price-quality path. This is done by assuming capital contributions form a constant proportion of expenditure on assets. The forecast capital expenditure for 2025 to 2030 is sourced from the Commerce Commission Information Disclosure database.

(d) The reliance limits and other proposed changes could spur increases in connection activity compared to forecasts that may assume no such interventions.

(e) We have used data from the Commerce Commission's draft DPP4 decision models. The Commission's final decisions may use updated information.

10.28. From the analysis above, Vector is the only non-exempt distributor materially impacted by the proposed reliance limits. If connection charges above the proposed limit are converted to regulated capital expenditure, this translates to a 15% increase in the last four years of the DPP4, equal to a 11% capex uplift over the full five-year DPP4 period.

10.29. When we flow this capex uplift through the DPP4 decision model, we find an increase in Vector's maximum allowable revenue of $28.25 million, which the model spreads across the entire period. In nominal terms, this is an 0.8% uplift in DPP4 revenue. If this were recovered across four years it would increase lines charges by around 0.93% in each year.[105] Applying this percentage increase to a typical residential bill of $800 per year of distribution charges this is $8.56 per year including GST.

10.30. The Authority considers cost implications on consumers very seriously. In addition to considering the more immediate and localised impacts, we also take a step back to consider the overall picture over a longer period of time.

10.31. We remain concerned about the impact of the expected price rise on consumers from 2025, particularly households experiencing energy hardship. As a regulator, we have specific tools in our toolbox to contribute to an all-of-government approach to reduce energy hardship and ensure energy is affordable.

10.32. The main areas we're able to make a difference to place downward pressure on prices are: promoting competition, improving transparency in generation, enabling flexibility, supporting efficient and effective networks and protecting consumers.

10.33. We have also calculated the percentage increase in distributor-funded capital expenditure for those exempt distributors forecasting an above-limit reliance level from 2026/27. This calculation compares to the 15% change in regulated capital expenditure indicated for Vector. Applying the reliance limits for these three exempt distributors could increase distributor-funded capital expenditure for the three years between 2026/7 to 2028/29 as follows:[106]

(a) For Centralines $0.952m or 3.3% of total forecast capital expenditure

(b) For Waipa $0.311m or 0.5% of total forecast capital expenditure

(c) For Network Waitaki $3.344m or 5.1% of total forecast capital expenditure.

10.34. As with the first step, this analysis assumes no change in behaviour by distributors or connection applicants. In practice, there could be a range of changes. For example, lower up-front charges could spur more connection applications, and distributors could find opportunities to accommodate some capital expenditure pressures through re-prioritisation.

---

105 For simplicity, this analysis deals with nominal values output by the DPP4 model only. We have not attempted to simulate how the Commerce Commission may elect to spread a revenue uplift (if any) across time or to adjust for changes in the timing of cashflows.

106 Forecast for capital contributions by category for exempt distributors available to 2028/29 only.

10.35. We have not assessed impacts beyond DPP4, which may reflect further evolution of behaviour changes, further accumulation of new connection costs and revenues, aging of new connections (with resulting changes in cashflow profiles).

10.36. We have only tested the impact of the proposed reliance limits, not the potential impact of the other parts of the proposed fast-track package. Other elements could also impact capital contribution levels, but this requires more bottom-up assessment by each distributor.

10.37. We have assumed impacted distributors achieve reliance limits exactly. We have not accounted for distributed generation (which may reduce impacts) or uncertainty buffers (which could increase impacts).

10.38. Our analysis assumes full implementation from April 2026, whereas distributors may apply for exemptions to extend their implementation timeline.

10.39. We have assumed no change in operating expenditure allowances or pass-through costs.

Appendix A Format for submissions

Submitter	

Questions	Comments
Q1. Do you agree with the assessment of the current situation and context for connection pricing? What if any other significant factors should the Authority be considering?	
Q2. Do you agree with the problem statement for connection pricing?	
Q3. Do you have any comments on the Authority's proposed pathway to full reform?	
Q4. Do you consider the proposed connection enhancement cost requirements would improve connection pricing efficiency and deliver a net benefit?	
Q5. Are there variations to the proposed connection enhancement cost requirements you consider would materially improve the proposed Code amendment?	
Q6. Do you consider the proposed network capacity costing requirements would improve connection pricing efficiency and deliver a net benefit?	
Q7. Are there variations to the proposed network capacity costing requirements you consider would materially improve the proposed Code amendment?	
Q8. Do you consider the pioneer scheme pricing methodology would improve connection pricing efficiency and deliver a net benefit?	

Q9. Are there variations to the proposed pioneer scheme pricing methodology you consider would materially improve the proposed Code amendment?	
Q10. Do you consider the cost reconciliation methodology would improve connection pricing efficiency and deliver a net benefit?	
Q11. Are there variations to the proposed cost reconciliation methodology you consider would materially improve the proposed Code amendment?	
Q12. Do you consider the reliance limits would improve connection pricing efficiency and deliver a net benefit?	
Q13. Are there any variations to the proposed reliance limits you consider would materially improve the proposed Code amendment?	
Q14. Do you consider the exemption application process (together with guidelines) can be used to achieve the right balance between improving connection pricing efficiency and managing transitional impacts on non-exempt distributors?	
Q15. Do you consider the dispute resolution arrangements proposed (for both participants and non-participants) will provide the right incentives on distributors and connection applicants to resolve disputes about the application of pricing methodologies to connection charges and improve connection pricing efficiency and deliver a net benefit?	
Q16. Are there variations to the proposed dispute resolution arrangements you consider would materially improve the proposed Code amendment?	

Q17. Do you consider the alternative contractual terms option would be better than the approach in the proposed drafting attached to this paper? Please give reasons.	
Q18. Do you think a sinking lid approach to reliance limits would be preferable to the proposed static limits approach described in sections 7.80 – 7.105?	
Q19. Do you think any element of the fast-track package should be omitted, or should begin later than the rest of the package?	
Q20. Are there other parameters you think the Authority should consider for the proposed connection pricing methodologies? If so, which ones and why?	
Q21. Do you agree pricing methodologies should apply to LCC contracts? If not, please explain your rationale.	
Q22. Do you agree the proposed requirements, other than reliance limits, can be applied satisfactorily to connections with vested assets? If not, please explain your rationale.	
Q23. Do you have any comments on the impact of reliance limits on incentives to increase prevalence of asset vesting?	
Q24. Do you agree the proposed methodologies are compatible with contestable connection works? If not, please explain your rationale.	
Q25. Do you agree that fast-track methodologies should not apply to embedded networks? If not, please explain your rationale.	
Q26. Do you have any comments on the Authority's anticipated solution for longer-term reform?	

Q27. Are there other alternative means of achieving the objective you think the Authority should consider?	

Appendix B Proposed Code amendments

Appendix C CEPA expert report on problem definition and benefits