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Tēnā koe,

Reducing barriers for new electricity connections – up-front charges and distributor obligations

We welcome the opportunity to respond to the Electricity Authority (**Authority**)’s consultation paper on reducing barriers for new electricity connections through consideration of up-front charges and distributor obligations.

We would also like to acknowledge the Authority’s consultative approach and engagement with stakeholders throughout this process. Importantly, following feedback, the shift from a blanket approach to a more targeted framework has resulted in outcomes that are far more proportionate to the risks and challenges faced by the sector.

This refinement is pragmatic, and by adopting this iterative process, the Authority has reinforced confidence that reforms will support timely electrification while remaining workable for industry participants, mitigating the potential for unintended consequences and ultimately ensuring fair and efficient benefits for consumers.

Powerco generally supports the Authority’s proposals, in particular the intent. However, we do have some concerns around the practical implementation of these which is the focus of our response. While we have stepped through these in the body of the document, they are summarised below. Attached along-side our response is an expert report from Incenta Economic Consulting (**Incenta**), which provides advice on the practical application of the “balance point” principle.

Summary of Key Points of Submission

Framework transparency is required

- While the EA discusses a framework for targeted intervention, we believe it needs to go further and clearly set out what the criteria and associated benchmarks are that it will use to trigger an investigation and/or further action.
 - Regulatory certainty is essential for both EDBs, the Authority and the Commerce Commission to know what the criteria and thresholds are to remove judgement / discretion from decision making.
 - This will also help reduce administration and compliance costs as EDBs can self-regulate, deterring bad practices. It also allows for cross-regulator planning whereby EA decisions will impact the Commerce Commission’s work programme.
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Suggested method for estimating the balance point

- In theory the balance point principle makes sense, however, in practice estimating and applying the balance point is a lot more complex and the Authority will need to work out how to apply it.
- Incenta recommends key methodological elements the Authority will need to work through to calculate the balance point, in order to determine the amount of a connection charge that is the “contribution to shared network costs” and how to define customer or connection classes the contribution should be consistent across “similar existing” connections.
- This is crucial to the Authority’s proposals and the balance point is central to the interventions and ability to compare it across EDBs.

Obligation to Connect

- We agree that the Authority has jurisdiction under section 32 and agree with introducing obligations to provide connection offers, publish access standards, and prohibit withdrawal of supply without a documented policy, as these measures promote efficient access and electrification.
- We recommend a must-offer contract approach and automatic updates to prescribed terms when the Code changes to ensure enforceable agreements, certainty for access seekers, and consistency over time.

While we support the Authority’s proportionate approach, having done some work to understand the practical implications of the proposals, the balance point is a lot more complicated to determine than we had anticipated. We do wonder if there is a simpler approach the Authority could use as a trigger point / benchmark, that is equally predictable and transparent that would achieve the same outcomes, but at a lower cost and far less complicated than the balance point.

We are always keen to meet with the Authority to discuss and develop the ideas in our submissions. In the meantime, if you have any questions or would like to talk further on the points we have raised, please contact Emma Wilson (Emma.Wilson@powerco.co.nz).

Nāku noa, nā,



Emma Wilson

Head of Policy, Regulation and Markets

POWERCO

1. Powerco supports the Authority's proposals in theory, however, some practical implications need to be worked through

We agree with the Authority that there are opportunities to improve network connections and as a sector, we need to support New Zealand's decarbonisation transition and promote the efficient adoption of renewable energy sources. Electrification is a key enabler of a low-emissions economy therefore timely and efficient new and upgraded connections to electricity networks are critical.

Powerco acknowledges the Authority's proposed Code amendments on distribution pricing, and we appreciate the Authority's taking additional time to consider and refine its approach based on stakeholder feedback.

We welcome the pragmatic proposal and support the Authority's intent and how they work in theory, however, we are concerned some of the practical implications haven't been worked through and are critical to the success of their implementation. This includes:

1. Being transparent around the framework for scanning and trigger points for certain Authority activity – i.e. further investigation and directing to reduce upfront charges.
2. Calculating and applying the balance point principle, given the importance of it to the Authority's interventions.
3. Clarifying the intent of mandating obligation to connect isn't to require EDBs to connect uneconomic connections.

We strongly encourage the Authority to consult and issue guidance on the first two points, as providing transparency and predictability of the Authority's framework will deliver further benefits to consumers through self-regulation which should reduce administrative and compliance costs. We discuss and offer solutions for each of these in the following sections.

1.1 Introduction

As mentioned in our previous submission,¹ we support regulatory interventions that assist the energy transition and protects our customers. However, we cautioned against high volume of changes and overly complex interventions, which are likely to drive costs into the system which end up being borne by the consumers. In particular:

- The importance of carefully **balancing regulatory goals and tools with the practical realities** of utility operations. This is of particular importance during the fast-track stage where the potential for unintended consequences is high due to the limited practical assessment undertaken and pace in which these are being rolled out. We recommended the Authority should focus on fewer interventions which deliver the same outcomes. We are starting to see some unintended consequences as we implement the July 2025 distribution connection pricing Code amendment changes. Where blanket regulation imposes costs across all EDBs, not just where market failure / barriers exist.
- Regulatory interventions **must be proportionate** to the harm and require clear quantified cost-benefit analysis to ensure they are targeted to areas where there are clear net benefits to be achieved. When regulatory interventions are not proportionate, they can drive unnecessary complexity, administrative and compliance costs into processes, especially where processes are automated in systems.

¹ Powerco, *Submission on Authority's Distribution Connection Pricing Consultation*, 20 December 2024, pg 1.

When there is inconsistency in performance across regulated businesses, regulatory intervention which targets everyone (blanket regulation) is usually set to address the lowest performers (as opposed to regulating to highest performers). When this happens, regulatory intervention is not proportionate to the harm it is trying to address and the costs will certainly outweigh the benefits, as it imposes costs across everyone and the whole system, not just the areas where it is needed.

The Authority recently announced a more targeted approach to implementing multiple trading relationships:

Submitters were generally supportive of our proposals to make switching more effective and efficient but expressed concerns about the industry cost of implementing the multiple trading relationships proposal.

We have listened to submitters' concerns, engaged with the Switch and Data Formats Group, and developed a revised proposal that would be simpler and more cost-effective. It would also mean changes could be in place sooner, so consumers can benefit earlier.²

In the same way that the Authority has revised its proposed multiple trading relationships approach to a lower cost solution that is proportionate to the benefits it is intended to deliver, the balance point trigger for regulatory intervention on connection pricing should provide a clear safe harbour within which neither the Authority nor EDBs or their customers incur regulatory costs for which there is no public benefit.

We welcome the Authority's additional analysis in understanding the barriers to timely connections, and the impact of its proposed interventions (and assessment of alternatives). We support the Authority's proposed targeted intervention of connection pricing, in particular by not applying a blanket approach to EDBs. This ensures regulatory interventions are proportionate to where market failure has been identified (barriers to connections) and ensures compliance and administrative costs are minimised – safeguarding against any unintended consequences. We believe these proposals do carefully balance regulatory goals and tools with practicalities of the world EDBs operate in.

However, while in theory these proposals make sense, we are concerned about some of the practical implications of the proposals, to which we have set out what these are and some suggestions for how to address these in the following. These include:

- **Framework for triggering an investigation** – the Authority needs to have a clear framework for what it will consider when 'scanning' and also what will trigger an investigation and/or further activity, and direction i.e. are there benchmarks EDBs need to meet. Regulatory certainty is essential so both EDBs and the Authority are aware what the threshold and criteria are for an investigation to be triggered as it provides certainty and removes judgment/discretion from the decision.
- **Estimating the balance point** – while in theory what the Authority has proposed makes sense, in practice estimating the balance point is a lot more complex, and we believe the Authority needs to be clear and transparent how it will calculate the balance point and then also use it compare across EDBs. Please refer to Incenta's report submitted alongside our response.
- Clarify that **vested assets** are included in the definition of capital contributions and the **obligation to connect** is about ensuring distributors cannot refuse to connect where minimum standards are met and a reasonable contract offer is accepted – it's not requiring EDBs to connect uneconomic connections. We recommended a must-offer contract approach to ensure enforceable agreements and reduce uncertainty for access seekers.

² Next steps on multiple trading relationships and switching, Electricity Authority, 22 December 2025.

1.2 Framework for triggering an investigation

As mentioned above, we support the Authority's proposed targeted approach that involves: (i) identifying where there are excessively high up-front charges (including where assets are vested); (ii) engaging with those EDBs to understand what is driving high prices; and (iii) if warranted, directing them to reduce their connection charges. We agree with the Authority that this approach allows for proportionate cost-benefit assessment of interventions, and ensures regulatory intervention is targeted to areas where it's net beneficial.

To get the full benefit of regulatory interventions, regulatory certainty and predictability are essential. Good regulatory practice aims to strike a balance between clarity and predictability against flexibility. We believe for these proposals to work to their full potential the Authority needs to be transparent about specifics of the framework it will use to both scan for areas where high upfront cost are a barrier to connections, by specifying, for example, what is the criteria the Authority will monitor and what are the benchmarks EDBs should meet in order to avoid triggering further assessment / investigation and then also what the benchmarks are, which lead to the Authority to direct an EDB to reduce its upfront charges.

The Authority has provided clear evidence that

*distributors have market power over connections because they control access to services that have strong monopoly characteristics. The current light-touch regulatory regime has led to poor quality and consistency of pricing methodologies, patchy uptake of efficient connection pricing settings, and limited information on the allocation outcomes driven by distributors' pricing settings.*³

The benefit of being transparent and more specific around what the framework / guidelines look like and how it will work in practice, is that EDBs are able to monitor their performance against this criteria and benchmarks meaning they can effectively self-regulate. By enabling this, it will discourage EDBs from doing anything which might be at odds with these criteria and benchmarks. This helps limit administrative and compliance costs, as the Authority will only have to focus on those EDBs who are not doing this (i.e. worst performers) and ensures that the benefits of intervention will in fact outweigh the costs.

The Authority's Compliance Strategy draws on

a range of options for encouraging and enabling compliance and for responding to non-compliance. Compliance tools can range from educating and assisting a participant to comply where the risk presented is minor, to laying a complaint with the Rulings Panel.

*Having a range of compliance tools enables the Authority to respond **proportionately** to the risk posed by the non-compliance and to adjust its response in an individual case by escalating or de-escalating the level of its approach as necessary.*⁴

This approach is relevant to the design of the connection pricing regulations, since the Authority seek(s) the highest possible levels of voluntary compliance⁵, the regime should create incentives for participants to comply and clear safe harbour thresholds against which they can self-regulate. This is particularly important given the cross overs with the Commerce Commission (**Commission**), where the Authority investigation outcomes may impact the Commission's work programme which has the potential to become complex and impose costs on the Commission should an investigation result in the reopening of the price path. Transparency around the framework and process

³ Distribution connection pricing Code amendment - Decision paper, Electricity Authority, 18 July 2025. Para 5.2

⁴ Compliance Strategy, Electricity Authority, December 2022. p. 3 (Emphasis added)

⁵ Compliance Strategy, Electricity Authority, December 2022. p. 6

will also help them plan and manage this as well. It is common practice in other jurisdictions, like the Ofgem's procedures and powers to investigate unfair pricing practices,⁶ which sets out what the process trigger is for an investigation.

Given this, we propose that the Authority sets out transparently what they will be scanning for and what the benchmarks are that warrant further assessment and inquiry, and then finally what the criteria / considerations and associated benchmarks for the Authority to direct an EDB to reduce its upfront costs. An example of what this could look like is set out below.

Table 1. Example of framework criteria and benchmarks

Criteria	Description	Potential benchmark
Evidence of high volume of new connections	Understanding the number of new connections / potential connections is important as it helps the Authority distinguish between changes in upfront charges compared with change in activity	e.g. significant increase in the number of new connections expected (EV hubs, industrials electrifying, subdivisions) Absolute number or a growth rate, which might vary by area
Evidence of high upfront charges	Understanding how this compares across EDB customer groups will help the Authority form a view what's considered high or not with reference to the balance point principle	This could be determined by specifying Contribution amount per connection, or a proportion (%) of the connection costs – refer to discussion on balance point principle below and Incenta's report
Evidence of pricing distortion	Using EDB pricing methodologies to understand if connection charges are inconsistent or opaque across EDBs or within the same EDB	Price variation % for a similar connection type or absolute value between comparable quotes.
Evidence of barriers to connections	Proxy for this could be complaints volume – repeated or significant complaints from consumers could signal barriers to connecting are present. Other signals could include: • Media attention / public concern • Submissions or industry feedback	Certain number of formal complaints/year OR escalated complaints to EA/Utilities Disputes OR complaints from multiple stakeholder types.
Clear consumer benefit	To ensure costs outweigh benefits, it's important there is clear customer benefit to be achieved for example – is there evidence intervention will reduce barriers, reduce short term costs, reduce cross-subsidies for existing customers?	Could be determined by percent or absolute reduction in the upfront cost, connection time reduced by number of days, or consumer bill impact for example.

There is a number of different ways the Authority could use or cut the criteria and benchmarks for example they could use a scoring system or if there is evidence of a certain number of the above criteria it warrants further

⁶ See, for example, Ofgem's January 2026 *Heat networks fair pricing and cost allocation guidance*,

investigation. However, we strongly recommend the Authority consults on this as it's important to ensure the process and assessment measures are transparent to all parties.

1.3 Applying the balance point principle

Consistent with Authority's original consultation,⁷ the Authority have proposed introducing the concept of a "balance point" into the Code as the central consideration into the Authority's proposed target intervention framework to identifying excessively high connection charges. The balance point principle means that customers in the same class should pay a similar contribution to the fixed and common costs of the network to existing customers in the same class.

In line with our previous submission⁸ we support the concept of the "balance point" as it's a useful way of thinking about how changes to the connection pricing method may affect efficiency and equity. As with the framework for targeted intervention, while we support the concept of balance point in theory, we are concerned with the limited detail and thinking around how this will be applied and determined in practice. This is fundamental to ensuring the workability and practical implementation of the Authority's proposals given the balance point is central to the Authority's entire proposal.

Given the importance of the balance point principle, Powerco have engaged Incenta to provide advice on how the Authority's balance point concept could be calculated and applied in practice.⁹

As the Authority's principal objective is security-constrained economic efficiency, the balance point should be arrived at in such a manner that the resulting constraint of connection charges best serves to minimise the likelihood of inefficiency decisions not to connect to distribution networks. Incenta's advice sets out the methodological issues the Authority will need to give consideration to when estimating the balance point in relation to a particular customer group. We have summarised the steps the Authority needs to take alongside key recommendations below, however, for more information, please refer to Incenta's report.

1. Establish the groupings or classes of customers that are considered to be similar or comparable – the common cost contribution required of this comparable group would become the balance point (i.e. benchmark for assessment of contributions to common costs) for new connections. This customer segmentation should be undertaken against the objective of identifying customers that have similar sensitivity of connection decisions to the level of connection charge. This will likely require a proxy such as residential, and various scales of commercial and industrial, and other willingness and capacity to pay for connections.
2. A basis for comparing contributions to shared costs will need to be determined, this could be either an absolute dollar value, or a percentage margin over net incremental cost etc. **Recommendation:** specifying the balance point in terms of an absolute dollar amount in the connection charge is likely to best meet the efficiency objective where the customers are of similar size in demand. However, other specifications like dollar per unit of capacity may be more suited where there is significant variation in electricity demand within a class of customers.
3. Need to consider how far to "look back" in time at historical connection charges. This depends on what the Authority wants to achieve. **Recommendation:** looking at connection charges over the period for which the connection charge reconciliation requirements have been in effect.

⁷ Electricity Authority, *Distribution connection pricing proposed Code amendment – consultation paper*, 25 October 2024.

⁸ Powerco, *Submission on Authority's Distribution Connection Pricing Consultation*, 20 December 2024, at 120.

⁹ Incenta Economic Consulting, *Electricity Authority's consultation on the balance point principle*, January 2026

4. A method may be required to establish the balance point for a given customer from the range of contributions that are observed from similar customers. Given the potential wide range of contributions to shared network costs may have been made within any class of customers in the past, that range may continue to be generated if the EDBs current methods for deriving connection charges continue. **Incenta notes**, that how the benchmark is defined and how EDBs respond, may create a dynamic that changes the shared network cost benchmark over time with the choice dependent on the outcome the Authority is seeking to achieve.
5. How the balance point value should be adjusted (i.e. inflation, RAB) when comparing shared network cost contributions across time, and the method by which it would be adjusted. **Recommendation:** adjusting by CPI when applying to a future period would be consistent with the Authority's efficiency objectives.
6. How the balance point value will be compared across EDBs, as this requires consistency across customer classes, historical records of connection charges and methods of calculation. Given practical challenges and complexity of this, more aggregated statistics may provide a better basis such as:
 - a. the dollar value of contributions to shared network costs in connection charges as a percentage of the RAB
 - b. the dollar value of contributions to shared network costs in connection charges as a percentage of annual network operating and capital expenditure.

The above advice highlights some of the complexities associated with calculating the balance point principle in practice, in which the Authority will need to determine a methodology for. We strongly recommend that the Authority also consults on its approach to this as part of a wider framework consultation.

1.4 Clarifying the intent of explicit obligation to connect

In line with our previous submissions, Powerco supports an open access regime and we continue to support the Authority's proposals to introduce an explicit obligation on distributors to connect load customers, provided minimum connection standards are met.¹⁰

In this consultation the Authority has confirmed its jurisdiction to regulate obligations to connect and supply under section 32 of the Electricity Industry Act and outlined its preferred direction:

- Create an explicit obligation on distributors to provide connection offers.
- Specify access standards distributors must publish.
- Prohibit withdrawal of supply except under a documented continuance of supply policy.

We support the Authority's view that it has jurisdiction to introduce these obligations and agree this is necessary to promote efficient access and electrification for the long-term benefit of consumers. The latest consultation provides a clear and adequate explanation of the Authority's powers.

However, we recommended a must-offer contract approach to ensure enforceable agreements and reduce uncertainty for access seekers.

Prescribed terms exist to accommodate the fact that the Code cannot create obligations for applicants that are not industry participants. A Code obligation on the EDB to offer to contract on the basis of the prescribed terms, or such other terms as the parties agree, so that there is an enforceable contract between the parties (and, conversely, the EDB does not have to connect the applicant if they will agree to neither the prescribed terms nor an alternative

¹⁰ Powerco, *Response to Proposed Network Connections Stage 1 Amendments*, 19 December 2024, pg 12

agreement) would achieve the same outcome without relying on unenforceable and potentially incomplete prescribed terms.

A 'must-offer contract' approach does not infringe on the Authority's powers because it doesn't create a Code obligation for non-participant applicants, but it does ensure there are enforceable obligations as a matter of contract.

To make the 'must-offer contract' approach workable, the prescribed terms should include a provision stating that unless the parties agree otherwise the terms of the contract are automatically deemed updated whenever there is a change to the prescribed terms as set out in the Code – this avoids inappropriate 'grandfathering' of existing contracts whenever the Code version is updated. The same should apply to the regulated terms if the Authority decides to apply a 'must-offer contract' approach in that context.

In addition to the above, these proposals highlight some of the difficulties that arise when regulations are different for load and generation connections. These proposals mirror the obligation to connect generation under Part 6. We have consistently raised concerns with different treatment of load and distribution generation connections, particularly given the increasing number of mixed-use connections that we are seeing on our networks.¹¹ We demonstrate how a least cost transition will be enabled by harmonising the Distribution Generation pricing principles with the Authority's pricing principles.

1.5 Include vested assets in the definition on capital contribution

In our response to Part C Electricity Industry Participation Minor Code Amendments Consultation,¹² recommended the Authority included vested assets in the definition of 'connection charge' to ensure that vested assets are not used as a roundabout mechanism for recovering 100% of connection charges upfront from customers. This will promote consistency and comparability across EDBs in how vested assets are treated regarding their impact on the actual up-front cost consumers are facing and thus hopefully prevent practices that deter electrification.

The definition of vested assets should align with the definition used by the Commerce Commission, as it's important that the definition of vested assets remains consistent across regulatory frameworks.

Please refer to our submission for more information and for our proposed Code amendment changes to give effect to this suggestion.

¹¹ [defining small business for DG rebates, DGPP submission 2025](#)

¹² Powerco, response to Part C Electricity Industry Participation Minor Code Amendments, 19 December 2025.

Appendix A. Response to Consultation questions

Questions	Comments
Background and context	
Q1. Do you agree with the assessment of the current situation and context for connection pricing described in section 4? Why, why not? What, if any, other significant factors should the Authority be considering?	Yes
PART A – Connection charges	
Q2. Do you agree with the rationale for considering interim restraint on connection charges described in section 5? Why, why not?	Yes
Q3. Have you observed or experienced signs of connection stress where current connection charging arrangements caused problems when seeking to connect to the network (e.g., projects delayed or deterred as a result of price-related barriers)? If so, please describe.	Access seekers have evidenced in their submissions some of the barriers they face, however, it's hard to form a view how widespread this is.
Q4. Do you agree with the Authority's evaluation of the options? Why, why not? Do you have any feedback on the expected impact if the status quo remains?	Yes – however, as mentioned in the body, we are concerned around the practicalities of implementation.
Q5. Do you have any comments on the proposed Code amendment and approach to implementation?	We support the intent of the proposed Code amendment, however, we have some concerns around the practical implications of the proposals, which we feel need further consideration as these are perhaps more complex than they appear. Please refer to above submission
Q6. Are there other alternative means of achieving the objective you think the Authority should consider? If so, please describe.	Having done some work looking into the practical application of the balance point principle, we do wonder if there is a simpler approach the Authority could use as a trigger point / benchmark, that is equally predictable and transparent that would achieve the same outcomes, but at a lower cost and far less complicated than the balance point.
PART B – Distributor supply obligations	
Q7. Do you have any comments on the Authority's rationale for clarifying distributor obligations to connect and supply?	
Q8. Do you have any comment on the Authority's preferred direction for clarifying distributors' supply obligations?	We support an obligation to connect where minimum standards are met, and reasonable contract offer is accepted. However, we recommended a must-offer contract approach to ensure enforceable agreements and reduce uncertainty for access seekers.

PART C – Minor amendments to the Code (connection pricing requirements)	
Q9. Do you have any comments on the drafting of the proposed amendments?	The definition of connection charge should include vested assets aligned with the Commission’s definition. Please refer to our submission for more information: https://www.powerco.co.nz/-/media/project/powerco/powerco-documents/who-we-are---pricing-and-disclosures/submissions/2025/electricity-authority---part-c-minor-code-amendment-electricity-connections.pdf

Electricity Authority's consultation on the balance point principle

Report for Powerco

January 2026

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1. Introduction and summary of conclusions

1.1 Our brief

1. The Electricity Authority (the Authority) has proposed introducing the concept of a “balance point” as the central consideration in the Authority’s proposed targeted intervention framework to identify excessively high connection charges and to take action to reduce these charges.
 - a. The “balance point”, which is the term coined by the Authority, refers to the outcome whereby the upfront fee that is payable by a newly connecting customer or a customer whose connection has changed (“connection charge”) includes a contribution to shared network costs¹ that is consistent with the contribution made by other customers in the same customer class.
 - b. The Authority also coined the term “neutral point” to define the level of a connection charge that would just bridge the gap between the incremental cost the customer is expected to cause from connecting to the network and then receiving the service, and the incremental revenue the customer is expected to contribute via ongoing service charges; i.e., making the customer meet the net incremental cost of connection, but making no contribution in the connection charge to shared network costs.
2. Incenta Economic Consulting (“Incenta”, “us” or “we”) has been engaged by Powerco to advise on how the Authority’s concept of the “balance point” could be applied in practice, and specifically:
 - a. the method(s) that may be applied to calculate the balance point
 - b. the method(s) that may be applied for retrospective calculations to examine what the balance point would have been historically at particular points in time
 - c. how the balance point should be able to change over time, and
 - d. how balance point values may be compared and benchmarked across electricity distribution businesses (EDBs).
3. We have been asked when providing this advice to take into account that the Authority’s principal objective is economic efficiency.

¹ The term “incremental cost” (and the similar concept of “avoidable cost”) refers to the additional cost that would be caused by connecting and serving a customer, and equivalently as the cost that would not be incurred “but for” connecting and serving that customer. The incremental cost will include the assets that are dedicated to the customer in question, as well as the additional costs that are caused at the different levels of the common-use network (for example, using up spare capacity and so advancing the need for augmentation). A characteristic of networks (or, more specifically, the presence of economies of scale) is that the sum of each customer’s incremental cost will typically be materially smaller than the total cost – and this difference between total cost and the sum of incremental costs is what is commonly referred to as the “common cost”, but which we refer to here (in keeping with the Authority’s terminology) as the “shared network cost”.

1.2 Authorship

4. This report has been prepared by Jeff Balchin and Dr Ray Challen. Jeff is the Managing Director of Incenta and has more than 30 years of experience advising on economic regulation issues across a range of infrastructure sectors in Australia and New Zealand. Relevant to the current matter, Jeff was involved in the reforms introduced to connection charges in Victoria in the late 1990s and early 2000s, which became the model that was subsequently applied across the eastern Australian states for energy. Ray also has several decades of experience with infrastructure regulation issues, including most recently as a member of the governing body of the Western Australian Economic Regulation Authority.

1.3 Summary of advice

5. We interpret the context for our advice – namely that the Authority's principal objective is economic efficiency – as implying that the balance point should be arrived at in such a manner that the resulting constraint on connection charges best serves to minimise the likelihood of that efficient decisions to connect to the network or to change a connection are deterred by the connection charge including a contribution to common costs (the efficiency objective).
6. Estimating the balance point in relation to a particular customer will require several important methodological issues to be resolved.
7. First, the Authority's central proposition is that the contribution to common costs required of a particular customer should be consistent with the contribution that is required of similar or comparable customers. Accordingly, the first step to estimate the balance point is to establish the groups (or classes) of customers that are considered to be similar or comparable. The common-cost contribution required of this comparable group would become the balance point (i.e., benchmark for assessment of contributions to common costs) for new connections. In principle, the efficiency objective means that the segmentation of customers should be undertaken against the objective of identifying customers that have similar sensitivity of connection decisions to the level of the connection charge. In practice this will most likely be undertaken by reference to indicators of customer similarity, such as the type of premises to which the connection applies (for example, residential, various scales of commercial and industrial, and agricultural) and other proxy indicators of willingness and capacity to pay for connection.
8. Secondly, a basis for comparing contributions to shared network costs will need to be determined, with the choices including an absolute dollar value, a percentage margin over net incremental cost, or some other specification such as a dollar amount per unit of capacity of the connection. We consider that specifying the balance point in terms of an absolute dollar amount in the connection charge is likely to best meet the efficiency objective where the customers are of a similar size in terms of electricity demand (e.g., residential customers). Other specifications, such as a dollar amount per unit of connection point capacity, may best meet the efficiency objective where there is

significant variation in electricity demand within a class of customer (e.g. classes of commercial and industrial customers).

9. Thirdly, attention will have to be given to how far to “look back” in time at historical connection charges when establishing the benchmark for the shared network contribution. This matter is ultimately dependent on what the Authority hopes to achieve. However, we observe that it will be most feasible to look at connection charges over the period for which the connection charge reconciliation requirements of clause 6B.11 of the Code have been in effect.
10. Fourthly, there is the potential that a range (and possibly a wide range) of contributions to shared network costs may have been made within a given class of customers in the past, and that such a range may continue to be generated if the EDBs' current methods for deriving connection charges continue. This potential for a range of outcomes is simply because connection charges may not have been (and probably were not) determined by adding the neutral charge and a contribution to shared network costs. Rather, it is likely that a different method has been used to derive connection charges, and the outcome of that different method will now be disaggregated into these components.² A method may therefore be required to establish the balance point for a given customer from the range of contributions that were paid by similar customers. We observe that how the benchmark is defined – and how EDBs respond – may create a dynamic process that generates further changes the shared network cost benchmark over time. Accordingly, how the benchmark is to be determined from the spread of observations is also dependent, in part, on the outcome the Authority is seeking to achieve and, in particular, whether it intends common-cost contributions to remain static or to change over time.
11. Fifthly, the Authority will have to consider how the balance point value should be adjusted (i.e., for matters like inflation in capital costs and the RAB) when comparing shared network cost contributions across time, and the method by which it would be adjusted. There are several options available, including to increase the shared network contribution for a particular inflation index or set of inflation indices, or alternatively to escalate the benchmark contribution by the same proportion as the EDB's shared network costs overall increase (i.e., so that the same proportionate contribution to shared network costs would be expected over time). Our view is that simply adjusting balance point values for changes in the CPI when applying to a future time period would be most consistent with the Authority's efficiency objective.
12. We have also considered how balance point values might be compared across EDBs.

² It is not a foregone conclusion that a wide dispersion will be observed in the contribution to shared network costs from similar customers. In a previous report by us in December 2024 (Electricity Authority's consultation on price and non-price aspects of customer connection, report for Powerco and Unison), we noted that one difference in the method applied to derive connection charges across EDBs was whether an allowance was made for the incremental revenue expected under ongoing service charges. If this incremental revenue was simply ignored – and connection charges were determined based solely on the incremental cost of connecting and serving the customer – then the customers' contributions to shared network costs would be equal to their incremental revenue, which would be expected to be reasonably consistent across customers within a particular class.

13. Comparisons across EDBs would require consistency of customer classes, historical records of connection charges and methods of calculation. Such a comparison would be more feasible on a forward-looking basis than if an attempt were made to backdate the analysis because all EDBs will need to calculate the inputs to the balance point for all new connections, but proxies would be required estimate the historical contributions to shared costs. However, even on a forward looking basis limitations would still apply, for example, to be meaningful, customer classes across EDBs would need to be defined materially the same, which otherwise could be allowed to vary to reflect the circumstances of the EDB.
14. Rather than comparing balance point values across EDBs, more aggregated statistics may provide be a better basis for comparing EDBs in contributions to shared network costs in connection charges and reliance of EDBs on connection charges to meet shared network costs. For example:
 - a. the dollar value of contributions to shared network costs in connection charges as a percentage of the RAB, or
 - b. the dollar value of contributions to shared networks costs in connection charges as a percentage of annual network operating and capital expenditure.

2. The Electricity Authority's proposals

15. In July 2025, the Authority introduced four measures into the Electricity Industry Participation Code 2010 (the "Code"):³
 - a. a connection enhancement cost allocation requirement
 - b. a capacity costing requirement
 - c. a pioneer scheme pricing methodology requirement, and
 - d. a connection charge reconciliation methodology requirement
16. At the time of introducing these measures, the Authority expressed a residual concern that inefficiently high up-front costs can deter connection activity and that it would further consider two proposals to constrain increases in connection charges:
 - a. establishing "reliance limits" to restrain the overall share of costs each distributor could recover from up-front connection charges, and
 - b. establishing "guardrails" to prevent already high connection charges from rising further.
17. The Authority subsequently proposed a "targeted intervention process" consistent with its guardrail concept, comprising:⁴
 - a. *scanning available information to identify where there may be inefficiently high up-front charges. This is an ongoing process because the information-base will change over time and because distributors may change their connection pricing methodologies at any time.*
 - b. *deeper inquiry into identified high up-front charges. This would involve information-gathering and analysis to determine whether the pricing is of concern, and if so, whether further intervention by the Authority is warranted*
 - c. *changes to connection pricing where intervention is warranted. This involves the Authority directing a specific distributor to update its pricing in accordance with the balance point principle and, if applicable, asking the Commerce Commission to reconsider the distributor's revenue path.*

³ Electricity Authority, 18 July 2025, Distribution connection pricing Code amendment, Decision paper, p2.

⁴ Electricity Authority, 17 November 2025, Reducing barriers for new connections: up-front charges and distributor obligations, Consultation paper, paragraph 7.6.

18. In assessing whether charges are too high, the Authority noted that:⁵
- a. The focus is at pricing policy and methodology level, rather than individual connection quotes. However, information regarding individual connections, connection types, or consumer groups may be relevant.*
 - b. 'Comparable' connections means connections with similar incremental costs and consumer group.*
 - c. Allocation trend (year-on-year) is relevant to whether charges are high, because historical allocation settings impact the level and make-up of lines charges and therefore the total cost paid by new connections (ie, new customers contribute to historical connection costs via their lines charges).*
 - d. Balance point pricing implies allocation levels are stable over time if there is no change in the type of connection activity (eg, more high-cost connections), relative input cost levels (ie, between connection activity inputs versus other capex or opex inputs) or allocation of shared network costs between consumer groups.*
 - e. Decreases may be efficient if the starting point is overly high allocation levels.*
19. The proposed code amendments make the balancing point central to the Authority's proposal:⁶
- The amendments:*
- define a 'connection charge balance point principle' that connection charges should be '...set at a level such that the contribution to shared network costs from new connections is commensurate with the contribution from existing connections'*
- enable the Authority to direct a distributor to amend its pricing to make it consistent with the principle within a specified timeframe if the Authority considers the distributors has not applied, or is not likely to apply, the connection charge balance point principle, provided the Authority has carried out certain specified steps first*
- require the Authority, as a specified step, to advise a distributor if it plans to examine a potential breach and explain the information and analysis that prompted the examination*
- require the Authority, as a specified step, before directing a distributor, to share a draft report explaining its decision and providing an opportunity for the distributor to respond*
- include a sunset clause so that the new clauses expire on 1 April 2030, by which time more comprehensive and enduring connection pricing reform may be in place.*

⁵ Electricity Authority, 17 November 2025, Reducing barriers for new connections: up-front charges and distributor obligations, Consultation paper, paragraph 7.15.

⁶ Electricity Authority, 17 November 2025, Reducing barriers for new connections: up-front charges and distributor obligations, Consultation paper, paragraph 7.24.

20. The Authority proposes a definition of the balance point principle as:⁷

- (1) The connection charge balance point principle is the principle that connection charges should be set at a level such that the contribution to shared network costs from new connections is commensurate with the contribution from existing connections.*
- (2) Contributions to shared network costs from new connections are commensurate with contributions from existing connections when:*
 - (a) new connections are not subsidised by existing connections; and*
 - (b) new connections make a similar (or lower) contribution to shared network costs as similar existing connections*
- (3) Contributions include connection charges and lines charges, including forecast lines charges.*

⁷ Electricity Authority, 17 November 2025, Reducing barriers for new connections: up-front charges and distributor obligations, Consultation paper, Appendix B.

3. Problem definition and analytical framework

21. We set out in this chapter our observations on the issues that will need to be considered to calculate balance point values, together with an analytical framework for addressing these issues consistent with an objective of economic efficiency of connection charges.
22. The key methodological elements in calculating the balance point are:
 - a. the method to determine the amount of a connection charge for a customer that is the “contribution to shared network costs”
 - b. defining customer or connection classes within which (for a particular EDB) the contribution to shared network costs should be consistent (i.e., the bounds of “similar existing connections”)
 - c. determining what it means for a contribution to shared network costs to be “commensurate” with similar existing connections, that is, for new connections to be making a similar (or lower) contribution to shared network costs as similar existing connections, and
 - d. determining what adjustment may be required to compare contributions to shared network costs across time (i.e., for factors like changes in capital costs and the RAB).
23. The point of reference in addressing these issues is the efficiency effects of connection charges.
24. The Authority has identified the following efficiency effects associated with connection charges:⁸
 - a. charges below the neutral point may result in inefficient connections occurring
 - b. charges above the neutral point may result in otherwise efficient connections being deterred, and
 - c. the potential for unexpected changes in connection charges creates a level of uncertainty for electricity customers that may dissuade otherwise efficient connections.
25. Having regard to these efficiency effects, the following considerations should guide the settling of the methodological issues set out above:
 - a. the neutral point for a connection charge should be calculated, and the amount of a connection charge above the neutral point is then taken to be the contribution to shared network costs
 - b. to the extent that a contribution to shared network costs is embedded in the connection charge there is the potential to discourage an efficient connection to the

⁸ Electricity Authority, 17 November 2025, Reducing barriers for new connections: up-front charges and distributor obligations, Consultation paper, paras.5.8-5.18.

network and so potentially generate an adverse efficiency outcome, although it is difficult to determine the magnitude of the contribution to shared network costs that may cause or has caused an inefficient decision to not connect

- c. having regard to point b, we interpret the Authority's intention as including that the risk of inefficiency from connection charges should not increase further over time, which in turn would be met by ensuring that the contribution to shared network costs required from a new connection is not greater than paid by similar connections thereby at least not increasing the likelihood that efficient connections are discouraged
- d. "similar connections" should be groups of customers that have similar characteristics in their investment decisions for connection in terms of their sensitivity of connection decisions to the level of contribution to shared network costs – this would mean that a similar level of contribution to shared network costs would result in a similar risk of inefficiency
- e. the method applied to compare shared network contributions across customers should seek to minimise the likelihood of any greater discouragement of connection by one customer compared with another in the customer class, and
- f. the method applied to compare contributions to shared network costs across time periods should seek to minimise the likelihood of any greater discouragement of connection by a customer compared with customer making connection decisions in prior time periods.

4. Advice on methods

4.1 Calculating the neutral point and network cost contribution

26. We consider that the method for calculating the neutral point and network cost contribution is adequately specified in the connection charge reconciliation requirements established under clause 6B.11 of the Code. The network charge reconciliation requirements require an EDB to determine and make available to connection applicants a breakdown of a connection charge into the components of incremental cost, incremental revenue and network cost contribution.
27. The Authority uses the term “neutral point” to define the connection charge that would result in the customer contributing incremental revenue equal to its incremental cost (i.e., making no contribution to shared network costs). This connection charge is equal to the difference between the incremental cost estimate and incremental revenue estimate as defined in clause 6B.11 of the Code and as required to be determined and disclosed under clause 6B.10.
28. “Network contribution” is defined in clause 6B.11 of the Code as the difference between the connection charge and the net incremental cost (i.e. incremental cost less incremental revenue).

4.2 Defining classes of “similar existing connections”

29. The Authority’s proposed definition of the balance point principle requires that contributions to shared network costs from new connections are “commensurate with contributions from existing connections”, meaning “new connections make a similar (or lower) contribution to shared network costs *as similar existing connections*” (emphasis added).
30. “Similar existing connections” is not a defined term. We consider that it is best taken to mean a set or class of customers that are meaningfully comparable to an applicant for a new or upgraded connection in the sense that the level of the contribution of shared network costs in a connection charge would have a similar bearing on a connection applicant’s decision to connect or not connect to the network as it had for existing connections.
31. An objective of minimising the potential for the contribution to shared network costs to discourage connection to the network requires consideration of customers’ price elasticity of demand for connection. Where a customer has relatively price inelastic demand for a connection (i.e. the connection decision is insensitive to the magnitude of the contribution to shared network costs) a contribution to shared network costs in a connection charge is less likely to affect the connection decision. Conversely, where a customer has relatively price elastic demand for connection, the connection decision is more sensitive to the magnitude of the contribution to shared network costs.
32. The task in defining similar existing connections is therefore to define a group or class of customers that have similar price elasticity of demand for connection.

33. Price elasticity of demand is determined by a prospective customer's willingness and capacity to pay for connection, which in turn is determined by the value to the customer of network connection (relative to alternatives to connection) and the ability to finance connection charges.
34. Analysing the willingness and capacity to pay of existing and prospective customers would be difficult and not practical for the purpose of determining the balance point. An alternative approach is to use proxy customer characteristics that are expected to correlate with willingness and capacity to pay.
35. Proxy characteristics might include:
 - a. the nature of use of the electricity, which would affect the value derived from electricity use and the alternatives available to the customer, for example residential use, and various types of commercial, industrial and agricultural uses,
 - b. the capacity of the connection assets, for example a residential customer requesting a three-phase connection rather than a single-phase connection might be expected to be placing greater value on the network supply and have a higher willingness to pay, and
 - c. economic characteristics of customers that would affect the ability to finance connection, such as the scale of expected electricity use; for example, a large commercial customer may have better access to finance than a small commercial customer.
36. We consider that there might be an acceptable level of correlation of willingness and capacity to pay with the observable customer characteristics of:
 - a. the same distribution service and/or retail service being contracted for at the connection points, which would correspond with the use of the premises serviced by the connection points; for example, the distribution services and retail services applying to various categories of residential, commercial, industrial and agricultural customers, and
 - b. the same or similar connection assets are used at the connection points, or the connection points have the same capacity, implying a similar scale of electricity use and, for particular categories of commercial and industrial customers, a similar scale of operations.

4.3 What is a similar contribution to shared network costs?

37. The proposed definition of the balance point principle requires that new connections make a similar (or lower) contribution to shared network costs as similar existing connections.
38. Determining what is a similar contribution as similar existing connections is not straight forward.
39. We see three important issues here:

- a. how is the contribution to network costs within a connection charge specified and compared between customers – more specifically is the contribution to be specified as an absolute dollar amount, a percentage margin over the net incremental cost, or some other basis, such as dollars per unit of connection point capacity?
- b. what is the set of existing connections (focussing here on the vintage of connection) against which the contribution to shared network costs of a new connection is to be compared?, and
- c. if within the comparator set of existing connections there is variability in the observed contributions to shared network costs, how is the benchmark for comparison to be determined?

40. Each of these three matters is examined further below.

How is the contribution to shared network costs within a connection charge to be specified?

41. Within a class of customers there may be substantial differences in direct connection costs; for example, because of the extent and cost of customer specific assets required (such as distance of extension of a distribution line to a customer connection point or the need to install a transformer specifically for a customer). There may also be differences in the assessed incremental cost caused on higher levels of the network for new connections that are otherwise very similar in terms of connection assets and customer characteristics, for example, between connections at a location where there is substantial (potentially excess) network capacity and connections at another location where capacity is scarce.
42. As a hypothetical example, the net incremental cost of connection for two otherwise identical connection points and customers may be \$10,000 in one case and \$100,000 in the other. The question must then arise as to what would be taken to be a similar contribution to shared network costs – for example, would the same contribution imply the same dollar amount (say \$5000 in each case), or the same percentage mark-up over net incremental (say 50 per cent, implying \$5000 for the first customer but \$50,000 for the second customer), or should “same” be defined in some other manner?
43. In this hypothetical example, if the willingness and capacity to pay connection costs was the same for both customers then the objective of minimising the likelihood that an efficient connection is discouraged would favour the lower (in absolute dollar amount) contribution to shared network costs by the customer with the greater net incremental cost of connection. This is because the customer with the larger incremental cost (at a minimum connection charge of \$100,000 of net incremental cost) is likely to be closer to the threshold level of connection charge where willingness and capacity to pay for connection might be exceeded by adding a contribution to shared network costs.
44. The objective of minimising the likelihood of discouraging efficient connections would therefore tend to be best served by considering similarity of contributions to shared networks costs within a class of very similar customers (such as residential customers with a standard connection) in terms of absolute dollar amounts.

45. Notwithstanding this, there might be other specifications of contributions to shared network costs that should be considered for some customer types. For example, while an absolute dollar contribution may be a reasonable proxy for willingness to pay for reasonably homogeneous customers (e.g., the residential customers with a standard connection), a benchmark based on dollars per unit of capacity of the connection point may be more reflective of willingness to pay where the customers vary substantially in size (such as for industrial and commercial customers). Whether or not such specifications are consistent with the objective of minimising the likelihood of discouraging efficient connections would depend on the correlation of the specification with customer willingness and capacity to pay for connection.

What is the time scale over which connection charges for existing connections are to be considered?

46. If a class of customers is defined according to the distribution service (and tariff) applying to the connection point, then all customers within the class would be making (approximately) the same forward-looking contribution to shared network costs through distribution tariffs.
47. However, customers within the same class that connected at different times (i.e., are of different vintage) may well have made very different contributions to shared network costs through connection charges where there were changes over time (i.e. over many decades) in methods of calculating connection charges and the objectives and policies of EDBs in including contributions to shared network charges in connection charges.
48. Therefore, there may be benefit in attempting to project back the estimate of the contribution to shared network costs to include the contributions that were made by customers over some past period, particularly if the Authority is concerned that there has been a recent increase in contributions to shared network charges in connection charges to an extent that has discouraged efficient connections. Clearly, however, the further back that one was to attempt to calculate the contributions of connecting customers to shared network costs, the more challenging and imprecise the effort would be. Indeed, it may well be that the records required (namely the connection charges paid by individual customers and an estimate of those customers' incremental cost and revenue) may not exist beyond a period.
49. Ultimately, whether and to what extent the Authority determines it necessary to attempt to unravel history will depend on the Authority's objective. If the Authority's intention is just to prevent a future deterioration in the efficiency of connections, then the most practical approach would be to limit the examination of past connection charges to the period after the requirements of clause 6B.11 of the Code took effect meaning that key inputs for the calculation will have been produced by the EDBs.

How is a benchmark of comparison of contributions to shared network costs to be determined where there is variation amongst similar existing connections?

50. It is possible that an EDB may have levied connection charges that included a materially different contribution to shared network costs within the same customer class. We are mindful here that the decomposition of connection charges into the neutral point component and the contribution to shared network costs is a new activity and may be

quite different to the calculations that were used to determine those contributions historically.

51. For example,
- a. if the total connection charge was constant for a class of customers but incremental costs of connection varied substantially, the residual contribution to shared network costs would vary inversely with the incremental costs
 - b. if there was substantial variation between connection points in relation to incremental cost, and contributions to shared network costs were determined as a percentage markup on net incremental cost, then the contribution to shared network costs would vary directly with the incremental costs, and so potentially vary materially on an absolute dollar basis, and
 - c. if incremental revenue was simply ignored and connection charges were determined based solely on the incremental cost of connecting and serving the customer, then the customers' contributions to shared network costs would be equal to their incremental revenue, which would be expected to be reasonably consistent across customers in a class.
52. We consider it plausible that – at least for some EDBs – contributions to shared network costs (both past contributions and contributions that would arise under existing methods) will be found to vary materially across a given customer class. In these circumstances it will be necessary to decide how that scatter-plot of observations should be applied to determine whether the contribution to shared network costs from a new connection is similar. Options for interpreting a scatter of observations include:
- a. determining the range of contributions to shared network costs for a customer class and defining “similar” to mean anywhere in the range
 - b. defining similar in terms of the mean or median value (so that contributions above the mean or median would be precluded)
 - c. defining similar to mean no greater than a specified percentile of the range, say the 25th percentile, or
 - d. defining similar to mean no greater than the minimum of the observed contributions.
53. We note that, if there is material dispersion (scatter) in the contributions to shared network costs across similar connections, then how the benchmark is defined – and how the EDB responds – may have efficiency implications.
- a. If the balance point is defined as the average observed across a customer class and the EDB in question responded by moving all contributions to this average, then efficiency may be unaffected, or possibly improve modestly. This latter effect would

arise because the efficiency loss caused by a price distortion typically increases non-linearly with the size of the distortion.⁹

- b. If the balance point is defined as the average observed across a customer class and the EDB in question responded by continuing to apply its existing method but capping the contribution to shared costs at the average of the class, then a larger efficiency improvement would be expected. This is because the highest contributions would be reduced, but the lower-than-average contributions would remain. In addition, the average contribution would also decline (all else constant) over time, causing a greater efficiency benefit over time.
 - c. There is also the option of setting the balance point at a different point in the distribution of observed contributions (e.g., the lower quartile), which would be likely to cause a decline in future contributions to shared network costs.
54. Ultimately, where material dispersion is observed the best method for defining the benchmark for shared cost contributions will depend on the outcome the Authority is seeking to achieve.

4.4 How might the balance point change over time?

55. A matter for consideration by the Authority is whether the balance point should be determined at a point in time and then remain constant, or whether change (adjustment) over time should be contemplated.
56. Some increase may be consistent with maintaining the comparability over time of the balance point with customers' willingness and capacity to pay for connection. Maintaining comparability with similar existing connections in real, rather than nominal, terms – and with inflation defined in terms of consumer purchases (i.e., the Consumer Price Index) – would be consistent with tracking the willingness and capacity to pay for connection.
57. Alternatively, a benchmark contribution to shared network costs could be allowed to increase over time to achieve a constant effective contribution to shared network costs, which would argue for indexation that reflects both:
- a. the rate of inflation in network construction costs, and
 - b. the rate of indexation applied to capital expenditure once in a distributor's RAB.
58. One option for combining these different rates of inflation would be to permit contributions to shared network costs to track the change in the (nominal) value of an EDB's RAB, which will be influenced by both the change in construction costs and the CPI revaluation of assets once in the RAB.
59. Out of these options, we would recommend applying the CPI to adjust for inflation when comparing contributions to shared network costs between periods. We note that CPI

⁹ In a simple model with a linear demand curve, the allocative inefficiency from pricing above marginal cost increases with the square of the distortion.

indexation is simple and is already widely applied for the EDBs (e.g., for RAB revaluations). In addition, CPI indexation is likely to be most consistent with determining a balance point that tracks a customer's willingness and capacity to pay over time, and so would be most consistent with the Authority's efficiency objective.

5. Benchmarking and comparison across EDBs

60. Comparing balance point values across EDBs would require consistency of parameters and methods of calculation as set out in this report including:
 - a. consistency of specification and characteristics of customer classes
 - b. consistency of data for existing connections, including the historical time-period over which connection charges for new customers are examined and the methods used to apportion the observed connection charges to incremental costs, incremental revenue and contributions to shared network costs
 - c. consistency in the methods used to derive a balance point value for each class of customers from the potential “scatter” of values of contributions to shared network costs that would be derived for existing connections, and
 - d. consistency of the method used to adjust the balance point over time.
61. Going forward, it may well be possible to compare balance points on a reasonably sound basis, given the new requirements on EDBs to calculate the inputs required for the shared network contribution on a standardised basis. However, this is subject to there being confidence that the customer groups being compared are substantially the same (and so can be assumed to have a similar willingness and capacity to pay). However, we would recommend caution in trying to compare balance points going backwards in time given that such historical estimates are likely to be increasingly imprecise as the historical period increases (i.e., being subject to data limitations and so the need to apply proxies), which increases the risk of inconsistency in any comparison across EDBs.
62. Rather than comparing balance point values by customer class across EDBs, more aggregated statistics may better be a better basis for comparing the extent of contribution to shared network costs that are embedded in connection charges, for example:
 - a. the dollar value of contributions to shared network costs in connection charges as a percentage of the RAB, and
 - b. the dollar value of contributions to shared networks costs in connection charges as a percentage of annual network operating and capital expenditure.