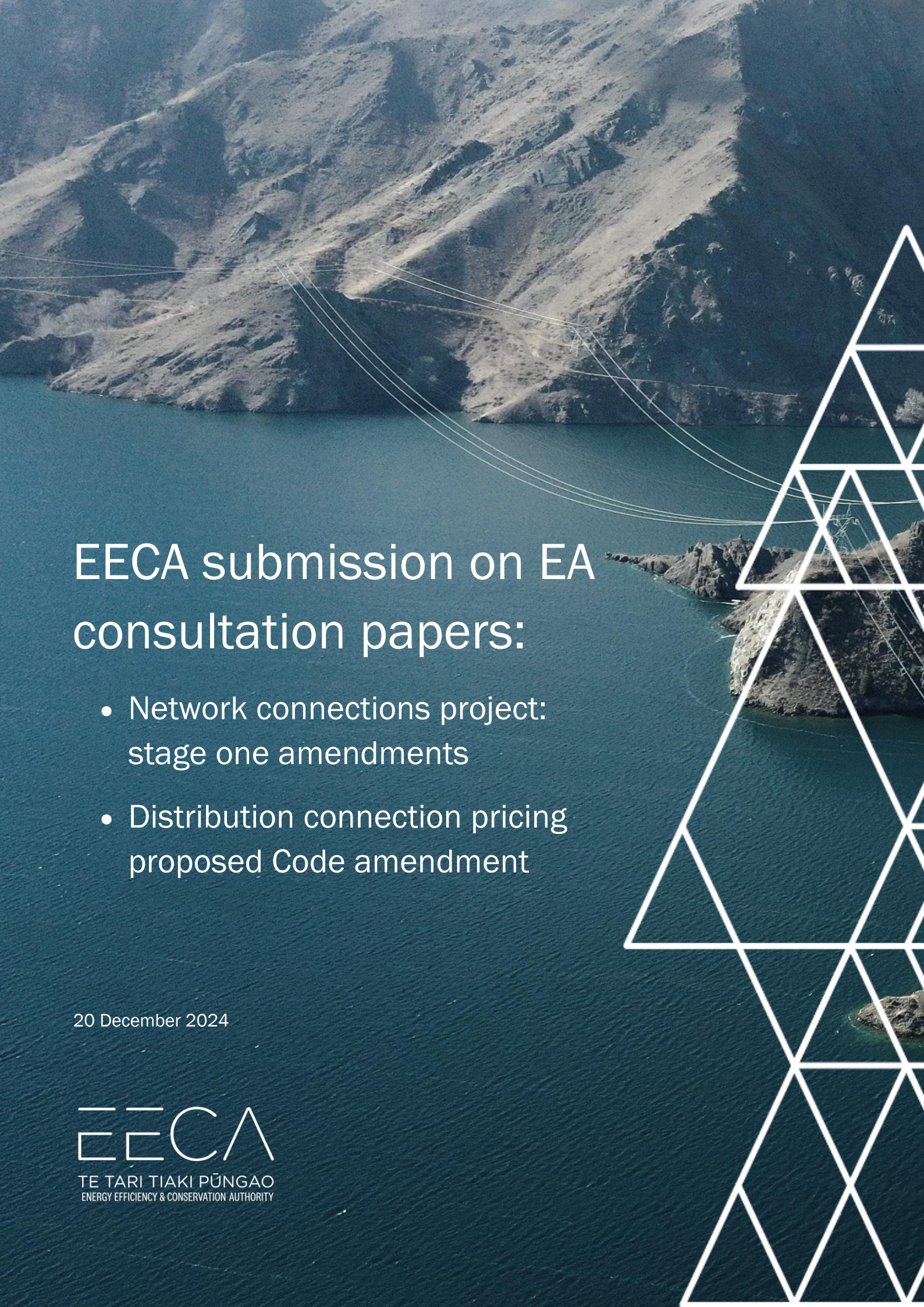


EECA submission on EA consultation papers:

- Network connections project: stage one amendments
- Distribution connection pricing proposed Code amendment

20 December 2024

EECA
TE TARI TIAKI PŪNGAO
ENERGY EFFICIENCY & CONSERVATION AUTHORITY

About EECA

The Energy Efficiency and Conservation Authority (EECA) is a Crown entity established under the Energy Efficiency and Conservation Act 2000 (the Act). As set out in the Act, EECA exists to encourage, promote, and support energy efficiency, energy conservation, and the use of renewable sources of energy.

EECA is a delivery agency, a regulator, and an authority on energy use. We deliver programmes that mobilise New Zealanders to be world leaders in clean and clever energy use. We work with a wide range of stakeholders, including industry, government, and everyday New Zealanders – because everyone uses energy.

Our Strategy

Our Mission

Mobilise New Zealanders to be world leaders in clean and clever energy use.

Focus areas

Energy efficiency first

Efficient energy use is the first option users adopt.

Outcomes

- Users accept and adopt energy efficient products and practices.
- Proven energy efficient technologies are identified and widely available.

Empower energy users

Users are empowered to control their energy.

- Users understand, manage, and conserve their energy use.
- Users get value from responsive and flexible energy systems.

Accelerate renewable energy

Users transition to low-emissions energy.

- Users plan for and adopt low-emission energy and technologies.
- Fuel options for energy transition are identified and widely available.

Energy users save energy, money and reduce emissions.
Energy productivity and resilience improves.

Submission on EA consultation papers

The Electricity Authority is seeking feedback on its *"Network connections project: stage one amendments"* consultation paper and *"Distribution connection pricing proposed Code amendment"* consultation paper.

Thank you for the opportunity to provide feedback. EECA's key points are outlined below, we welcome the opportunity to meet and discuss our comments further.

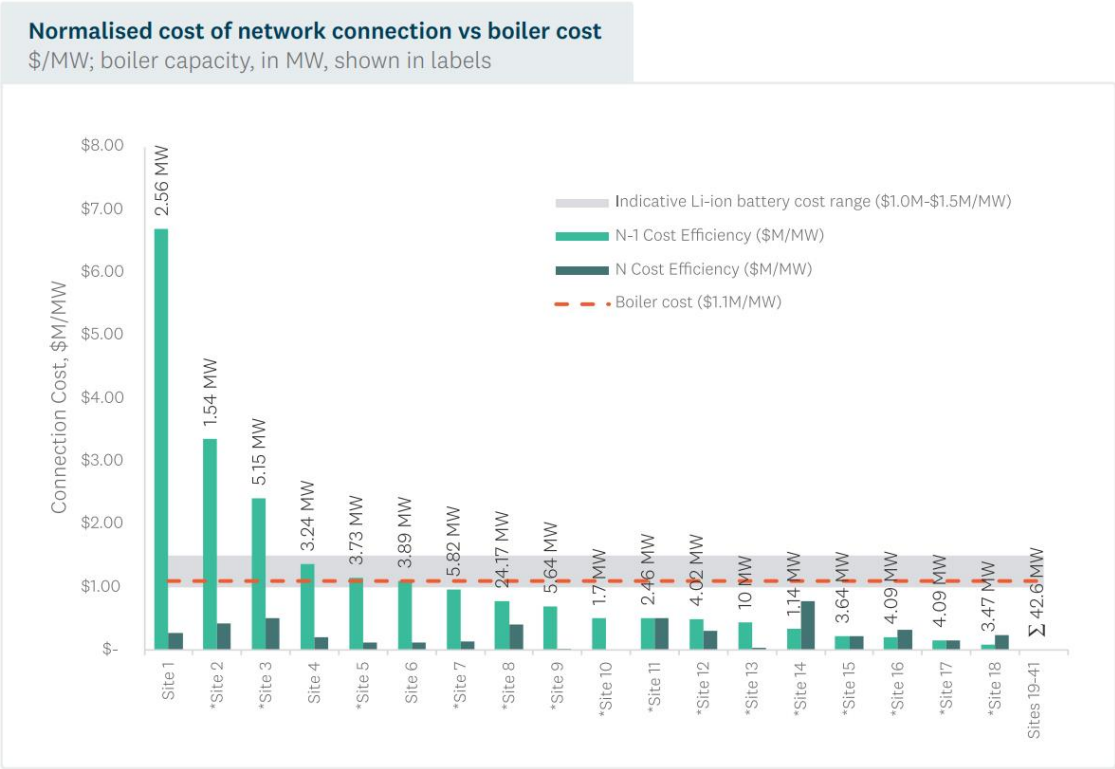
EECA's key points on the proposed amendments:

1. **We strongly agree that electricity distribution network and connection pricing settings need to be updated to support ongoing electrification trends, population growth and general economic development.**
    - The electricity system needs to respond promptly and fairly to meet these needs and must not get in the way of energy users wanting to transition to more efficient or renewable alternatives. There is evidence to suggest that current rules have not kept pace with the number, size and complexity of connection applications, and change is promptly needed to assist and enable those that want to connect.
    - An efficient and effective connections regime can act as an enabler of clean energy use to support economic growth and continued investment. Greater consistency in network and connection pricing can allow users to better plan for and adopt low emission energy and technology.
2. **The two sets of proposed amendments could address some significant barriers for getting energy users connected to the electricity network. EECA has seen first-hand that long and uncertain connection processes and costs are resulting in significant delays and cancelled projects.**
    - A poor connections regime acts as a barrier to investment in electrification and renewables. Accordingly, we are in favour of the EA's intent to reshape the electricity market rules to encourage more efficient investment in important infrastructure.
    - We observe that the two sets of proposed rule changes look to make it easier for energy users to connect to the electricity network.
    - EECA engages with the main EV charge point operators in New Zealand through the co-investment support we provide. Through this activity we have seen first-hand the variability in connection processes around the country, and the impact this has on the time and cost of installing an EV charger. For example, charge point operators report that connection processes can take

between 3 months to a year, resulting in slower deployment – and in many cases, cancelled projects.

- As such, EECA is strongly in favour of the proposal to include a requirement for EDBs to publish applications waiting to connect to a network, and how much room there is for new or upgraded connections. We note Powerco are the only EDB currently doing this in an easy to use and accessible format, and that this has saved time during the connection process for both new applicants (including charge point operators) and the EDB.
- We note that the Commerce Commission's recent Targeted Information Disclosure Review (2024) requires EDBs to provide more information about spare network capacity and geospatial data, starting from April 2025, which should be utilised in these proposed amendments.
- Through our Regional Energy Transition Accelerator (RETA) programme, EECA assesses the electricity connection cost for if each process-heat user were to electrify their existing fossil-fuelled load. There is a wide range of upgrade costs that process-heat users could face, based on their location, existing spare capacity and the infrastructure nearby. The figure below is from the recently published Hawke's Bay RETA which shows a range in capital connection costs, when standardised, between $6.8M per MW to zero.

Figure 55 – Normalised cost of network connection vs boiler cost. Source: Ergo, EECA



- There are many instances of first mover advantages (i.e. the first to electrify claims the existing spare capacity for low cost), and also first mover

disadvantages (i.e. the first to electrify triggers an upgrade due to insufficient capacity, after which other users could connect to upgraded assets).

- EECA supports the proposed changes to mitigate the first mover disadvantage and to therefore balance the pricing mechanisms across all connections.
- We note EA's point that "connections are priced at the lowest cost so connection applicants don't pay for a larger connection than they need (unless they request it)." We agree with this outcome to mitigate the cost-barrier for potential applicants; but note that in order for EDBs to sufficiently future proof their network, larger capacity increases should be allowed, provided sufficient evidence. For example, if a new/increased connection requires 5 MW, but the EDB has evidence of future increased demand for a further 5 MW, we suggest the EDB should be able to increase by 10 MW, but only charge the applicant for the equivalent equipment required for the 5 MW upgrade.

3. **It is likely that the proposed changes will help to rebalance connection pricing methodologies so they're more efficient and fair.**

- EECA agrees with the intentions of the amendments, to try and achieve efficient connection charges that are fair to existing consumers, in a way that doesn't discourage new connections.
- The proposals also aim to improve consistency of connection pricing and processes – to make it easier for businesses operating across multiple regions. Greater consistency in terms of the connection process and costs will be of particular value to EV charge point operators wanting to operate across various regions as the rules currently differ between lines companies.
- We acknowledge the status quo settings have allowed EDBs to develop their own rules around how to process and charge businesses and investors wanting to connect. This means there's a wide range of practices happening across New Zealand, and in some cases, comparatively high up-front costs. This provides disproportionate disadvantages from one region to the next and an unnecessary barrier to doing business in NZ. EDBs may not have necessary incentives to make the connection process easier on their own accord. We also note that queue issues arise where stalled or loosely feasible projects are given priority over others that are ready to go.
- Additionally, new/increased connections require more ongoing (OPEX) price certainty for if they were to electrify. For example, some process heat conversions are large projects (over 1 MW, with many over 10 MW), which have significant capital outlay and an expected project life of 20 years or more. These projects can secure long term contracts for biomass and

electricity energy from suppliers which provide certainty over those costs, but EDBs cannot provide any certainty of their future charges beyond the current pricing year. There have been examples of process heat users facing significant network charge increases only a year after implementing projects, which weren't signalled beforehand.

- Standardisation is encouraged for the methodologies applied by EDBs to determine both the capital contribution and ongoing network charges that apply for new/increased connections. For example, new/increased connections who pay 100% of the capital contribution should incur lower ongoing network charges, as the newly installed assets have already been paid for and shouldn't form part of the EDBs regulated asset base.

4. **EECA notes there is opportunity for the EA to ensure the benefits of the proposed amendments are realized.**

    - We particularly note that there should be flexibility in the Code amendments to define Distributed Generation (DG) applications as small, medium and large. This should be a balanced approach that allows for future changes to the defined application sizes if necessary. One potential reason for doing so would be if the threshold was causing a particular size to be chosen during application resulting in a potentially inefficient investment.
    - We also note that the papers make it clear that when there are multiple medium DG trying to connect, there's a process for allocating between them. It's also made clear that there's also a process for allocating between large DG trying to connect. However, it is unclear whether these two processes (for medium and for large DG) are connected and considered jointly. This could be clarified, and there is an opportunity to ensure this actually happens in practice.

5. **We look forward to continuing to work with the Electricity Authority and other agencies to support a renewable, flexible and resilient energy system.**

Appendix A Format for submissions

Submitter	EECA (Energy Efficiency & Conservation Authority)

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?	EECA agree that there appears to be significant variation in the application of connection charges across the country, and it seems unlikely that this variation of charging also represents consistently efficient connection pricing.
Q2. Do you agree with the problem statement for connection pricing?	EECA agree with the problem statement. We think it could be useful for the paper to present evidence that observed variability in charges is inefficient, to support the problem statement.
Q3. Do you have any comments on the Authority's proposed pathway to full reform?	The approach to developing a pathway appears to have drawn from overseas experience, which is commendable. We think many of the problems could be resolved more robustly if incentives were appropriately aligned. We think a discussion around what misalignment exists, and why, and what the solutions might be, could be helpful here.
Q4. Do you consider the proposed connection enhancement cost requirements would improve connection pricing efficiency and deliver a net benefit?	EECA is generally supportive of proposed connection enhancement cost requirements, and we consider they will improve connection pricing efficiency. The proposed requirements seem sensible and well considered. (We note the consultation paper contains doesn't contain discussion of possible/likely drawbacks and costs, which makes it difficult to comment on the net benefits of the proposal. Possible drawbacks may include: • Additional cost to distributor to develop minimum scheme for each connection, and is this passed onto consumers? • Limits to distributor capability/capacity already an issue, how do these changes affect this?)
Q5. Are there variations to the proposed connection enhancement cost requirements you consider would materially improve the proposed Code amendment?	We would like to offer the following comments and observations: 7.1 We think it might be helpful to make a small change from network capacity costing "applied as network capacity headroom consumed" to "applied as network capacity headroom forecast/expected to be consumed", as the former doesn't seem like it would deliver the benefits.

	7.1 Dispute resolution - we expect good design would avoid the instances of disputes by being transparent and predictable to start with. If the methodology is compliant there should be no dispute, hence this component should be focussed on regulatory compliance and enforcement. This may just be a case of renaming from Dispute resolution to something else. 7.1 It may be useful to rename Reliance limits methodology to be more descriptive and easily understood. 7.6 (a) It may be useful here to clarify 'acceptable to the distributor', as some have higher standards than necessary. 7.7 Examples are quite 'strong' versions of flexible schemes, it would be good to clarify that more modest levels of flexibility could also be beneficial. 7.10 (b) What if posted rates materially exceed the minimum scheme?
Q6. Do you consider the proposed network capacity costing requirements would improve connection pricing efficiency and deliver a net benefit?	EECA is generally supportive of proposed capacity costing requirements, and we consider they will improve connection pricing efficiency. The proposed requirements seem sensible and well considered. (We note that the consultation paper doesn't contain discussion of possible/likely drawbacks, which makes it difficult to comment on the net benefits of the proposal. Possible drawbacks may include: • Significant effort for distributors to develop and communicate rates • risk of getting them wrong)
Q7. Are there variations to the proposed network capacity costing requirements you consider would materially improve the proposed Code amendment?	7.30 (c) We suggest this should be symmetrical for lower-than-average costs also.
Q8. Do you consider the pioneer scheme pricing methodology would improve connection pricing efficiency and deliver a net benefit?	EECA is generally supportive of the pioneer scheme pricing methodology, and we consider it will improve connection pricing efficiency. The proposed methodology seems sensible and well considered. (Noting the consultation paper contains doesn't contain discussion of possible/likely drawbacks and costs, which makes it difficult to comment on the net benefits of the proposal.)
Q9. Are there variations to the proposed pioneer scheme pricing methodology you consider would	It could be useful to include further information on how the pioneer scheme would work under (g). For example, is the applicant the pioneer?

materially improve the proposed Code amendment?	
Q10. Do you consider the cost reconciliation methodology would improve connection pricing efficiency and deliver a net benefit?	The proposal appears to be based on economic purity which may face some challenges given the range and number of input and output variables, and the assumptions required. We wonder if there are examples of this approach being applied effectively elsewhere which could be drawn on?
Q11. Are there variations to the proposed cost reconciliation methodology you consider would materially improve the proposed Code amendment?	We would like to offer the following comments and observations: 7.65 It could be useful for the paper to clarify what 'disconnection and rationing' is. 7.71 We think this could be provided by default, as it is being calculated anyway. 7.74 (d) It's not quite clear why network capacity costs are not in present value terms. 7.75 (d) We wonder if these costs could/should be already included in the incremental cost?
Q12. Do you consider the reliance limits would improve connection pricing efficiency and deliver a net benefit?	It seems like a necessary precursor to introducing limits would be to understand the 'efficient' level of capital contribution and potential reasons for deviation from it in either direction. We should not assume that any particular approach is inefficient without evidence to support this.
Q13. Are there any variations to the proposed reliance limits you consider would materially improve the proposed Code amendment?	We suggest a different name for this i.e. Capital contribution proportion limits.
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	We suggest this could be renamed – dispute resolution is an adversarial process between distributors and customers, whereas enforcement is BAU between a regulator and participants. If the Authority has set rules for distributors re connection pricing, we support them to be willing and able to enforce these on behalf of customers.

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?	Adding imposed incremental trend of limits back to 'desired' or 'efficient' levels for all distributors would seem better than static limits, assuming that efficient levels can be determined with sufficient certainty.
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?	We suggest parameters should ideally align with those of the underlying asset, to avoid any arbitrary parameters.
Q21. Do you agree pricing methodologies should apply to LCC contracts? If not, please explain your rationale.	Consistent application of pricing principles to all connected parties would appear to be a valid starting point.
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.	Yes, however some of the technical requirements (e.g. 'minimum schemes') could potentially create barriers if the required methodology is complex or not transparent.
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?	We would like to offer the following comments and observations, which relate to the regulatory statement presented in the consultation paper: • 9.3 Costs listed do not include potential for impaired capability of distributors to connect new loads and/or build new assets. This could arise from the need for skilled staff who are in short supply to apply the new methodology which could prevent them from working on other tasks. • 9.4 (a) This benefit seems speculative and/or unlikely and we think it may need further explanation. • 9.12 While the 0.12%/0.18% number is small, there is no evidence presented that it is achievable on a practical basis. Likewise, the 2% cost estimate seems speculative and could be on the low side given known capability and capacity limitations in the labour market. • 9.19 (a) Suggest the paper could explain how guidelines would have higher up-front costs for participants than the proposed fast-track measures.