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From: Electricity Engineers' Association of NZ

Date: 4 February 2026

Subject: EEA Submission – Discussion Paper – *Reducing Barriers for New Connections – Up-Front Charges and Distributor Obligations*

OVERVIEW

The Electricity Engineers' Association (EEA) welcomes the opportunity to comment on the Authority's consultation on reducing barriers for new connections. The paper raises important issues at a time when New Zealand's electricity system is undergoing rapid change, with rising electrification, increasing volumes of distributed energy resources (DER), and growing expectations from consumers, developers, and installers. Across the sector, the connection experience is becoming a critical enabler, or barrier, to achieving national energy and emissions goals.

The Electricity Engineers' Association (EEA) is the peak technical body representing the engineering and technical workforce across New Zealand's electricity supply industry. Our members include electricity distribution businesses, generators, contractors, consultants, equipment suppliers, and technical specialists who are directly involved in designing, operating, maintaining, and expanding the electricity system. The EEA has a strong and long-standing interest in the effectiveness of connection frameworks, as connection processes sit at the intersection of engineering standards, customer experience, regulatory settings, and long-term system planning. Through our Streamlining Connections programme and wider technical work programme, we are actively working with industry and regulators to improve national consistency, technical clarity, and the overall efficiency and predictability of the connection experience.

We agree with the Authority's assessment that connection pricing outcomes have become increasingly variable and, in some cases, difficult for customers to navigate. Many of the examples cited in the paper are consistent with what we observe through our Streamlining Connections programme and our wider engagement with members. However, we also emphasise that much of this variability reflects real, underlying engineering and operational differences between networks: voltage limits, LV hosting capacity, protection requirements, and resilience considerations all materially shape the cost and feasibility of connecting new load or generation. Recognising these technical drivers is essential to any reform effort.

Against this backdrop, we support the direction of the Authority's work. The rationale for considering interim restraint is sound, particularly where evidence suggests that high or increasingly unpredictable up-front charges are deterring efficient investment. But restraint must be carefully designed to avoid creating new problems—such as delays, overly conservative engineering decisions, or under-recovery of legitimate costs needed to maintain safety and compliance. Any intervention should therefore be paired with improvements in technical processes, data visibility, and national consistency. Many of these improvements are already underway through the EEA's work on national LV and MV connection guidelines, minimum scheme definitions, export-limit methodologies, and a common data protocol for the sector.

The EEA also supports the Authority's preferred option of targeted intervention. This approach strikes a workable balance: it responds proportionately to emerging pricing concerns while allowing for the legitimate technical variability across networks and avoiding rigid, sector-wide prescriptions that could compromise safety or distort investment signals. If the status quo were to persist, we agree that disparities in connection outcomes would likely widen, leading to growing uncertainty for developers and slowing electrification progress in areas already experiencing capacity constraints.

Alongside pricing reform, the Authority's intention to clarify distributor supply obligations is timely. Current arrangements leave too much room for differing interpretations, creating uncertainty for both customers and distributors. Clearer obligations, paired with standardised access standards, will help ensure that customers understand what they can expect from the connection process. But these obligations must be grounded in the physical and safety realities of operating an electricity distribution network. Where voltage, thermal, or protection limits prevent a standard connection from proceeding, distributors must retain the ability, and obligation to offer technically sound alternatives, including flexible or staged connections.

From the EEA's perspective, success in this reform programme looks like a connection regime where customers can:

- reasonably predict the likely scale of connection costs early in the process
- understand what is driving those costs
- see credible lower-cost or flexible alternatives where available, and
- have confidence that minimum scheme designs and technical requirements are being applied consistently across the country.

Improving predictability and transparency in this way is at least as important to customers as the absolute level of charges and is critical to maintaining confidence in the connection process as electrification accelerates.

We are encouraged by the alignment between the Authority's proposed direction and the EEA's work programme. The recent review of distributor technical standards highlighted significant variability and opportunities for improvement, and the sector is now actively developing shared templates, processes, and guidelines to address these issues. The Authority's proposals have the potential to reinforce and accelerate this work, delivering tangible benefits for customers, distributors, and installers alike.

While the drafting of the proposed Code amendments is broadly clear and workable, minor refinements would improve clarity, particularly regarding the relationship between minimum scheme definitions, the balance-point principle, and the evidential requirements of the inquiry process. Ensuring that flexible connection arrangements are accommodated within the pricing framework will also support innovation and help reduce reinforcement costs.

Overall, the EEA supports the direction of the Authority's reform programme. We see strong opportunities for improved transparency, consistency, and customer experience, provided reforms are implemented in partnership with industry and grounded in sound engineering practice. We also see clear alignment between regulatory expectations and the sector's ongoing transition to more standardised technical processes and improved data visibility. With careful design and collaboration, the proposed changes can meaningfully reduce barriers to new connections while safeguarding the safety, reliability, and long-term efficiency of the electricity system.

The remainder of this submission provides the EEA's detailed responses to each of the consultation questions. These responses build on the themes highlighted in our summary and reflect the practical experience of our members who work within these processes every day. They expand on the importance of grounding pricing and supply obligations in sound engineering practice, improving transparency and consistency for customers, and ensuring that regulatory reforms align with the sector-wide technical work now underway through the EEA. Insights from our Streamlining Connections programme, national technical guidelines, and data governance initiatives all inform the perspectives that follow. Taken together, these responses aim to support reforms that are both technically robust and workable in practice, while enabling more efficient and customer-focused connection pathways across the country.

Response to Consultation Questions

Q1. Do you agree with the assessment of the current situation and context for connection pricing described in section 4?

The EEA generally agrees with the Authority's description of the current environment and considers it a fair reflection of the issues affecting customers, installers, developers, and distributors today. The paper accurately highlights the growing variability of capital contribution practices, the pressure on new connections as electrification accelerates, and the potential for inefficient or inequitable cost allocation if current trends continue. These themes also align strongly with what we hear through our Streamlining Connections programme, our member engagement, and the recent review of distributor technical standards. From the customer and developer perspective, it is often this lack of predictability and transparency, rather than any single dollar figure, that creates the greatest barrier to investment.

At the same time, the context would be strengthened by a clearer recognition that many of the issues appearing as pricing challenges are, in fact, symptoms of deeper engineering and operational constraints. Differences in LV network capacity, voltage headroom, protection settings, and hosting capability mean that the marginal cost of connecting new load or generation varies significantly between networks and even between feeders. These differences are real and legitimate, and they must continue to be reflected in pricing to support safe and efficient operation of the network. Variability is therefore not inherently inefficient; the challenge is distinguishing variability that arises from genuine technical drivers from variability arising from process or transparency issues.

The consultation paper also understates the degree to which inconsistent data availability contributes to uncertainty and cost for both access seekers and distributors. Many LV networks still lack granular visibility of transformer loading, voltage profiles, and DER penetration. This makes assessments more labour-intensive and can lead to conservative outcomes or delays. The EEA's ongoing work on data governance, common data standards, and wider industry work on improved LV visibility is intended to address exactly these challenges, and strong alignment between this work and the Authority's broader reform agenda will be important.

Finally, the context should recognise the increasing burden of resilience and climate adaptation on distributors, particularly following events such as Cyclone Gabrielle. These drivers affect network investment cycles, and in some regions place upward pressure on baseline costs. Connections pricing reform should be designed with a full understanding of these competing pressures.

On balance, the Authority's assessment is directionally correct, but recognising the underlying technical, resilience, and data-related drivers will ensure that the next stage of reform is grounded in the realities distributors operate within.

We also note that regional differences—arising from geography, legacy asset bases, population density, and differing levels of DER penetration—mean that connection challenges and associated costs vary widely across the country. Explicitly recognising these variations is important to ensure that future regulatory settings remain equitable for consumers, while still allowing distributors to meet essential safety, reliability, and compliance obligations.

Q2. Do you agree with the rationale for considering interim restraint on connection charges?

The EEA agrees that the Authority's rationale for considering interim restraint is well-founded, particularly given the evidence that some connection costs are increasing faster than can be reasonably explained by underlying technical or economic factors. These pressures are clearly affecting electrification projects across the country, including EV charging, irrigation, industrial decarbonisation initiatives, and smaller developments that lack the financial flexibility to absorb high or unpredictable up-front costs.

However, we strongly support the paper's implicit recognition that any pricing restraint must be applied carefully. If used in a way that does not reflect physical network realities, restraint could unintentionally compromise safety, voltage management, or reliability. For example, LV networks in certain regions are already operating close to thermal or voltage limits, and significant reinforcement is sometimes required simply to maintain compliance with Electricity (Safety) Regulations or maintain acceptable power quality. In these situations, restraint on charges without parallel mechanisms to ensure cost recovery could discourage or delay essential upgrades.

It is also important that restraint does not inadvertently incentivise delay, overly conservative engineering outcomes, or de facto refusal of more complex connections. If distributors perceive a risk that legitimate reinforcement costs will not be recoverable, there may be unintended shifts in internal behaviours, prioritising connections with simpler profiles, being more cautious in minimum scheme definitions, or lengthening assessment timeframes to reduce exposure. These behavioural dynamics must be actively considered in implementation.

The rationale would also benefit from explicitly connecting pricing restraint to ongoing improvements in technical processes, data transparency, and flexible connection options. As this work matures—particularly the EEA's connection guidelines, export-limit methodologies, and data governance frameworks—it will become easier to ensure that pricing reforms are grounded in consistent, nationally aligned engineering practice.

In considering any form of restraint, it is also important to recognise the broader financeability settings under Part 4. Distributors must retain the ability to recover the prudent and efficient costs of essential

LV and MV upgrades; otherwise, pricing restraint could unintentionally defer necessary investment or reduce the sector's ability to maintain network safety and reliability. If not carefully designed, restraint mechanisms may also disincentivise innovation in flexible connections, LV visibility tools, and data improvements that are central to reducing long-term connection costs.

Overall, we endorse the rationale for targeted intervention, if it is designed in a way that supports, rather than conflicts with, the engineering standards needed to operate the network safely and efficiently.

Q3. Have you observed or experienced signs of connection stress where current charging arrangements caused problems when seeking to connect to the network?

Yes. Across a wide range of EEA engagement channels, members consistently report signs of connection stress, and the examples described in the consultation paper are fully consistent with what we observe. These stresses manifest both in upfront pricing and in the complexity of the connection process itself.

From a pricing perspective, distributors report cases where reinforcement costs have escalated due to rapidly increasing load demands, heightened DER penetration, and ageing LV assets that require upgrade simply to maintain compliance. These cost pressures can make connection charges appear high relative to historic norms, even when they are driven by genuine technical needs. At the same time, installers and developers highlight situations where the scale or volatility of quoted costs has deterred or delayed projects, often affecting small business customers, new subdivisions, or commercial developments reliant on tight margins.

We also see stress arising from limited visibility of network constraints. Many LV networks lack the tools or data required to quickly determine whether a given street, feeder, or transformer can support additional load. As a result, engineering studies may take longer than desired, and outcomes are sometimes more conservative than necessary due to data uncertainty. This can magnify the perception of cost-related barriers.

Additionally, the EEA's FlexTalk 2.0 programme has shown that consumer devices and DER can offer substantial flexibility that reduces both demand peaks and reinforcement needs. However, in the absence of consistent national guidance on flexible connections, these options are not yet being widely used to alleviate connection stress. Standardising these practices could materially reduce cost pressures.

These issues are compounded in some regions by workforce and resource constraints, particularly for smaller distributors. Limited engineering capacity, competing operational demands, and the need to

modernise legacy data systems all contribute to connection processing delays. Recognising these constraints is important when assessing the drivers of connection stress and identifying feasible solutions.

Overall, the evidence of connection stress, both price-related and process-related, is substantial. The Authority's proposals must address these stresses holistically, recognising that pricing is closely intertwined with data maturity, technical standards, visibility, and the capability to offer more flexible connection pathways.

Q4. Do you agree with the Authority's evaluation of the options?

Yes, we consider the Authority's evaluation of the available options to be well calibrated and sensitive to both the technical and regulatory constraints facing distributors. The assessment recognises the need to address growing disparities in pricing outcomes while avoiding blunt, sector-wide measures that could impose heavy administrative costs or interfere with legitimate engineering practices.

The preferred option—targeted intervention—is, in our view, the most proportionate and workable approach. It strikes an appropriate balance between addressing outlier behaviours and retaining flexibility for distributors whose pricing practices already align with the intent of the balance-point principle. This targeted approach respects the fact that the marginal cost of reinforcement varies widely across networks and avoids the considerable risks associated with prescriptive caps or universal methodological constraints.

If the status quo continues, we expect the disparities described in the paper to widen. Electrification-driven load growth is not slowing, and without intervention, capital contribution reliance is likely to increase in ways that may not reflect long-term efficiency or fairness. This would risk deterring or delaying projects that are otherwise socially and economically valuable, particularly for small commercial customers and subdivision developers. It may also exacerbate concerns about inter-temporal inequity, where new customers bear a disproportionate share of network investment relative to historic users.

We support the paper's recognition that a targeted approach allows for nuanced engineering, commercial, and contextual factors to be considered at the individual distributor level. Ensuring that these investigations explicitly incorporate technical realities, such as LV hosting constraints, DER impacts, resilience requirements, and minimum scheme definitions—will be critical to the success of this option.

Q5. Do you have any comments on the proposed Code amendment and approach to implementation?

The proposed Code amendments are broadly sensible and provide a clear and pragmatic framework for implementing targeted intervention. The stepwise inquiry process, the requirements for engagement with the distributor, and the opportunity to respond to preliminary findings all support procedural fairness and align with sector expectations. The inclusion of a sunset clause is also appropriate, given the intent to implement more comprehensive reforms by 2030.

There are, however, a few areas where refinement would improve clarity and practical implementation. The first concerns the connection charge balance-point principle. While the concept is sound, the Code could more clearly signal how distributors should demonstrate compliance when their minimum scheme definitions, engineering standards, or DER integration approaches evolve over time. As the EEA's national guidelines progress, these definitions will become more consistent, but the Code should avoid creating uncertainty during the transition period.

Without materially more consistent national approaches to minimum scheme definition, there is a real risk that regulatory scrutiny of connection charges will drift into re-litigating engineering judgement on a case-by-case basis. This would increase uncertainty for both customers and distributors, raise compliance costs, and undermine the intent of the balance-point principle. The EEA's national connection guidelines are specifically intended to reduce this risk by providing a shared technical baseline.

A second consideration relates to the treatment of flexible or non-standard connections. In many cases, the most economically efficient connection is not the one that delivers unconstrained capacity on day one, but the one that uses smart limits, staging, or flexibility to defer or avoid unnecessary reinforcement. Many distributors are beginning to explore export-limited, time-bound, or flexible-load connection arrangements that can materially reduce the need for upstream reinforcement. The Code should ensure that these innovative approaches are not inadvertently constrained by the balance-point principle, and that they remain available as part of a suite of solutions that can lower connection costs.

We strongly recommend that the Code amendments explicitly recognise flexible connection arrangements, including export-limited, time-bound, and staged connections as legitimate and preferred tools for reducing reinforcement costs where technically appropriate. Embedding these pathways into the regulatory framework will help ensure they do not remain viewed as 'non-standard' exceptions, but rather as efficient and customer-focused alternatives to capacity-driven upgrades.

Finally, the implementation timeline appears broadly workable, though some smaller distributors may require support or templates to meet the documentation and evidential requirements of the inquiry

process. Aligning these expectations with EEA templates and guidance could reduce administrative burden and ensure consistent national practice.

Overall, the amendments are well designed, and with minor refinements to reflect the evolving technical landscape, they should operate effectively.

Q6. Are there other alternative means of achieving the objective that the Authority should consider?

In addition to the targeted intervention framework, there are several complementary measures that could help address the underlying issues more effectively and reduce the need for more intrusive regulatory approaches.

One area of opportunity lies in improving the transparency and consistency of technical information available to access seekers. The EEA's national LV and MV connection guidelines, which will include standardised templates for minimum scheme design, application requirements, technical parameters, and flexible connection options, are intended to reduce variability and improve predictability across the country. Supporting distributors to adopt these guidelines would likely reduce misunderstandings and improve the efficiency of connection assessments, thereby mitigating some of the pressures driving high connection costs.

Improving LV visibility is another important alternative avenue. Access to LV loading, voltage, and hosting capacity data—whether through hosting capacity maps, dynamic modelling tools, or standardised network analytics—would allow customers and installers to make better decisions prior to submitting applications. This, in turn, would reduce the number of speculative or premature applications, free up distributor resources, and streamline the connection process.

The Authority may also wish to consider how flexible connections, such as export-limited DER or demand-responsive loads, can be more formally integrated into connection and pricing frameworks. These arrangements can defer or avoid costly reinforcement in many settings and are increasingly supported by smart devices and growing consumer flexibility. Aligning pricing incentives with the value these arrangements provide would support more cost-effective outcomes.

Finally, industry-wide cost transparency, particularly around the components contributing to reinforcement costs, may help reduce perceptions of inequity and enable more informed public discourse about connection pricing.

Q7. Do you have any comments on the Authority's rationale for clarifying distributor obligations to connect and supply?

The EEA agrees that clarifying these obligations is timely and necessary. The current framework contains ambiguities that can create uncertainty for customers and leave distributors exposed to inconsistent interpretations. As connection volumes rise and electrification deepens, clarity around what "obligation to connect" means is becoming increasingly important for both consumers and distributors. The Authority's rationale correctly identifies that the lack of explicit obligations for load connections, and the potential for process or pricing barriers to act as de facto refusals, creates risks of inconsistent customer experience. At the same time, the rationale appropriately acknowledges that physical constraints and safety requirements limit what distributors can reasonably deliver. Ensuring that these realities are embedded into any clarified obligation will be essential.

The recent review of distributor technical standards, supported by the Authority and delivered by the EEA, found significant variability in the way distributors describe their connection processes, standards, technical criteria, and operational requirements. This variability can translate directly into perceived (and sometimes real) differences in access, cost, or timing for customers. The Authority's rationale would therefore benefit from emphasising the link between supply obligations and the need for more standardised technical documentation—something the EEA is now actively progressing.

We acknowledge the collaborative work already undertaken between the Authority and the EEA, particularly through the recent technical standards review and ongoing engagement on DER settings, voltage management, and the Streamlining Connections programme. Building on this foundation will be important to ensure that clarified obligations align with emerging national practice and reflect the operational realities faced by distributors.

We agree that clearer obligations should improve customer confidence and reduce uncertainty. But the success of any clarified obligation will rest heavily on how it interacts with minimum scheme definitions, voltage and capacity constraints, safety rules, DER integration challenges, and the availability of flexible connection pathways. These technical limits must be integral to the rationale.

Q8. Do you have any comment on the Authority's preferred direction for clarifying distributors' supply obligations?

The Authority's preferred direction is broadly aligned with the direction EEA members are already moving in, particularly through work on standardised connection processes, access standards, and technical guidelines. Requiring distributors to publish a suite of access standards, provide connection

offers, and maintain clear policies on continuance of supply represents a constructive step forward in improving transparency and consistency.

For this direction to be successful, it will be important that the access standards are grounded in nationally aligned technical guidance rather than each distributor developing them independently. The EEA's LV and MV connection guidelines, flexible connection frameworks, and interface with DER standards (including AS/NZS 4777, export-limit methodologies, and voltage settings) provide an opportunity to establish a coherent national baseline. Aligning regulatory expectations with these guidelines will ensure consistency without sacrificing the ability of distributors to account for regional circumstances, legacy networks, or differing risk tolerances.

We also emphasise the importance of flexibility within the obligation's framework. In many cases, where a standard connection cannot proceed due to voltage, thermal, or protection constraints, technically sound alternatives—such as export-limited, flexible, or staged connections—may still be feasible and efficient. The supply obligations should enable and encourage these solutions, rather than inadvertently narrowing the range of available options.

Overall, we support the Authority's preferred direction, provided the next stage of work is co-designed with industry to ensure technical feasibility, enforceability, and alignment with the significant standardisation efforts already underway.

Q9. Do you have any comments on the drafting of the proposed amendments?

The drafting of the proposed amendments is generally clear, well structured, and consistent with the intended policy objectives. The definition of the balance-point principle is understandable, and the procedural safeguards—such as the requirement for preliminary findings, engagement with the distributor, and publication processes—support good regulatory practice.

We see value in refining the drafting in a few areas to ensure alignment with emerging technical standards and to support smooth implementation. The first relates to the interaction between the balance-point principle and the evolving definition of minimum scheme. As national guidelines progress, minimum scheme design is likely to become more standardised, and the Code should accommodate this evolution without creating regulatory friction or ambiguity.

A second refinement concerns the treatment of flexible or constrained connections. These connection types are increasingly important as a means of enabling electrification at lower cost, particularly where LV networks are constrained. The Code should make clear that the balance-point principle does not

preclude or disadvantage these solutions, and that they remain an appropriate option for reducing customer costs and managing network capacity.

Lastly, clarity around evidence requirements—particularly relating to LV constraint analysis, reinforcement triggers, cost allocation, and DER impacts—would support consistent application across distributors and reduce the administrative burden of participating in an inquiry. Providing examples, templates, or expectations in supplementary guidance (rather than in Code) may be the most appropriate approach.

Overall, with these minor refinements, the drafting provides a solid foundation for implementing the Authority's proposals.

Conclusion

In closing, the EEA supports the intent and overall direction of the Authority's proposed reforms. The issues raised in the discussion paper are real and increasingly material for customers, installers, and distributors, particularly as electrification accelerates and demand grows across residential, commercial, and industrial sectors. We agree that connection outcomes must become more predictable, transparent, and equitable, and that pricing practices should better reflect the balance between efficient investment, fairness for new and existing customers, and the practical constraints of operating LV and MV networks.

At the same time, the success of these reforms will depend on how effectively they integrate with the technical realities that shape connection outcomes. Capacity limits, voltage quality, thermal constraints, safety regulations, resilience needs, and DER integration challenges all fundamentally influence connection costs and feasibility. The EEA's national work programme—including new connection guidelines, minimum scheme templates, export-limit methodologies, and data governance initiatives—is directly addressing these factors and will provide an essential foundation for consistent national practice. Ensuring alignment between these emerging standards and the Authority's regulatory framework will be critical.

We also emphasise the importance of flexibility and innovation in the path forward. Flexible or staged connections, export-limited DER, better LV visibility, and the growing capability of smart devices to respond to network conditions all create opportunities to reduce reinforcement costs and improve customer outcomes. A regulatory environment that enables these approaches—rather than constrains them—will better support efficient electrification and reduce barriers to new connections.

Overall, the EEA is committed to working collaboratively with the Authority and the wider sector to improve the connection experience for consumers while ensuring that the electricity system remains safe, reliable, and future-ready. With careful design, proportionate regulation, and coordination across industry programmes, the proposed reforms can materially improve national consistency and customer experience and help ensure that New Zealand's distribution networks are equipped to support the country's transition to a more electrified and resilient energy future.

Ultimately, reducing barriers to new connections is not just a question of pricing methodology, but of system maturity: data visibility, consistent technical standards, flexible connection pathways, and transparent processes. The EEA's national work programme is directly addressing these foundations. If regulatory reform and technical standardisation continue to move in step, New Zealand has a real opportunity to deliver a connection regime that is faster, more predictable, more transparent, and more supportive of efficient electrification—while still protecting safety, reliability, and long-term system value.

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