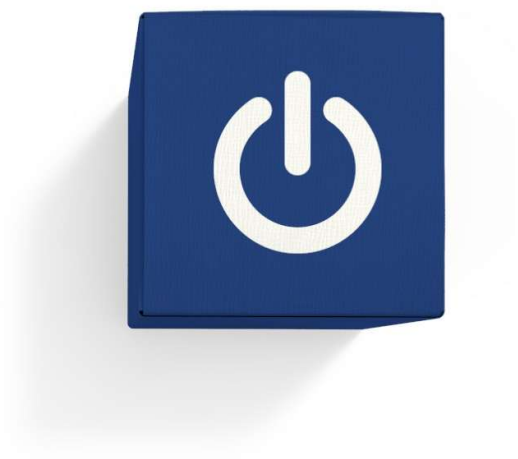
Connection obligations and interim restraints on connection charges

New Zealand Electricity Authority

13 November 2025



FINAL REPORT

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Contents

1. EXECUTIVE SUMMARY

1. CEPA has been engaged by the New Zealand Electricity Authority (the Authority) to consider two amendments to the Electricity Industry Participation Code (the Code). The Authority is proposing a Code amendment for an interim restraint on connection charges and is working towards a Code amendment related to an obligation to provide a connection offer.

Interim restraint on connection charges

2. The Authority is seeking to reform connection pricing practices of EDBs. It has split the reform package into a set of fast-track measures and further reform. Further reform will set out comprehensive requirements that EDBs must embed in their connection pricing methodologies. The Authority is still assessing the exact features of this next stage of reform, but have shared initial views that EDBs will be required to price their connection charges between the "neutral point" and the "balance point". The Authority is of the view that further reform will take time because of the wide scope of the matters being considered and EDB capacity to implement changes.

3. One of the initially proposed fast track measures was to implement "reliance limits". This would have placed a limit on the proportion of connections plus system growth capex that is funded through capital contributions.

4. The costs of distribution network services must be recovered through charges on customers. Those charges can either be (a) upfront, in the form of capital contributions or other connection charges; or (b) on-going in the form of fixed and variable network charges. In principle, it is possible to have high upfront charges (high capital contributions) and low on-going charges or vice versa. Both are consistent with the EDB earning a normal economic return over its life.

5. However, once a choice between upfront and on-going charges has been established, if an EDB increases the upfront charges for newly connecting customers, then in principle the EDB should reduce the on-going charges for those newly-connecting customers. This requires establishing and maintaining separate on-going charges for these customers. We observe that in practice this is rare. Especially in the case of smaller customers, EDBs do not normally maintain different classes of on-going charges consistent with corresponding upfront charges at the time of connection.

6. In this context, an increase in upfront charges (without an associated reduction in the on-going charges) would likely mean that the EDB is able to over-recover its revenue allowance in the short-term. In the longer term, to the extent that the higher upfront charges are forecast and incorporated within the revenue allowance, this would lead to a reduction in the on-going charges across all customers. The EDB would not be over-recovering, but there would be a cross-subsidy from the newly-connecting customers (who, in effect, pay above the present value of their cost of connection) and the existing customers.

7. We previously assessed reliance limits and concluded that it made sense to place limits on EDBs ability to raise connection charges on newly-connecting customers in the absence of an offsetting reduction in ongoing charges ('ring-fencing') for those same customers. We made two observations regarding the operation of the current regulatory framework:

   - For non-exempt EDBs there is an incentive to reduce their net connections capex during a regulatory period. This is because of the operation of the price path incentives alongside the Incremental Rolling Incentive Scheme (IRIS). A reduction in net connection capex can either be achieved by reducing connection costs or by increasing capital contributions.

- A change in the balance of upfront charges with no offsetting adjustment to ongoing charges for the newly connecting customer leads to a reallocation of costs between newly connecting and existing customers. This is the case even if this change were anticipated. An increase in upfront charges can further increase the difference between the actual price paid by the connecting customer and the net incremental cost of a connection. This can inefficiently deter new connections while providing windfall gains to existing customers.

8. In regard to the economic argument for reliance limits, stakeholders made two points:

   - Firstly, reliance does not provide a reliable indicator of the efficiency of connection pricing.
   - Secondly, any issues with the Commerce Commission's price path incentives should be addressed by the Commerce Commission.

9. Despite the issues with reliance limits there is still a case for intervention. There has been a rapid change in upfront connection charges for a subset of EDBs and this trend is crucial to the argument that a fast-track intervention is required. As ongoing charges are not typically bespoke, overall costs (that is the combination of both upfront and ongoing charges) are likely to have moved further away from net incremental cost for newly connecting customers. Given the limited regulatory oversight of upfront connection charges we are concerned that EDBs may continue to increase these charges indefinitely.

10. Following stakeholder feedback the Authority is now considering four potential options:

    - **Methodology lock** – This would prevent EDBs from changing their methodology for calculating capital contributions for connections.
    - **Allocation limits** – This would require EDBs to calculate connection charge in relation to a percentage of incremental cost.
    - **Improved reliance limits** – Reliance limits as previously proposed but with 6 amendments:
        - Sunset in 2030
        - Exclusion of large connections
        - Limit applied to the average level over 3 consecutive years assessed ex post.
        - EDBs can apply for a higher limit if reference years had abnormally high system growth capex.
        - Limits re-assessed if there is an increase in in-kind contributions
        - Complementary restraints to system growth and total reliance.
    - **Targeted intervention** – EDBs would be screened according to a set of criteria and the EDBs which satisfy those criteria would be considered for further intervention.

11. The Authority is of the view that 'methodology lock' and 'allocation limits' have practical difficulties which limit their effectiveness. These require EDBs to document their connection charging policy in line with set requirements. The Authority is concerned that EDBs are not able to calculate connection charges on the required basis, and this will take time to implement. Due to these issues and the fact that these options are not preferred by the Authority, we only provide a brief consideration of these options.

12. One of the key risks under the improved reliance limits option is that they could adversely impact the incentives for EDBs to proceed with connections. The EDB could choose not to connect, rather than funding the connection and recovering the costs over time. This risk is particularly relevant for non-exempt EDBs. By moving to higher capital contributions, select EDBs have indicated their preference for not paying for connection assets upfront and being compensated over time. This suggests that the risk of adverse incentives to connect is real.

13. The risk of adverse incentives is mitigated with the combination of a targeted intervention and the requirement to offer to connect. Those subject to targeted intervention would be required to set connection charges at the 'balance point'.

14. The balance point will be defined in the Code as setting connection charges "…*such that the contribution to shared network costs from new connections is commensurate with the contribution from existing connections*". EDBs that are selected would be required to move their connection charges to the balance point.

15. In our view the proposal to set connection charges at the balance point is consistent with sound regulatory policy. This rule prevents the selected EDBs from engaging in a form of inter-temporal price discrimination. By providing newly-connecting parties with clarity and certainty over their connection charges it facilitates investment by potential customers in developing business models which rely on connection to the distribution network. This promotes innovation and competition.

Connection obligations

16. The Authority previously consulted on two amendments to the Code which may have given rise to an obligation to connect load.[1] Specifically, the Authority proposed to introduce two new processes which must be followed by electricity distribution businesses (EDBs) for the connection of large loads. The first process applies to load connections between 69 kVA and 500 kVA while the second process applies to load connections greater than 500 kVA. These processes included a deemed acceptance requirement which the Authority recognised as giving rise to an obligation to connect load. In the decision paper, the Authority proceeded with the two connection processes but removed deemed acceptance.

17. The Authority is now considering a more general obligation covering both "injecting" and "non-injecting connections". That is both load and distributed generation. This includes creating an explicit obligation on distributors to provide connection offers.

18. EDBs do not currently have an obligation to connect load. This arrangement is unusual both relative to the regulation of electricity distribution networks in other jurisdictions as well as relative to the regulation of other monopoly sectors. In this report, we look in detail at the obligation placed on electricity distribution networks in Great Britain (GB) and in the National Electricity Market (NEM) in Australia. We find that both jurisdictions have obligations to connect load. This is similar to the US where electricity distribution companies typically have a general "*obligation to serve".* In the EU, Europe-wide rules require that Member States impose on distribution companies an obligation to connect customers. The exact form of obligation varies by Member State but the overall principle that electricity distribution companies must connect is common.

19. We consider that an economic case can be made for such an obligation. Furthermore, without such an obligation any attempt to regulate connection processes or connection pricing for load faces a significant hurdle. EDBs have the option to side-step any of these attempts by refusing to connect.

20. New Zealand did previously have an obligation to connect in primary legislation. This was removed by the passage of the Electricity Act 1993. The parliamentary debates at the time provide an indication that it was the uneconomic nature of some connections which at least partially drove the change. The risk of uneconomic connections was also raised by some stakeholders in response to the Authority's initial proposal. Related issues around being required to build and maintain technically infeasible connections were also raised by stakeholders.

[1] The Code already includes an obligation to connect distributed generation when applications comply with Part 6 of the Code, meet a distributor's connection and operation standards, and meet some other conditions (for example, see clause 6.4(2)).

21. Our view is that framing the obligation to connect as an obligation to provide a connection *offer* at cost reflective prices side-steps some of these issues (though issues around connections which become uneconomic remain). Where newly connecting customers need substantial extensions over difficult terrain they should face commensurate prices. Should they nevertheless choose to connect, the value they place on the connection exceeds the cost, and so the connection is efficient. An obligation to provide a connection offer at cost-reflective prices also allows EDBs to embed their technical requirements for the safe operation of the power system while reflecting the fact that the works required are uncertain in advance of the connection application.

22. Any prescribed timeframes should reflect the steps to providing a connection offer while accepting that as the timeframes for any works will be bespoke to the connection it is difficult to prescribe these in advance. EDBs should however work towards livening the connection as soon as reasonably practicable after the connection offer has been accepted. We encourage the Authority to simplify the required processes and to ensure that prescribed timeframes can be met by even the smallest EDBs.

2. INTERIM RESTRAINT ON CONNECTION CHARGES

23. In this section we provide our assessment of the Authority's proposed interim restraints on connection charges. [2]

2.1. WHAT DID THE AUTHORITY INITIALLY PROPOSE?

24. The Authority previously proposed to place a limit on the proportion of connections plus system growth capex that is funded through capital contributions. Specifically, the ratio of capital contributions to the connections-plus-system-growth capex was proposed to be at or below 47% or if an EDB had a higher reliance in 2024 then that EDB's 2024 level. We provide the formula to calculate 'reliance' below.[3]

$$\frac{\text{Capital contributions: Consumer connection capex} + \text{Capital contributions: System growth capex}}{\text{Consumer connection capex} + \text{System growth capex}} \leq 47\% \text{ or EDB's 2024 level if higher}$$

25. This restraint was proposed as the Authority observed that for some EDBs there had been a material increase in capital contributions for connection. The Authority interpreted this trend as worsening connection pricing efficiency. The reliance limit is intended to guard against this.

2.1.1. What did we say previously?

26. Connection costs can be met either by upfront or ongoing charges. The upfront charges are known as capital contributions. Where a connecting party is required to make a capital contribution to achieve a connection, it is paying upfront for at least some of the connection cost. Where the EDB does not demand a capital contribution for the full connection cost, the outstanding connection cost is rolled into the EDBs RAB and recovered over time in ongoing charges.

27. We made the following observations regarding the operation of the current regulatory framework:

- For non-exempt EDBs there is an incentive to reduce the net connection capex during a regulatory period. This is because of the operation of the price path incentives as modified by the Incremental Rolling Incentive Scheme (IRIS). A reduction in net connection capex can either be achieved by reducing connection costs or by increasing capital contributions.[4]
- Even where changes in connection charges were anticipated at the start of the regulatory period there is the potential for a reallocation of costs between newly connected and existing customers. If there is an increase in connection charges this could result in newly-connecting customers paying more for a connection than an existing customer. This may inefficiently deter new connections and mean that existing customers receive a windfall gain.

28. We concluded that it makes sense to place limits on an EDB's ability to raise connection charges in the absence of ring-fencing – that is, in the absence of an offsetting reduction in ongoing charges for the connection applicant. At the time, we did not see evidence that newly connecting customers were receiving an offset from lower ongoing charges (as ongoing charges are generally undifferentiated within customer classes). We consider it desirable to avoid cross-subsidisation between different groups of customers. Doing

[2] To undertake our review, we were provided with a draft version of the Authority's consultation paper – 'Reducing barriers for new connections: up-front charges and distributor obligations'.

[3] When we refer to reliance in this section it is the outcome of the left-hand side of this formula we are referring to.

[4] While we did not say this explicitly, a reduction in connection activity would also reduce costs and is incentivised by the regime.

so could inefficiently deter connection for some customers while not providing the correct price signal for other customers.

29. We agreed with the Authority that in the longer-term it makes sense to introduce rules that ensure that:

    a. The incremental revenue from each connecting customer exceeds the net incremental cost of connecting that customer.
    b. Customers who are grouped into classes with a similar cost to serve and similar ongoing charges should pay similar upfront charges. This implies that newly-connecting customers should pay a similar connection charge as existing customers in the same class.

2.1.2. What was stakeholders' feedback?

30. There was a significant amount of stakeholder feedback. As requested by the Authority, we reviewed the reports prepared by consultants.[5] On reliance limits we summarise the feedback into two overall points:

- Firstly, reliance does not provide a reliable indicator of the efficiency of connection pricing. A limit of 47% does not follow from any economic reasoning.
- Secondly, issues with the Commerce Commission's price path incentives should be addressed by the Commerce Commission.

2.1.3. What potential improvements have been identified?

31. The Authority has considered the feedback provided on their initial reliance limits proposal and identified five potential options:

- No specific interim intervention
- Improved reliance limits
- Methodology lock
- Targeted intervention
- Allocation limits

32. The Authority's preference is targeted intervention. In this section we explain the reasons why the other options have been ruled out. We focus the remainder of our assessment on targeted intervention as the preferred option.

No specific interim intervention

33. One option is to not to proceed with any interim restraint. This would mean that only the agreed fast-track requirements would proceed. These focus on transparency of connection pricing and new requirements around connection pricing methodologies including for example prohibitions around last straw pricing.[6] The Authority would also continue working towards further reform, which is likely to introduce more comprehensive requirements around connecting pricing methodologies from 2030.

Improved reliance limits

34. The improved reliance limits proposal makes the following additions to what was previously proposed by the Authority:

[5] Reports were submitted by Incenta, Frontier, Sapere, Houston Kemp and Axiom.

[6] We considered these interventions in our previous report, see CEPA (2024), Regulation of distribution connection charges in New Zealand.

- Reliance limits will be sunset in 2030 which is intended to align with further reform by DPP5.
- Exclude connections with 'special' (i.e. not uniform charges as for most connections) pricing. This most likely to impact large connections.
- The limit would be applied to the average level over 3 consecutive years assessed ex post.
- EDBs can apply for a higher limit if reference years had abnormally high system growth capex.
- Limits will be reassessed if there is an increase in in-kind contributions (vested assets).
- Complementary restraints will be applied to system growth reliance and total reliance.

Methodology lock and allocation limits

35. The methodology lock proposal would prevent EDBs from changing their methodology for calculating capital contributions. This intervention requires that each EDB has a sufficiently comprehensive connection charging policy that a change can be identified. The Authority is of the view that current methodologies vary in completeness and quality. This makes identifying a change for some EDBs difficult.

36. Our view is that the cost of a connection is bespoke to the connection and therefore regulating the way in which the connection charge is calculated – as opposed to directly regulating the charge itself – is appropriate. However, the Authority's finding on current methodologies aligns with our findings on EDB documentation around connection processes in our assessment of connection obligations above. The regulation of methodologies requires that these be adequately documented.

37. The Authority also appears to be concerned that current methodologies are producing inefficient connection charging outcomes. This suggests that in addition to adequately documented methodologies some EDBs may need to modify their methodologies.

38. Mandatory connection pricing methodologies will come into effect on 1 April 2026. This includes a standardised methodology for estimating net incremental cost. The allocation limit proposal suggests that this is used to cap upfront connection charges at a percentage of the estimated net incremental cost, for example 95%.

39. While the Authority has introduced the requirement to start estimating incremental cost it may take time until these can be used as a reliable basis for a cap. We also agree with the Authority's finding that the efficient level is unlikely to be fixed as connections are bespoke. A cap at 95% appears to be just as arbitrary as a reliance limit at 47%.

Targeted intervention

40. The Authority's preference is to proceed with the targeted intervention proposal. The Authority has concluded that as the information required for an effective control is unavailable (methodology lock, allocation limits) and that efficient contribution levels are situation-specific (improved reliance limits, allocation limits) it is appropriate to consider a targeted approach.

41. The Authority has set out at a high-level how the targeted intervention proposal would work. This would:

- Use available metrics to screen for EDBs of interest. This may include considering examples where reliance is high or increasing.
- Undertake a deeper examination of flagged EDBs. This will help establish whether it is a connection pricing efficiency issue or whether there are other factors.

- If a concern is confirmed, require the EDB to update its connection charging methodology. This may require the distributor to also request an amendment to their revenue path from the Commerce Commission.

42. The targeted intervention will be centred around ensuring 'balance point' pricing. The Code will be amended to include a balance point principle, which states 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*". The direction to the EDB to amend its pricing will be a direction to make it consistent with this principle. These clauses will sunset on 1 April 2030.

43. The Authority is of the view that this will allow it to identify and intervene in cases where upfront connection charges are inefficiently increasing over time. That is, where the distributor is allocating an increasing proportion of shared network costs to new connections.

2.2. RE-ASSESSMENT OF THE CASE FOR INTERVENTION

44. In this sub-section we consider the evidence that there has been a reduction in efficiency of connection charges and by extension consider the strength of the justification for intervention. We identify some potential risks with the proposals, we consider whether the proposed modifications to reliance limits improve upon the initial proposal and finally consider whether a targeted intervention is superior.

2.2.1. Is there evidence of a reduction in connection charge efficiency?

45. We previously considered whether there was evidence of a problem.[7] We observed that respondents to the Authority's previous consultation agreed with several aspects of the Authority's problem definition:

1. EDBs have market power over the setting of connection charges; and
2. Connection charges are not subject to any direct regulatory constraints; and
3. Revenue from connection charges (capital contributions as a proportion of growth capex) has been increasing for some EDBs.

46. Some respondents seemed to assert that, to demonstrate the existence of an economic problem, the Authority must demonstrate the existence of connections requests which – although socially valuable – did not proceed. We noted that while such evidence would be useful (and would indicate an economic harm), in regulatory and competition policy practice, when assessing whether or not to impose a regulatory intervention on a firm with market power, it is not normally considered necessary to demonstrate the existence of activities which did not happen (such as transactions that did not occur because the price was above marginal cost). Rather, it is usually considered sufficient to assess the degree of market power and whether arrangements can mitigate the impact of that market power.

47. Furthermore, we observed that the exercise of market power in connections does not necessarily show up in the outcome of connection negotiations. Rather, the exercise of market power is felt by chilling the incentive on connecting parties to make investments prior to connection negotiations. Potential customers who are deterred from making investments to develop electricity-dependent projects will never enter into connection negotiations in the first place.

48. The status-quo has shifted slightly since our last report in that some of the Authority's proposed Code amendments have now been adopted. These amendments are intended to improve the efficiency and

[7] CEPA (2025), Distribution Connection Pricing – Assessment of submissions, section 4.1.1.

transparency of connection charges. However, we agree with the Authority's conclusion that they will not in themselves remove the discretion of EDBs to increase upfront connection charges if they wish to do so. More specifically, the second factor in the problem definition above is unchanged.

49. The proposed intervention has also changed, and we observed in our previous report that the "*appropriate hurdle depends on the extent of the regulatory intervention*". In our previous report we considered the Authority's fast-track proposals (putting aside reliance limits) imposed relatively limited constraints on the discretion of EDBs. The current targeted intervention proposal will be a more significant intervention for those EDBs that pass the Authority's screening and examination stages.

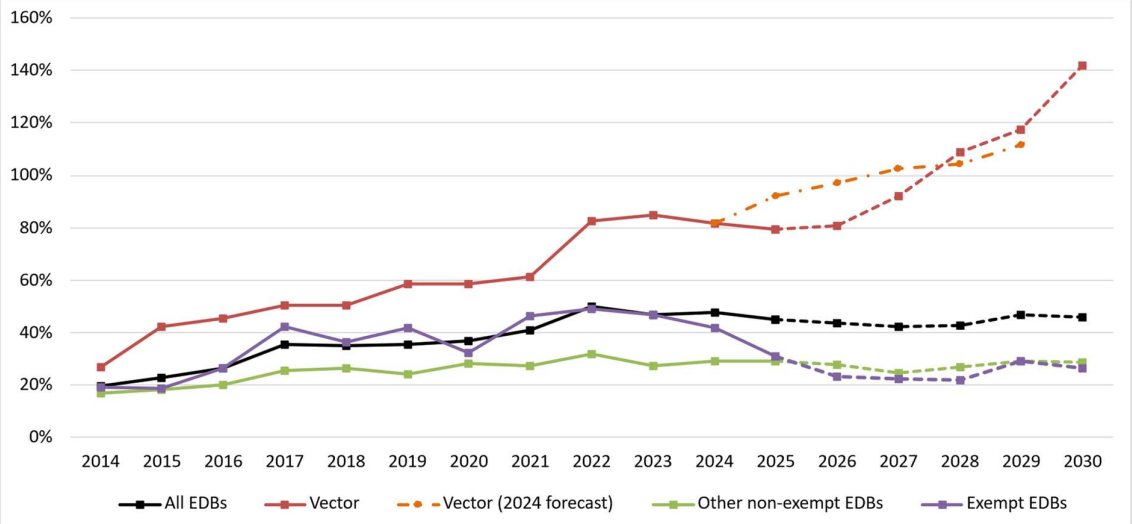
50. The Authority in its consultation for the targeted intervention proposal put forward two categories of evidence:

- Evidence that upfront connection charges have increased. This is presented by the Authority as an increase in reliance over time. There has been a material increase in capital contributions required for connection by some EDBs.
- Evidence that this increase in capital contributions has been linked with issues faced by access seekers.

Evidence that upfront connection charges are increasing

51. The evidence that upfront connection charges (as represented by reliance) have increased over time for a subset of EDBs was presented by the Authority and we noted that stakeholders did not disagree with this observation. The Authority has now presented further evidence that some EDBs are now forecasting further material increases in upfront connection charges.

Figure 2.1: Reliance over time (actual and forecast)



Source: Electricity Authority (2025)

52. In our previous report we observed that it was possible that new connections incur a higher cost to serve relative to historical connections and that if the cost of connection assets was rising faster than other system growth capex the reliance ratio may increase. In this section we examine the evidence and rule this out as a potential alternate explanation.

53. We also wanted to confirm that this increase was not anticipated by the Commerce Commission. If the increase in connection charges is anticipated by the Commerce Commission, it will set a revenue cap which takes into account the future revenue from connection charges, resulting in lower charges for all other customers, so that the EDB is left no better or no worse off. In our previous report we described the

incentives non-exempt EDBs face to increase capital contributions for connections within a regulatory period in the case where such increases are not anticipated by the Commerce Commission. We concluded that it was not clear if this incentive was socially beneficial.[8]

54. We explore the available data and conclude that:

- An increase in connection charges is likely to have been primarily because of a change in connection charging policy rather than because of an increase in connection costs, at least for a subset of EDBs.
- For non-exempt EDBs the change in capital contributions for connections was not anticipated by the Commerce Commission.

55. For the subset of EDBs with materially increasing reliance it is likely that newly connecting customers are being allocated a higher proportion of shared costs relative to existing customers. Newly connecting customers face the present value of both upfront and ongoing charges. Given that ongoing charges are generally undifferentiated this means it is likely that a higher proportion of shared network costs are being met by newly connected customers.

56. As an example we looked at connection costs for Vector. Figure 3.2 below shows the average capex connection cost for Vector between 2014 and 2024. When proceeding with a connection an EDB can either:

- Require the customer to meet the connection cost upfront by requiring a capital contribution; or
- Finance the connection, have the asset value roll into its regulated asset base (RAB) and be compensated for this over time through an increase in ongoing charge revenue.[9]

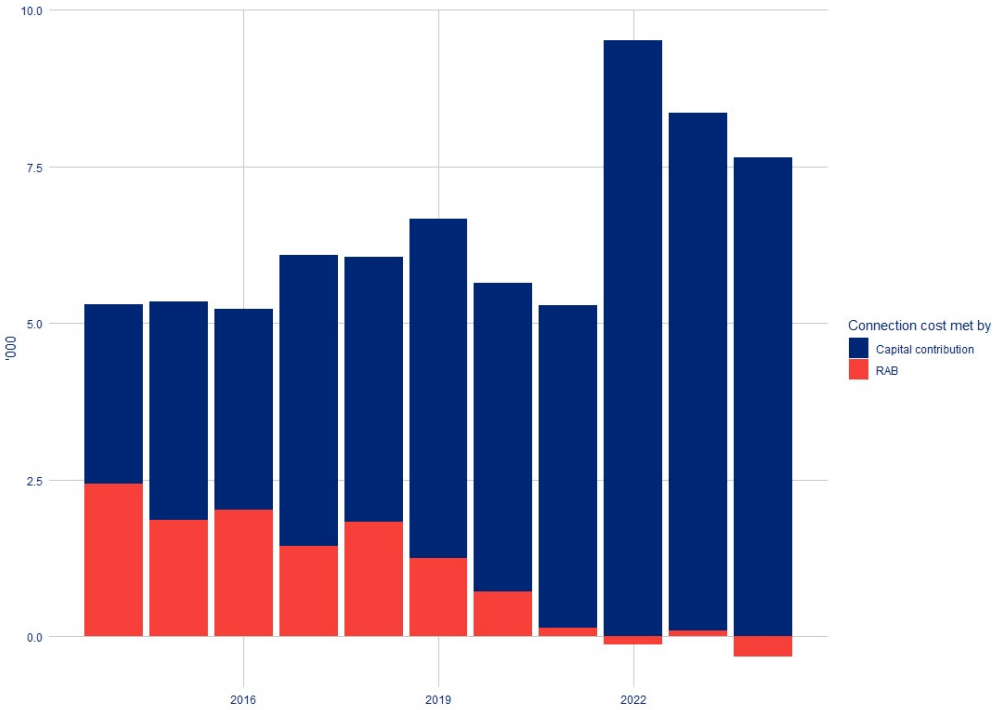
57. Figure 3.2 splits the average capex cost between these two options. We observe that the charging structure changed materially over this period. In 2014 approximately half the cost of connection assets would be met by ongoing charges. In 2024 none (on average) of the connection asset's cost would be met by ongoing charges. The average upfront charge associated with capex for connection increased from approximately $2,500 to $7,500 (approximately $3,800 to $7,500 in 2024 dollars).[10]

[8] CEPA (2024), Regulation of distribution connection charges in New Zealand, Section 2.2.

[9] A third option also exists, which is to use vested assets. Vector recorded no vested asset transfers during this period.

[10] This estimate might be imperfect. We understand that costs associated with disconnection might also be included in this category, though it is not clear whether disconnections activity has any material capex component.

Figure 2.2: Average capex connection costs met by capital contributions or RAB – Vector ($ nominal)[11]

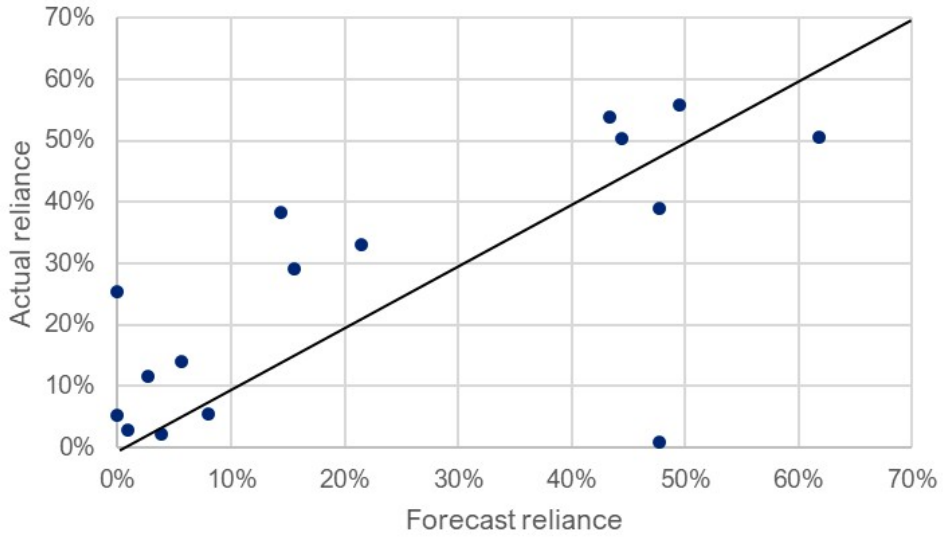


Source: CEPA analysis of ID data

58. Vector's change to its capital contributions policy was unanticipated by the Commerce Commission for the third default price path (DPP3) period. The figure below shows the reliance embedded in the DPP3 decision for the period 2020 to 2024 relative to the reliance achieved over the same period. Alongside Vector there were several other EDBs where reliance during the DPP3 period was higher than forecast.

[11] Value of vested assets not included.

Figure 2.3: Reliance levels during DPP3 determination period (forecast v actual, 2020-2024)



Source: CEPA analysis of ID data and DPP3 capex model.

Evidence of issues faced by access seekers

59. The evidence that the Authority has collected so far on issues faced by access seekers is summarised as follows:

    - bp NZ and Rewiring Aotearoa claim they are unable to pursue electrification because of high up-front connection charges.
    - The Authority presents evidence that Auckland (which is served by Vector) has less public EV charging infrastructure relative to the other two major New Zealand cities.

60. The Authority also observes that there is no systematic source of information on deterred or delayed connections. We note that even if such a source of information existed it is unlikely to provide a comprehensive account of issues given that the chilling effect of market power is likely felt prior to any connection application being made. With regards to the evidence of adverse impacts we consider there is a need for balance. In our previous report we emphasised that the requirement for empirical evidence should not impose an undue or unreasonable hurdle. A situation where upfront connection charges are increasing rapidly combined with limited regulatory oversight of those connection charges provides a sufficient justification for considering further regulatory intervention.

Conclusion

61. There is clear evidence that upfront connection charges have materially increased for a subset of EDBs. The speed and direction of this change provide indirect evidence that connection charging efficiency is decreasing, at least for a subset of EDBs. The evidence that efficient connections are being deterred is not as well established. Nevertheless, in our view there is sufficient evidence for the Authority to proceed to consideration of regulatory solutions.

62. Our view is that given the potential for an adverse exercise of market power in connection charging, combined with a clear shift in connection charging policy, and an absence of mechanisms for connecting parties to mitigate the effects of that market power, the Authority is right to propose stricter regulatory intervention. In short, we consider that the Authority is following good regulatory practice in considering the application of more direct controls in this circumstance.

63. The proposed intervention includes an examination stage which would allow the Authority to gather more evidence prior to directing an EDB to amend its connection pricing. This stage should also allow alternative explanations for connection pricing outcomes to be explored reducing the risk of unintended consequences from intervention.

2.2.2. Does an intervention based on the balance point promote efficiency?

64. Our understanding of the Authority's proposed intervention is that certain, selected EDBs will be directed to have their connection charges set no higher than the "balance point". The balance point will be defined in the Code as setting connection charges "…*such that the contribution to shared network costs from new connections is commensurate with the contribution from existing connections*". The balance point principle is a key component of the Authority's proposed intervention.

65. EDBs must receive sufficient revenue to cover their prudent and efficient costs. There are likely to be economies of scale and scope in the provision of electricity distribution services. As a result, if the incremental revenue received from each customer (in upfront and ongoing charges) was only sufficient to cover the direct incremental cost of serving that customer, the EDB would likely not be able to recover sufficient revenue to cover its total costs. For this reason, it is common to allow EDBs to charge somewhat more (in the combination of upfront and ongoing charges) than the direct incremental costs of serving a customer.

66. Having said that, it is not desirable for EDBs to have discretion to set a different mark-up over incremental cost for each connecting customer. Instead, it is common for EDBs to divide customers up into classes. Customers in each class usually pay the same ongoing charges. In addition, customers in each class usually pay a similar contribution to the fixed and common costs of the network.

67. As we noted in our previous paper, this practice prevents a form of price discrimination by the EDB.[12] Specifically, it prevents the EDB from charging a customer-specific connection charge (based, for example, on the business model of the customer). Such price discrimination would allow an EDB to extract the full value of the connection to newly-connecting parties, and therefore would undermine the incentive to develop business models which create substantial value for end-customers and which rely on access to the distribution network. By committing to charge customers in each class the same ongoing charge and the same contribution to common costs, the EDB makes a commitment to not engage in individualised or tailored price discrimination.

68. We understand the Authority's pricing proposal to be 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. This is our understanding of the 'balance point' concept.

69. When implemented in this way the Balance Point does not prevent two customers within the same class paying different connection charges – only that, any such difference must be equal to the difference in connection costs of the two customers. If connection costs increase over time, later connecting parties could pay higher connection charges without violating this principle. However, if connection costs are constant (and ongoing charges are held constant) connection charges should also be held constant over time.

70. We note that this principle does not prevent the EDB from creating new customer classes from time to time, provided that is carried out in a separate process to the establishment of connection charges for a specific customer, is announced well in advance, and is in line the Authority's pricing principles.

[12] CEPA (2025), Distribution Connection Pricing – Assessment of submissions, section 4.2.2.

71. In our view the proposal to set connection charges at the balance point is consistent with sound regulatory policy. As we have noted above, this rule prevents a form of inter-temporal price discrimination (for selected EDBs). By providing newly-connecting parties with clarity and certainty over their connection charges it facilitates investment in developing business models which rely on connection to the distribution network. This promotes innovation and competition.

2.2.3. What are the risks of intervening?

72. We consider that one of the key risks of intervening is that it will adversely impact the incentives of EDBs to proceed with connections.

73. The first stage of the Authority's proposed intervention is screening to identify connection pricing arrangements that warrant deeper examination. The Authority intends to take account of a range of already disclosed information, which includes information on reliance. EDBs may want to avoid being picked up in this process as the consequence is the potential for intervention by the Authority. Attempting to avoid intervention could create an incentive for EDBs to delay proceeding with connections.

74. We consider that there are several plausible reasons why EDBs may have an incentive to increase capital contributions and/or delay connections:

- For non-exempt EDBs, this incentive may arise because of the impact of an unanticipated increase in capex connection costs or volumes. If an EDB considers that it is unable to raise capital contributions this removes an option for mitigating these impacts due to the revenue cap within period and impacts the operation of the capex IRIS mechanism across periods.
- For non-exempt EDBs, the risk that the cost of capital is set too low and the EDB judges that the revenue stream for connections capex is insufficient to compensate it for proceeding with the connection.
- For both exempt and non-exempt EDBs, there may be pressure from existing customers to hold down prices which can be achieved by increasing capital contributions to ever higher levels.

75. We observe that the risk that connections don't proceed may be mitigated with the introduction of a connections obligation.

76. It is also possible that the examination stage of the proposed intervention allows EDBs to present evidence that they are merely responding to an unanticipated increase in capex connection costs or volumes. This means the strength of this incentive depends on how the EDB perceives the Authority's intervention.

77. We identified above that there was an unanticipated increase in capex connection costs in 2022-2024, so the first potential reason is not just a hypothetical concern.

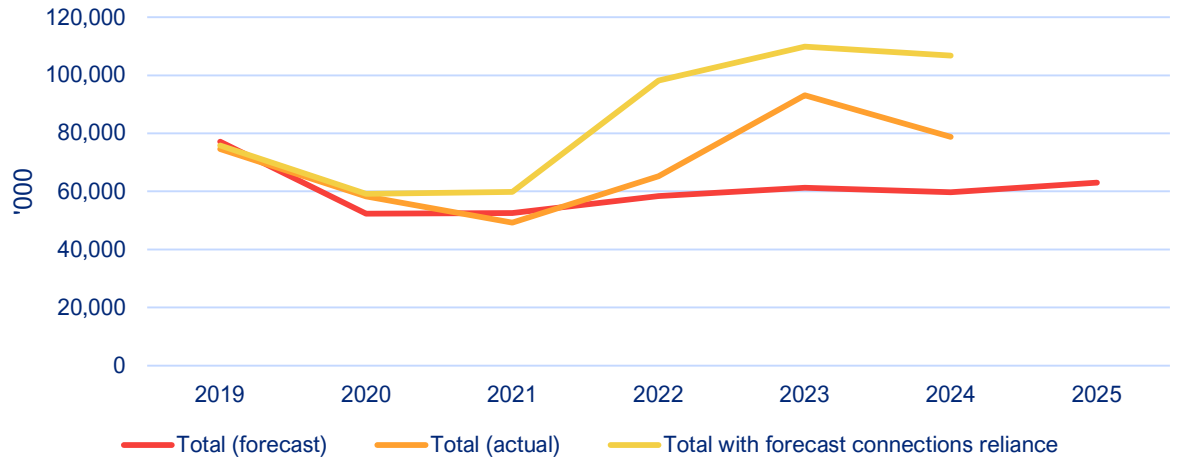
78. On average for non-exempt EDBs, capital contributions in the period 2022-2024 appear to have acted to mitigate the increased capex costs associated with connections activity. The figure below shows for those EDBs on a DPP the total capex associated with connections activity minus capital contributions.[13] This is done to compare actuals with what was forecast for DPP3. We have also calculated what this would have been had EDBs maintained a constant reliance level.[14] This would have led to much lower capital

[13] We focus on connections here rather than connections plus system growth. This allows us to clearly examine whether it is connections costs which might be driving changes in reliance.

[14] For this calculation we calculated reliance on capital contributions for connections capex only. This implicitly assumes no changes in reliance for systems growth.

contributions and by extension much higher levels of capex flowing into RAB and being met by ongoing charges across the customer base.

Figure 2.4: Total connections capex minus capital contributions



Note: DPP3 capex forecasts inflated to actual CGPI to ensure comparability to outturn.

Source: CEPA analysis of DPP3 Capex model and ID data.

2.2.4. What are the potential interactions with an obligation to connect

79. Any incentive that arises from intervention to delay or deny a connection is significantly mitigated if there is an obligation to provide a connection offer. However, if connections are required to proceed while there is a constraint on how much an EDB can charge upfront a different unintended consequence potentially arises. The risks of this occurring are much lower for the targeted intervention proposal relative to the imposition of reliance limits.

80. If reliance limits were binding it is simple to construct an example where problems can arise, for example:

- Assume the EDB is at their reliance limit.
- The EDB has undifferentiated ongoing charges.
- A connection applicant requires a significant and costly extension to connect.

81. To avoid breaching the reliance limit while proceeding with the connection the EDB will pay for the asset and have this roll into RAB. As ongoing charges are undifferentiated the cost of this asset will be met by the entire customer base not the customer requiring the significant extension. In effect, existing customers are subsidising the connection of a new customer.

82. Our view is that an obligation to connect will only support efficient connection charging decisions if EDBs are allowed to charge (upfront) at least net incremental cost. The Authority's targeted intervention which embeds the balance point principle recognises this.[15]

[15] This does not imply that EDBs must charge the full incremental cost of connection upfront. Some (or all) of the incremental cost of connection can be recovered through on-going charges.

2.2.5. Should the intervention be targeted?

83. We consider that there are good arguments for a targeted rather than an aggregate approach. The aggregate approaches currently being considered by the Authority include improved reliance limits, methodology lock and allocation limits. It is also possible to consider an alternative to the targeted intervention approach which would involve requiring all EDBs to move their connection charges to the balance point.

84. The Authority considers that the issues it has identified are only relevant for a minority of EDBs. A targeted approach would ensure regulatory intervention only for EDBs where there is a concern while mitigating any unintended consequences of an aggregate rule. Intervention could also be better targeted at the methodology rather than outcome level. The key disadvantage of this approach is that the process is likely to be associated with administrative cost both for the Authority and any EDBs identified at the screening stage. On the other hand, costs will be lower for EDBs not selected.

85. As outlined above, the risks that the intervention produces an incentive not to proceed with connections are mitigated somewhat with a targeted intervention. The EDB is not faced with a choice of not proceeding with a connection or socialising a cost. Instead, it faces a risk that certain connection charging outcomes will invite further scrutiny. This may still invite caution by the EDB but less so than with reliance limits.

86. The Authority also proposes that the targeted regime be time limited. If further reform requires connection charges to be calculated on an efficient basis then the case for a targeted version of this requirement seems to fall away.

2.3. CONCLUSION ON INTERIM RESTRAINT

87. Given the current evidence we conclude that a targeted intervention is preferred. There are risks of unintended consequences with the modified reliance limits proposal, which are mitigated with a targeted intervention.

3. CONNECTION OBLIGATIONS

88. In this section we provide our assessment of the Authority's proposed introduction of an obligation to connect load.[16]

3.1. WHAT WAS THE AUTHORITY'S INITIAL PROPOSAL?

89. The Authority previously proposed two amendments to the Code which give rise to an obligation to connect load under certain circumstances. Specifically, the Authority was seeking to introduce two new processes to be followed by EDBs for the connection of certain load types.[17] The first process applies to load connections between 69 kVA and 300 kVA while the second process applies to load connections greater than 300 kVA. These were amended to 69 kVA to 500 kVA and load connections greater than 500 kVA in Authority's decision.[18]

90. The current Code sets out some limited obligations on EDBs with regards to load connections:[19]

- There is a requirement for EDBs to issue Network Connection Standards which detail the technical and safety standards for a connection to their network.
- Part 12A of the default distributor agreement (DDA) sets out a process for new connections or changes in capacity. This includes a limited set of time limits including that "standard new connections" must be electrically connected to the network with 2 working days if all necessary requirements are met.

91. There are also statutory protections in place for the continuance of supply for connections that were in place prior to 1 April 1993.[20]

92. Apart from these provisions, we understand that the Code does not set out either an obligation to connect load or offer an obligation to connect.

93. We observe that relative to the current Code requirements, the Authority's initial proposal would have:

- Mandated a process flow that must be followed by the EDB (for example the initial application and final application steps).
- Mandated information that an applicant must provide to the EDB.
- Mandated requirements for the EDB to provide certain information to the applicant.
- Mandated timeframes for the various stages in the process.
- Mandated that EDBs must apply a certain prioritisation process to which applications proceed first.
- Required deemed acceptance of the connection application under certain conditions.

[16] To undertake our review we were provided with a draft version of the Authority's consultation paper – 'Reducing barriers for new connections: up-front charges and distributor obligations'.

[17] Electricity Authority (2024), Network connections project: stage one amendments – consultation paper.

[18] Electricity Authority (2025), Network connections project: stage one amendments – decision paper.

[19] Electricity Industry Participation Code, Part 12A

[20] Section 105, Electricity Industry Act 2010.

94. The Authority stated in its consultation paper that the process obligations imply a further obligation on EDBs to provide the necessary infrastructure to achieve a connection. However, there are no requirements on EDBs regarding the timeframes required to provide this infrastructure.[21]

95. The proposed changes would have been a significant departure from current arrangements. They would have created a principle that the EDB has an obligation to connect load of a certain size and set out procedural requirements that must be followed by EDBs. These would overrule the current connection policies of EDBs who are free to develop policies as they choose and to freely not provide connections.

3.2. What issues were raised by stakeholders?

96. Stakeholders raised several concerns with the proposal. The Authority summarised the feedback it received as follows:

- would reverse policy implemented through primary legislation.
- would amount to an obligation to invest.
- would sometimes be detrimental to existing customers.
- would sometimes be impractical or impossible to implement.
- risks encouraging inefficient network access outcomes, for example connection at the distribution level when transmission connection would be more efficient.
- raises concerns linked with connection pricing requirements including ability to allocate costs to connection applicants under the new requirements.

3.3. What is the Authority now proposing?

97. Following consideration of the feedback provided, the Authority is now proposing to develop Code amendments for consultation which will, among other things, create an explicit obligation on distributors to provide connection offers.

98. These requirements could apply equally to "injecting connections" as well as "non-injecting" connections. That is, both load and distributed generation.[22]

3.4. Assessment of obligation to connect

99. In this sub-section we provide an assessment of the Authority's proposal to introduce an obligation to connect. We consider five issues:

- The case for an obligation to connect.
- How other jurisdictions define their obligation to connection.
- Whether there is evidence of an issue in New Zealand.

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[21] Electricity Authority (2024), Network connections project: stage one amendments – consultation paper, paragraphs 3.24 and 3.25.

[22] The Authority is of the view that there is an implied obligation to connect distributed generation, but no such obligation exists for load. The Code will now include processes for connecting load, the deemed acceptance provisions that were consulted on were removed.

- The potential downsides of such an obligation.
- Which features of the obligation are most material.

3.4.1. What is the case for an obligation to connect?

100. An obligation to serve is a common feature of monopoly service regulation. This is as much the case for electricity distribution as for other monopoly networks.[23] Looking specifically at electricity distribution we find that:

- In Great Britain (GB) an obligation to connect arises from primary legislation and appears to be almost absolute for electricity distributors.[24]
- In Australia an obligation to connect arises for National Electricity Market jurisdictions from the operation of the National Electricity Rules.[25] We interpret the requirements as almost absolute in certain circumstances and discuss the carve-outs in the sub-section below.
- In the US a general obligation to serve is recognised and an obligation to connect is a component part of this obligation.[26] The exact nature of this obligation varies by state.[27]
- In the European Union a directive provides for universal service and an obligation on distribution system operators to connect customers.[28]

101. In contrast, New Zealand has no general obligation to connect load placed on electricity distribution companies. However, this has not always been the case. We understand that the repeal of the Electricity Act 1968 removed such an obligation from primary legislation. The Energy Sector Reform Bill which would subsequently become the 1992 Electricity Act states that:[29]

"The Electricity Act 1968 is repealed, and new provisions enacted in relation to the regulation of the supply of electricity…These include- (i) The abolition of licences to supply electricity and consequentially the obligation on licence holders to supply"

102. We also observe that provisions of the 1992 Electricity Act which were repealed at the end of the transitional period included a duty to supply:[30]

"Duty to supply - Every consumer within any part of a licence holder's supply area shall be entitled to be supplied with electricity by that licence holder (or, where another licence holder is authorised, pursuant to an agreement entered into pursuant to section 185 of this Act, to supply electricity to that consumer, by that other licence holder) on the same terms and conditions as those on which any other consumer within that part of the supply area is receiving, in similar circumstances, a corresponding supply of electricity."

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[23] For example, historically for telecommunications – Barbara (2012), *The obligation to serve for telecommunications services: Divergent policy paths in Canada and the US*.

[24] Section 16, Utilises Act 2000 – "Duty to connect on request"

[25] Specifically, Chapters 5 and 5A of the NER.

[26] Colton (1997), *The "Obligation to Serve" and a competitive electric industry*, page 52.

[27] Kehres (2008), Obligation to serve and Economic and legal incentives. in the context of Michigan – "*A public utility is not free to choose to serve only those customers which it is convenient or currently [profitable] to serve*."

[28] EU Directive 2019/994, Article 27 – "*Member States shall impose on distribution system operators an obligation to connect customers to their network…"*

[29] Energy Sector Reform Bill.

[30] We have taken the wording of this duty from the Energy Sector Reform Bill.

103. Given that such obligations are so common in other jurisdictions as well the fact that such an obligation was previously part of New Zealand primary legislation two questions arise:

- Why are such obligations a common feature of monopoly regulation?
- Why did New Zealand move away from such an obligation?

104. Our view is that an economic case can be made for such obligations and that they form part of good regulatory practice. In terms of the economic case, we find that:

- The ability for a monopolist to choose which customers to serve can lead to the hold-up problem. Customers may make sunk investments prior to connection. A monopolist may seek to expropriate the value of those investments through the connections process. This leads to a hold-up where potential connection applicants will not make the required investments in the first place.
- Under a revenue cap an incentive to cut costs to improve within regulatory-period profitability exists. Without an obligation to connect we might expect EDBs to be incentivised to reduce the costs of connection activity by refusing or delaying connections. This could result in connection applicants facing inefficient delays or even an inefficient lack of service.

105. We also observe that without an obligation to connect there is a risk that the remainder of the regulatory controls become unenforceable. If prices for distribution services are regulated, as they are for non-exempt networks (by the Commerce Commission), it may become impossible to receive service at the regulated price. The EDB may simply refuse to connect or hold out for other forms of compensation. As part of its connection reform work the Authority has realised this issue. It has already introduced anti-avoidance provisions which prevent EDBs from refusing to connect to avoid complying with the connection pricing methodologies, but refusing to connect for other reasons is not prohibited:[31]

"6B.3(4) A distributor must not refuse to connect a person to the distributor's distribution network for the purpose of avoiding compliance with the mandatory connection pricing methodologies"

106. Given this clear case, why would New Zealand remove this obligation from primary legislation? The records of Parliamentary debates on the Energy Sector Reform Bill only hint at the reasons why this obligation was removed. John Luxton, then Minister of Energy stated:[32]

"The Government is committed to ensuring that the owners of electricity lines and gas pipelines provide competitors with fair and reasonable access to those lines when that is technically possible…"

"…During the next 20 years many lines will need to be replaced. Energy companies should consider working with consumers who live in sparsely populated areas to provide acceptable alternative sources of electricity, such as stand-alone or community-based generation units, if those are more economical…"

"…The Rural Electrical Reticulation Council has served the country well since its establishment in 1945. Virtually all New Zealanders have access to mains power from the national grid, so that task is largely complete. For that reason, the council's role in the granting of subsidies for rural electricity supply is to end on 1 April 1993…"

107. These quotes point to the issues with providing electricity supply in sparsely populated areas, though we observe that this is not a problem that is unique to New Zealand. It is possible that some connections are simply uneconomic. Bypass of the network, for example through the provision of "*stand-alone or community-based generation units*", may be the most economic service available. It is also possible that no centrally-

[31] Electricity Authority, Distribution connection pricing Code amendment – Decision paper, 11.9.

[32] Hansard, Second Session, Forty-third Parliament, 1991-92, Volume 521.

provided service is economic in some cases. It follows that there must be limits on the obligation to connect. We look at how other jurisdictions have done this in the next sub-section and consider the lessons for New Zealand.

3.4.2. How do other jurisdictions define their obligation to connect?

108. We focused our review on the current obligations to connect in GB and the Australian National Electricity Market (NEM), while we observe that the US and the EU have similar obligations these vary by state.

109. There are some similarities between the GB and Australian obligations which point to some takeaways for setting such an obligation in New Zealand:

- Obligations to connect must be read alongside the relevant charging rules. We covered connection charging in these jurisdictions in our previous report.[33]
- Connection obligations go beyond a simple principle that load has an obligation to connect. The process, for example timeframes for certain steps, are prescribed in some detail.
- While the timeframes for early parts of the process are prescribed there are less stringent requirements for when required works need to be completed by. The Australian National Electricity Rules (NER) requirements do however require that the distribution company to use "*best endeavours*".
- Connection obligations are combined with dispute resolution procedures.

NER requirements in Australia

110. In the Australian NEM, the obligations on distribution networks to connect arise from the NER Chapters 5 and 5A and by extension vary by customer type.[34] Chapter 5A applies where the connection applicant is not a registered participant or planning to become a registered participant with the Australian Energy Market Operator (AEMO). By extension, this chapter covers the majority of load connections.

111. Chapter 5A splits connection types between "*basic*", "*standard*" and "*negotiated*". DNSPs are required to have a model standing offer for basic connections, can choose to have model standing offers for standard connections while all other connections are negotiated.

112. Chapter 5A provides the required terms and conditions that have to be covered by the model standing offer as well as a requirement for the AER to review and approve these offers. Of note, basic connection services "are likely to be sought by:…a significant number of retail customers in the area served by the distribution network".

113. The distribution network service provider (DNSP – broadly equivalent to an EDB) has the option of submitting to AER for approval model offers for standard connection services. These mean that even where there are model standing offers these can vary by class and requirement of customer.

114. Connection applicants have the option of also negotiating a connection where basic and standard connections do not meet their requirements. Chapter 5A sets out a negotiation framework for this process.

115. These documents are used by the AER to determine disputes as described below. By extension, they form a material part of delivering on the connection obligation.

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[33] CEPA (2024), Regulation of distribution connection charges, Appendix A.

[34] There may be additional obligations under State legislation. For example, Queensland's Electricity Act 1994 states that "*the distribution entity must allow, as far as technically and economically practicable for the distribution entity, a person to connect supply to its supply network, or take electricity from its supply network*".

116. The DNSP is also required to prepare a connection policy.[35] The NER requirements for this document are focused on describing the circumstances where the DNSP will charge customers for connections.

117. Chapter 5A also sets out the following requirements with regards to timing:

- Distribution Network Service Providers (DNSPs) must within 5 business days of receiving an enquiry to connect provide certain prescribed information.
- DNSPs must within 10 business days after receipt of a complete application provide certain additional information. This includes whether the connection application is being treated as basic, standard or negotiated.
- If the connection service is a standard or basic connection service, then the DNSP must make a connection offer within 10 business days of receiving a completed application. The applicant has 45 business days to accept the offer.
- For negotiated connection the DNSP must use "best endeavours" to make a connection offer within 65 business days.
- Once the connection offer is accepted this forms a contract between the applicant and the DNSP. The DNSP must use its "best endeavours" to ensure that connection work is carried out within the applicable time limits in the connection contract.

118. Chapter 5A also sets out some actions that DNSPs are explicitly allowed to do, which includes:

- DNSPs being allowed to charge a site inspection fee if this is required.
- DNSPs being allowed to charge a fee to cover the cost of negotiation.

119. With regards to connection charges the NER sets out principles as well as process requirements. One key difference between a basic connection and the other types is that those seeking a basic connection cannot be made to pay towards the cost of augmentation.[36] When a connection offer is made it must include a breakdown of connection charges which includes separating out the cost of network extensions and augmentation.[37]

120. Chapter 5A also sets out dispute resolution procedures between connection applicants and DNSPs. The AER is responsible for determining a dispute and must give effect to:

- Connection policy
- Model standing offer (if basic or standard connection)
- The Chapter 5A requirements.

121. If the rules under Chapter 5A do not apply to the connection (generally because the connecting party is not a retail customer) then the process for connection under Chapter 5 applies. One of the principles under NER 5.1A.2 is that "*all connection applicants should have the opportunity to form a connection to a network*".

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[35] The requirements of the connect policy are set out in NER 6.7A.

[36] The National Electricity Law (NEL) defines augmentation as "*work to enlarge the system or to increase its capacity to transmit or distribution electricity*". The AER clarifies in their connection charge guidelines that the "*the intention is to exclude deep system augmentation charges for retail customers*."

[37] The AER connection charge guidelines defines an extension as "*An augmentation that requires the connection of a power line or facility outside the present boundaries of the transmission or distribution network owned, controlled or operated by a Network Service Provider*."

Similar to chapter 5A, Chapter 5 then sets out the process which must be followed by the distribution network including timeframes. There are also procedures for handling disputes between connection applicants and distribution networks including the powers of the AER to make a determination.

Requirements in GB

122. The legislative requirements for the duty to connect sit alongside the electricity distribution licence conditions.[38] The licence conditions provide more detail regarding how the connection obligation should work in practice but are less detailed than the Australian NER.

123. The licence requires that the distribution company treat all requests for connection as if they were request under 16A of the Utilities Act.

124. The licence requires that the distribution company make a connection offer "*as soon as reasonably practicable*" after receiving a connection request. However, this must be within 65 working days.

125. The licence sets out the information that must be contained in the offer. This includes details of any extensions or reinforcement of the distribution system required. The licence requires that the distribution company have a charging methodology and any charges payable under the offer are consistent with this methodology. We described the charging methodology in our previous report.[39]

3.4.3. Is there evidence of an issue in New Zealand?

126. Regarding load connections the Authority previously set out potential issues that could arise given the lack of an obligation to connect:[40]

- Load applicants can face variation in the application processes.
- Load applicants do not get baseline protections (timeframes for approval/denial, information or capped fees).
- Load applicants may have to engage with unclear requirements.
- Distributors can prioritise work other than load applications.

127. The Authority has also recognised that, as requirements for connection pricing are introduced, the lack of a clear obligation becomes a risk. We discuss this issue further in the second half of this paper (Section 2.2.4).

128. The Authority notes that a risk also arises if there is no alignment between the current obligation to connect distributed generation and an obligation to connect load. The Authority is also of the view that the current obligation to connect distributed generation is not clearly expressed or bounded.[41]

129. We also identified a set of concerns associated with the monopoly power of EDBs (see section 2.3.1 above).

130. Stakeholders outlined the lack of assessment undertaken by the Authority on the current performance of existing EDB connection processes.[42]

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[38] Standard conditions of Electricity Distribution Licence.

[39] CEPA (2024), Regulation of distribution connection charges, Appendix A.

[40] Electricity Authority (2024), Network connections project: stage one amendments – Consultation paper.

[41] We have not assessed the obligations to connect distributed generation, though agree that it makes sense for obligations between load and distributed generation to be aligned.

[42] Vector (2025), Network Connections Project – Stage One.

131. We agree that evidence put forward by the Authority that connection processes are currently being denied or unreasonably delayed is limited. However, the lack of an effective dispute resolution procedure for load and limited information required by Commerce Commission's information disclosure regime on connections means there are relatively few avenues for poor performance to be surfaced.

132. Nonetheless, we find indirect evidence of issues from a review of EDB websites and asset management plans (AMPs). Our review reinforces the impression that connection applicants will have difficulty in determining the level of service they should expect to receive or the probability that their connection application will be denied.

133. To familiarise ourselves with the connection landscape in relation to load in New Zealand we undertook a scan of 13 EDB websites and AMPs.[43] Regarding EDB websites we found that:

- 3 EDBs set out detailed timelines for the various parts of the connection process.
- 7 EDBs provided no information on the estimated timeframes between steps or even any detail on the steps required.
- The remaining 3 EDBs provided limited information, for example they provided the number of days between first application and getting in touch with the applicant and nothing more.

134. We also reviewed the AMPs for these 13 EDBs and this provided a similar picture:[44]

- 5 EDBs provided at least some information of timeframes associated with connections processes.
- 7 EDBs provided no timeframes with some providing scant information on the connections process.
- We were unable to locate 1 EDB's AMP.

135. From this sample we conclude that there is limited information on EDB's websites or AMPs on timeframes for connection or even the steps required by the EDB to provide a connection. It is possible that internally each EDB has a more fleshed out connection policy which is provided on enquiry. Nonetheless, based on what is publicly available we conclude that connecting parties enter negotiations with EDBs with limited understanding of the standard of service they can expect to receive. In this context, even if there were a dispute resolution process it would be ineffective as there is no minimum standard of service with which EDBs must comply. [45]

3.4.4. What are the potential downsides of an obligation?

136. Stakeholders provided significant feedback on the Authority's proposals.[46] This feedback raises a range of potential downsides from an obligation to connect. We separate our considerations between those issues

[43] The EDBs we looked at were: Alpine Energy, Aurora Energy, Buller Electricity, Centralines, Counties Energy, EA Networks, Firstlight Network, Marlborough Lines, Nelson Electricity, The Power Company, Powerco, Orion and Vector Lines.

[44] The information disclosure requirements require that AMPs include: *"a description [of] ⋯commonly encountered delays and potential **timeframes** for different connections;"* [emphasis added]

[45] Part 6 of the Code will include finite timeframes for distributors to process load applications from mid-2027. These timeframes will apply for load applications above 69kVA and for initial, interim and final applications i.e., from when an application is made to distributor's final approval. Additionally, distributors must publish and comply with a 'queueing and management policy for distributors' which details the steps after final approval, including indicative timeframes for the applicant and distributor to complete these steps (e.g., to provide a connection works agreement).

[46] Given the large volume of feedback, we have worked from the summaries the Authority prepared.

which arise from any general obligation to connect, and those issues raised regarding the Authority's specific proposal.

Issues associated with any general obligation to connect

137. One major issue is the potential for uneconomic connections. Avoiding such connections may have been one of the factors behind the current arrangements. Where customers connect without paying at least the net incremental cost of their connection they are in effect subsidised by other customers. Setting upfront connection charges below net incremental cost will drive inefficient connection activity. Ensuring that connection charges are at least above net incremental cost should prevent access seekers from seeking uneconomic connections.

138. To address this, we recommend that the obligation to connect include a requirement that the EDB offers to connect *at cost-reflective prices*. If a connection applicant is seeking a significant extension to connect a remote property, they should face an appropriately high charge for doing so. If they choose to connect then they have demonstrated that they value the connection more than it costs to provide, which is an efficient outcome.

139. There will be administrative costs associated with any general obligation. EDBs should be free to charge connection applicants for the costs they incur at each stage of the process as long as these charges are cost reflective. This includes charges for site visits, negotiations, design etc.

140. In some cases, an EDB may anticipate that there will be further connections in the same location as a connecting customer and the most efficient connection asset is "over-sized" relative to the needs of the first connecting party. The allocation of the costs of such over-sized assets raises questions "position in queue" and risk-allocation issues. We discussed these issues in our previous report.

141. An obligation to connect raises the possibility that the EDB is forced to modify its expected capex plan. This could arise if the EDB has a plan for augmenting network assets based on a forecast of requirements and a connection application arises that is inconsistent with that plan (e.g., materially larger, or earlier than anticipated). Nevertheless, we consider that the EDB should be required to take reasonable steps to connect the applicant at a charge which reflects a reasonable estimate of the direct costs.

Issues raised with the Authority's 2024 obligation

142. Submissions raised several issues with the Authority's proposed form of obligation.

143. Under the Authority's initial proposal, if an EDB breaches the prescribed timeframes the connection application is deemed to have been accepted.[47] It is not immediately clear if this requirement is workable. If the EDB has not assessed the application, then there may be reasonable technical reasons why the connection should not proceed as applied for. Our view is that access to an effective dispute resolution procedure seems preferable than deemed acceptance.[48] The Authority could also consider whether costs should be assigned to EDBs that breach prescribed timetable requirements.

144. There is a concern that as this obligation only applies to EDBs rather than to Transpower, connection applicants will be incentivised to connect at the EDB level rather than at the transmission level even if

[47] Submission by Counties Energy.

[48] The Authority sought feedback on deemed approval, in limited circumstances, in its October 2024 consultation paper. Deemed approval was excluded from its July 2025 decision paper, following stakeholder feedback. Deemed approval has applied for small, distributed generation applications (using the Part 1A application process), since 2021, and this requirement continues.

connection at the transmission level is more appropriate.[49] Connection size appears to be one of the factors that determines whether connection at the distribution or transmission level is most appropriate. We encourage the Authority to seek to harmonise requirements at the distribution and transmission level.[50]

145. There is a concern that the proposals act as forced investment, contrary to legal obligations, or that this runs against primary legislation and Parliamentary intent.[51] We are not in a position to comment on legal issues.

146. The ENA suggests that EDBs should be free to refuse to offer a connection when the application is unreasonable. For example, causing excessive congestion, exceedingly remote assets and connections that lead to undesirable network configurations. It is possible that there may arise circumstances where a connection must be delayed until necessary upgrades are carried out in the core of the network. The timing of a connection is a matter which would be the subject of dispute resolution. In cases of exceedingly remote assets or connections that lead to undesirable network configurations, the EDB would nevertheless be required to engage with the connection applicant and explain the situation, and provide an estimate of the likely costs of connection. If the connection applicant is unhappy with explanations of the EDB, it could seek dispute resolution.

147. The ENA also argues that the prescribed terms for load do not allow EDBs to withdraw from supply. This would require them to maintain highly uneconomic connections. The ENA outlines that the continuance of supply obligations on pre-1993 consumers (which is prescribed in legislation) has led to poor outcomes. Our view is that allowing EDBs to withdraw from supply on economic grounds appears to come with significant risks. Since customers make substantial sunk investments in reliance on continuing access to the electricity distribution network, disconnection of customers comes with the risk of significant economic harm.

148. We observe that in Australia the NER and National Energy Retail Rules (NERR) do not appear to allow disconnection on economic grounds. However, the NER does have rules around stand-alone power systems (SAPs) that can be operated by DNSPs. A SAP would include both generation and distribution elements but be entirely disconnected from the DNSP's primary grid. A DNSP can fulfil its connection obligations by offering to connect to a SAP.[52] There are also rules specifying how a DNSP can convert parts of their network to a SAP.[53]

149. Submissions also raised an issue around the maintenance, that is operational costs, associated with connection assets.[54] Where a customer requires a significant extension that must be maintained by the EDB, it may not be appropriate to socialise the on-going maintenance costs. Instead, it may be appropriate to include a component of the on-going maintenance costs in the upfront capital contribution. Again, this would be subject to dispute resolution.

150. The ENA also raises a concern that the obligation to connect as currently proposed may drive perverse outcomes with regards to the use of third parties to carry out works. Our view is that the obligation to

[49] Submission by Counties Energy.

[50] We note that there are provisions under Part 12 of the Code. Any change would need to be considered alongside these provisions for large distributed connected plant.

[51] Submissions by ENA, Electra Trust, Counties Energy Trust, Energy Trusts of New Zealand, Northpower, Scanpower, Trust Horizon.

[52] AEMC (2019) Review of the regulatory frameworks for stand-alone power system – Priority 1, page xiii.

[53] NER 5.13B.

[54] Submissions by Northpower and Powernet.

connect at cost-based charges has no bearing on whether a third-party or the EDB itself carries out connections work. This would be no change from the status quo.

151. The Lines Company is concerned that there is a risk to other customers if an obligation to connect is not combined with an ability to require a suitable security. We recognise that in certain circumstances (particularly where the connection asset is unique and unlikely to be re-utilised in the event of the failure of the connecting party), there arise risk allocation issues. In cases where there is a material risk of asset stranding, it may be appropriate for a mechanism to be established which insulates the EDB or its customers from the risk of asset stranding. In such circumstances, it may be appropriate for the EDB to request some form of security upfront. However, the connection charges must still be cost based and the terms and conditions of connection (including the security) will remain subject to dispute resolution.

152. We observe that GB's obligation to connect does include the power for distribution companies to require security.[55] In the NEM, connection offers under Chapter 5A must include details on "*any security to be provided*" implying that DNSPs are allowed to require security.[56] It seems reasonable to allow EDBs to require security in circumstances where payment for assets is uncertain. Security policies should be developed in advance of the connection application, as part of the overall terms and conditions for connection. Ensuring that these policies are developed in advance also allows a dispute resolution procedure to work effectively.

3.4.5. What does this suggest about how connections obligations should be structured?

153. Our assessment of the potential downsides and the structure of connection obligations in other jurisdictions points to useful features of an obligation to connect.

154. Our view is the obligation to connect should include the requirement to provide a connection offer at a price which at least reflects an estimate of net incremental costs. Once that cost-based offer is accepted by the connecting party, the EDB would be under an obligation to provide a connection. Any process obligations such as those around timeframes should be focused on providing a connection offer in a reasonable timeframe. For small, simple, standard connections it may be possible to specify timeframes in advance. However, many connections are bespoke, in terms of size or location. For these connections it is difficult to prescribe in advance the amount of time required to achieve a connection subsequent to an offer being made. There are clearly trade-offs between time and cost. If a connection applicant wants to be connected quickly this is likely to cost more. However, these issues must be negotiated between the EDB and the connection applicant and do not appear to be amenable to regulatory prescription.

155. Both of these points are explicitly recognised by the Authority:

- The Authority is seeking to create an obligation on distributors to provide connection offers.
- The Authority recognises that a "*poorly defined connection obligation could…encourage inefficient connections if combined with pricing that is not cost-reflective*."

156. Due to the bespoke nature of connections, the dispute resolution procedure is crucial. The terms and conditions, including timeframes for achieving a connection, can be considered as part of a dispute resolution process.

[55] Section 47, Utilities Act 2000.

[56] NER 5A.1.A(a)(10).

157. The version of the Authority's draft consultation paper we reviewed does not place much focus on dispute resolution. We would encourage the Authority, as it develops its Code amendment, to specifically consider the options available to connection applicants to escalate issues with the connection offer process. Issues could include not receiving connection offers in a timely manner, or not receiving connection services in line with the offer after it has been accepted.

158. EDBs in New Zealand are on average smaller than Australian DNSPs and UK DNOs. This may point to be more limited administrative resources being available to manage connections activity. Some networks manage a small number of new connections a year. For example, Buller Electricity dealt with just "*37 new or altered connections per year*".[57] Any prescriptive requirements in the Code will need to work for EDBs of all sizes. Our view is that timing requirements should act as a regulatory backstop of last resort. EDBs should in general be able to outperform any of the stated requirements, for example on timeframes.

159. Our view is that a regulatory backstop for the time required to provide a connection offer would be desirable. This would assist in ensuring that the dispute resolution process is effective. We would encourage the Authority to consider appropriate timeframes as it develops its Code amendment. The Authority should also seek views on the achievability of these timeframes.

160. It should be made clear that EDBs can charge administrative fees for parts of the process.[58] However, it is possible that EDBs are unable to charge the full administrative costs associated with a connection offer obligation to the connection applicant. This is the case even if EDBs are allowed to charge for some parts of the process, such as charging for site visits or charging for negotiations. As such, some of these costs are likely to be socialised. The more onerous the process, both in terms of steps required and timeframes, the higher these costs are likely to be. This also points to a simplified procedure with achievable timeframes.

3.5. Conclusion on connection obligations

161. The Authority's main objective is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers. It has an additional objective to protect the interests of domestic and small business consumers in their dealings with industry participants.

162. It is commonly the case that monopoly service provision is combined with an obligation to provide the service – in this case to connect customers. This is as much the case for electricity networks as for other types of monopoly networks. The current arrangements for EDBs in New Zealand are unusual.

163. We appreciate that one of the motivations for the current arrangements is to avoid uneconomic connections from proceeding. Our view is that the obligation to connect should specifically include an obligation to provide a connection *offer* at cost reflective prices. Where newly connecting customers need substantial extensions over difficult terrain they should face commensurate offer prices.

164. An obligation to provide a connection offer also allows EDBs to embed their technical requirements while reflecting the fact that the works required are uncertain in advance of the connection application. Any prescribed timeframes should focus on the steps to providing a connection offer. It is harder to impose timeframes on the physical provision of connection infrastructure. EDBs should however work towards livening the connection as soon as reasonably practicable after the connection offer has been accepted.

[57] Buller Electricity (2025), Asset management plan.

[58] We observe that Part 6 of the Code allows distributors to charge fees to distributed generation for various parts of the connection process.

165. As such, we find that the Authority's proposal to create an explicit obligation on distributors to provide connection offers should improve the efficient operation of the electricity industry.

166. It is also clear that an obligation to provide a connection offer will help protect the interests of domestic and small business consumers. Setting out clearly what level of service domestic and small business consumers can expect from distributors will assist in improving these consumers' capacity to negotiate. Furthermore, if there is a dispute having the obligation codified will assist in resolution.

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