Electricity Distribution Business Efficiency – Recommendations for Standardisation and Collaboration

Independent Advice and Recommendations

Prepared for Ministry of Business, Innovation & Employment

9 April 2026

Document Control

Report title	Independent Advice and Recommendations
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Date	Version	Author	Remarks
19/03/2026	1.0	Andrew Gatland & Jules Congalton	Issue for client review
02/04/2026	1.1	Andrew Gatland & Jules Congalton	Updates following client review
09/04/2026	1.2	Andrew Gatland	Minor corrections relating to regulatory powers

Contents

1 Executive Summary

1.1 Overview

Distribution charges account for roughly 25% of residential electricity bills, and modelling by BCG estimated $22 billion of network investment is required over the next decade to support electrification.[1] Improved standardisation and collaboration across New Zealand's electricity distribution businesses (EDBs) could be a lever for reducing the cost of that investment and the ongoing cost of operating distribution networks, with efficiency gains achieved reflected in the distribution component of consumer bills.

MBIE engaged Asset Dynamics to provide independent advice and recommendations on actions EDBs could undertake to improve standardisation and collaboration, following the Minister for Energy's letter of expectations to EDB Chief Executives in October 2025. This report is the third and final deliverable, drawing on industry engagement with EDBs and regulators, and a critical assessment of EDB responses to the letter of expectations. These inputs were supplemented with international research comprising interviews and literature review.

The recommendations are organised into two sets. Set A comprises actions that EDBs identified through the industry engagement and responses to the letter of expectations. These have direct EDB support and implementation momentum in many cases, making accountability relatively straightforward. Set B comprises structural mechanisms to ensure that efficiency opportunities the industry is systemically less likely to identify are surfaced and that performance gaps are visible to stakeholders on an ongoing basis. The structural reasons why this is the case are discussed in Section 3.3. The two sets are complementary and independently actionable. Progress on Set A does not depend on Set B being in place, and vice versa. As Set B mechanisms mature, the visibility they create will strengthen accountability for the delivery of Set A-type actions.

Set A recommendations are prioritised using three criteria. Consumer benefit considers the magnitude and breadth of the efficiency gain (net of implementation costs), including scope, scale, and timeframe for benefit realisation. Implementation readiness considers whether the pathway to implementation is clear and the primary actors are willing and capable. Electricity Networks Aotearoa (ENA) and industry alignment considers the degree to which the recommendation is supported by ENA's response to the letter of expectations, which represents an industry-wide position. Sequencing dependencies were also considered, as some recommendations depend on prior actions being in place and are assigned later timeframes accordingly.

Set B recommendations were evaluated as an integrated system rather than individually, assessing whether together they create sufficient transparency and

[1] *The Future is Electric – A Decarbonisation Roadmap for New Zealand's Electricity Sector* (Oct 2022)

accountability to drive efficiency improvement, despite the structural limitations discussed in Section 3.3.

1.2 Recommendations Arising from EDB Input

Nine Set A recommendations are proposed. The first three, formalising shared services and joint operating models, standardising connections, and formalising national mutual aid, are standalone and can be pursued independently. Recommendation A4 proposes establishment of a Smarter Networks coordination group, based on the action raised by ENA to develop a distribution system operation (DSO) framework for New Zealand. Recommendations A5-A7 are workstreams that the Smarter Networks coordination group should deliver, addressing flexibility services standardisation, low voltage (LV) network data use, and network planning standardisation. Recommendations A8-A9 were assessed as having a lower priority and propose assessments of issues and opportunities that were raised by EDBs. These included a collective financing mechanism, and the cost implications of current settings in relation to temporary traffic management and vegetation management.

Set A recommendations are summarised in Table 1.

#	Recommendation	Primary Actor	Timeframe	Priority
A1	**Formalise and scale shared services and joint operating models**	Regulator, ENA, EDBs	2026-2027	High
A2	**Standardise connections and form common shop-front roadmap**	ENA, EDBs	2026-2027	High
A3	**Formalise national mutual aid and assess critical spares platform**	ENA, EDBs	2026-2027	High
A4	**Establish Smarter Networks coordination group and DSO framework**	ENA, EDBs, Transpower, regulators	2026-2027	High
A5	**Standardise flexibility services procurement**	ENA, EDBs, Transpower	2027-2028	High
A6	**Improve LV network data use and standardise LV monitoring**	ENA, EDBs, Electricity Authority	2028-2029	High
A7	**Standardise network planning framework and methodologies**	ENA, EDBs, Transpower	2028-2029	Moderate
A8	**Assess feasibility of a collective EDB financing mechanism**	NEG, EDBs	2027-2028	Moderate
A9	**Assess external cost drivers**	NZTA, Govt.	2027-2028	Moderate

Table 1: Summary of Recommendations Arising from EDB Input

1.3 Recommendations to Support Further Efficiency Improvement

Five Set B recommendations are proposed and are summarised in Table 2. The first three form an integrated system in which the register provides visibility of industry-wide activity, benchmarking identifies relative efficiency at the individual EDB level, and expanded information disclosure and analysis provides visibility of what EDBs are doing to improve. Together these elements make EDB performance visible to stakeholders, creating an incentive for boards to direct management to improve efficiency.

Recommendation B4 proposes a review of regulatory incentives for standardisation and collaboration. Recommendation B5 proposes that extending price-quality regulation to currently exempt EDBs be considered if benchmarking reveals they are materially underperforming and the mechanisms under Recommendations B1 to B3 have not produced sufficient improvement.

#	Recommendation	Primary Actor	Timeframe	Priority
B1	**Establish register of standardisation and collaboration initiatives**	ENA	2026	High
B2	**Enable comparative efficiency benchmarking of individual EDBs**	Government / Commerce Commission	2026-2028	High
B3	**Information disclosure on standardisation and collaboration**	Commerce Commission	2028 onwards	High
B4	**Review incentives for standardisation and collaboration**	MBIE / Commerce Commission	2028-2029	Moderate
B5	**Review extension of price-quality regulation to currently exempt EDBs**	Government / Commerce Commission	Longer-term	Conditional

Table 2: Summary of Recommendations to Support Further Efficiency Improvement

2 Context for Report

2.1 Background

MBIE commissioned Frontier Economics to undertake an independent review of New Zealand's electricity market performance. In its report published October 2025, Frontier recommended amalgamating New Zealand's 29 EDBs into five large EDBs.

The Government decided not to progress this recommendation as forced amalgamation would be expensive and complex and may face opposition from stakeholders. Additionally, the Frontier report did not provide conclusive evidence that ownership change is needed to improve EDB efficiency.

To encourage EDBs to operate efficiently and take advantage of opportunities for innovation, the Government decided to pursue alternative options. The Minister for Energy sent a letter of expectations to EDB Chief Executives, asking EDBs to identify opportunities to improve standardisation and collaboration in the industry by 30 January 2026. The Government will consider the response from EDBs before deciding if further regulatory action is required.

2.2 Scope

MBIE engaged Asset Dynamics to provide independent advice and recommendations on actions EDBs could undertake to improve standardisation and collaboration and thereby improve efficiency. Efficiency in this context refers to the ability of an EDB to deliver network services that meet required or expected safety and quality standards at the lowest sustainable cost. This includes reducing current operating and capital expenditure and improving capability over time so that future costs are lower than they would otherwise be.

The scope of standardisation and collaboration is represented in this report along two key dimensions. The first is the EDB function that is the subject of standardisation and collaboration, such as Connections, Network Planning, Maintenance Delivery, and Information Systems. The second is the depth of the arrangement, which ranges from knowledge sharing at one end, through common standards and joint procurement, to shared services and joint operating models at the other. Standardisation and collaboration can reduce the unit cost of delivering network services through mechanisms such as economies of scale, shared fixed costs, and joint procurement. They can also speed up how good practice and improved capability spread across the industry to close the gap between current efficiency and achievable efficiency.

Delivery of this scope of work involved three primary activities.

1. Engaging with EDBs and regulators to assess opportunities and barriers to greater standardisation and collaboration
2. Assessing EDB responses to the Minister for Energy's letter of expectations

3. Developing a framework to enable prioritisation of recommendations for EDB actions and potential Government interventions, and considering international experience

The first two activities are documented in “Summary of Engagement and Lessons Learnt” (Deliverable 1) and “Assessment of Responses to Letter of Expectations” (Deliverable 2) respectively. This report, Deliverable 3, draws on both as inputs, together with international research, to develop and prioritise recommendations. While the focus of this work is on EDB standardisation and collaboration, some recommendations fall outside this scope. They are included because they were consistently raised by EDBs as material barriers to improved efficiency.

3 Methodology

3.1 Inputs

This report draws on three inputs. The first is the industry engagement summarised in Deliverable 1. Between November and December 2025, Asset Dynamics conducted 16 structured interviews with representatives of ENA, 12 EDBs, the Commerce Commission, the Electricity Authority, and EECA. The interviews were led by Asset Dynamics and observed by MBIE staff. The industry engagement was designed to surface current collaborative activity, identify barriers to further standardisation and collaboration, and understand perspectives on what new opportunities exist to improve efficiency and innovation.

The second is the stakeholder responses to the Minister's letter of expectations as well as the critical assessment of the responses presented in Deliverable 2. Twenty-seven responses were received from EDBs, EDB groups, ENA, Energy Trusts of New Zealand (ETNZ), and one consumer trust. Asset Dynamics reviewed each of the responses, assessed the commitments made, identified themes across responses, and noted any gaps. This resulted in identification of current initiatives with scaling potential, new actions proposed by EDBs, other topics considered relevant by EDBs, and summary analysis for each.

The third is relevant international experience. Asset Dynamics conducted three structured interviews with international stakeholders (through introductions provided by MBIE and the Commerce Commission). The interviews were with senior representatives from the German Federal Network Agency (BNetzA), and the Finnish Energy Authority (Energiavirasto), as well as a US-based independent economist with expertise in energy network issues. Relevant literature from these and other jurisdictions was also considered. This experience provides a basis for assessing whether proposed actions are aligned with international good practice, and for identifying approaches that have delivered measurable efficiency gains in comparable contexts but were not surfaced through the domestic engagement process.

3.2 Analysis Approach

The approach that was taken involved four main steps. The first was to identify a full set of possible actions raised across the three inputs.

The second step was to group the actions into themes and assess whether the list was complete. This step identified clear groups of actions. In some areas there was strong convergence across respondents. For example, shared services and joint operating models, standardisation of connection processes, and resilience and mutual aid were frequently raised. In other areas, actions were less prominent relative to what the evidence base suggested was possible. Comparative efficiency benchmarking and centralised registration of standardisation and collaboration initiatives are examples of this. This step also highlighted a more fundamental issue, which is that the inputs from

interviews and responses to the letter of expectations are inherently limited in what actions they can identify. This is a critical issue and is discussed further in Section 3.3.

The third step involved organising the identified actions into two sets:

- **Set A** comprises the actions raised by ENA and EDBs through the industry engagement and the responses to the letter of expectations. These generally have direct EDB support, some momentum for implementation, and the proposing EDBs have an interest in following through on these commitments, making accountability for implementation relatively straightforward.
- **Set B** comprises actions to ensure that structures are put in place so that efficiency opportunities that engagement with individual EDBs or ENA is less likely to surface are nonetheless identified and can be pursued on an ongoing basis.

Maintaining the distinction between the two sets makes clear the difference in their source and reflects the fact that they are independently actionable and complementary.

Table 3 provides a high-level comparison between Set A and Set B recommendations.

Dimension	Set A Recommendations	Set B Recommendations
Arising from EDB Input	Yes	No; although discussed indirectly in some cases
Benefits to Consumers	Direct	Indirect (structural)
Rationale for Inclusion	Efficiency improvement opportunities identified by ENA and EDBs. Direct benefit for consumers (to be confirmed by any required cost-benefit analyses).	Efficiency improvement opportunities not directly identified by ENA and EDBs are considered. Transparency and accountability mechanisms that create incentives for EDBs to pursue efficiency improvements that would not otherwise be identified or acted upon.

Table 3: Comparison between Set A and Set B recommendations

The fourth step was to assess and prioritise the identified actions using the framework described in Section 4, and to develop the recommendations set out in Section 5 (Set A) and Section 6 (Set B).

3.3 Structural Limitations of Inputs

The EDB inputs set out in Section 3.1 provide a valuable view of current collaborative activity and EDB intentions, which is a good basis for forming recommendations. However, they have a key structural limitation. EDBs' perspectives are limited by their own strategic interests and position within the industry. This means that even a comprehensive engagement process will miss efficiency opportunities available to the industry. This is not something that could be addressed by consulting further or asking different questions, rather it reflects the structure of the industry. Five key reasons for this limitation have been identified:

1. **EDB interests:** EDB CEOs are accountable to their Board and shareholders, and not to New Zealand electricity consumers as a whole. Their responses therefore reflect what is in their organisation's interest to identify and commit to, not necessarily what would optimise industry-wide outcomes, including improved efficiency. The interests of individual EDBs vary significantly based on their ownership structure and other factors, and these differences were evident from both the interviews and the responses to the letter of expectations.
2. **ENA consensus:** ENA cannot take a position that would conflict with any member's interest. As a consensus body with an advocacy role, its responses will converge towards the least controversial common ground across its members. Actions that are more transformative but not in the interests of specific EDBs or groups of EDBs are unlikely to be included in responses from ENA.
3. **Multi-EDB alignment:** The most significant gains from standardisation will require multiple EDBs to align on common approaches, for example data models, shared platforms, and joint procurement at scale. Identifying these opportunities requires a view across the industry that no individual EDB has. But even where such opportunities are visible, no individual EDB has the standing or incentive to propose an action that requires others to change their approach. Implementing such opportunities consistently would require EDBs to give up their ability to opt out at any stage (an ability they have in relation to ENA-led initiatives).
4. **Exempt EDBs:** Exempt EDBs have less incentive to achieve economic efficiency than price-quality regulated EDBs and can give weight to a wide range of other factors that their shareholders consider important, including local autonomy and employment. Without external benchmarking, the gap between current and achievable efficiency may not be visible to an exempt EDB.
5. **Industry-wide analysis:** EDBs cannot identify efficiency opportunities that would only become visible through systematic industry-wide analysis or benchmarking against comparable international jurisdictions. This is work that currently no one in the industry has the incentive or responsibility to do.

Together these limitations mean that the efficiency opportunities identified by ENA and EDBs will be narrower than the full landscape of opportunities that could be considered for the industry. To best achieve the outcomes set out in the letter of expectations, improved structures would be needed to ensure that a fuller range of actions is surfaced for consideration on an ongoing basis. This is the primary rationale

for the development and inclusion of the Set B recommendations in this report, although as indicated earlier, implementation of the Set B recommendations would also complement and support the achievement of the Set A recommendations.

3.4 Other Limitations

The interview programme covered a sample of EDBs rather than all 29. While the sample was designed to reflect diversity in size, ownership model, and geography, the findings reflect the views of those interviewed and will not have captured all perspectives.

The international research was not intended to be a comprehensive review of global practice. International findings were used to identify and to inform recommendations, not to suggest that approaches from other jurisdictions should be directly applied in New Zealand.

Finally, this report is based on information available at the time of writing. The industry is in a period of change, and since the letter of expectations was issued several partnerships and other collaborative initiatives have been announced. Some of the actions recommended in Set A are already underway; these recommendations are designed to support and guide them rather than initiate them from scratch.

4 Framework

4.1 Overview

As explained in Section 3, the recommendations in this report are of two distinct types, and the framework used to assess them reflects this distinction. Set A recommendations arise directly from the industry engagement and responses to the letter of expectations. These recommendations were assessed and prioritised individually using the three criteria set out in Section 4.2. The criteria enable an overall priority rating for each recommendation to be assigned.

Set B recommendations are designed to ensure that efficiency opportunities EDBs are systemically less likely to identify are nonetheless surfaced and acted upon on an ongoing basis. These recommendations are not ranked against each other as they form an integrated approach in which each element supports the others.

A single priority scale is used for both sets of recommendations: High, Moderate, Low (below threshold for inclusion in report), and Conditional (should occur if specified conditions are met). The priority applies slightly differently for each set of recommendations. For Set A the priority reflects the relative strength of the recommendation individually, while for Set B, the priority reflects the importance of the recommendation to the implementation of the overall approach.

4.2 Prioritisation Criteria and Evaluation of Set A Recommendations

Three criteria were applied to each Set A recommendation:

1. **Consumer benefit:** Qualitative assessment of the overall magnitude of the efficiency improvement considering scope, scale, and timeframe for benefit realisation. The consumer benefit is the net efficiency gain, i.e., the reduction in EDB costs less the cost of achieving it. Actions with large, widely applicable, and near-term consumer benefits are assessed as having a greater consumer benefit than actions with smaller, narrower, or only long-term benefits.
2. **Implementation readiness:** This criterion considers whether the requirements for successful implementation are in place. This includes whether the primary actors are willing and capable to act, whether there are known barriers or constraints, and whether there is existing momentum for change.
3. **ENA and industry alignment:** ENA's response to the letter of expectations was developed through a coordinated process with EDB input and represents an industry-wide position. Where a recommendation is aligned with commitments made in ENA's response, it can be taken to have in-principle support from across the industry. This criterion assesses the degree of that alignment, covering whether ENA made an explicit commitment and the extent to which it was reinforced by individual EDB responses to the letter of expectations.

In addition to these considerations, interdependencies were considered. Some recommendations can be progressed independently; others depend on prior actions

having been completed. This criterion may affect the proposed timeframes but does not affect priority rating.

Section 5.2 provides a summary of the prioritised Set A recommendations. A more detailed presentation of the application of the prioritisation criteria to the Set A recommendations is provided in Appendix A – Application of Prioritisation Framework to Set A Recommendations.

4.3 Functional Model

In Deliverables 1 and 2 a generic EDB functional model was introduced as a tool for contextualising standardisation and collaboration opportunities. The functional model was developed using publicly available information about organisational designs used by EDBs. Set A recommendations are linked to elements of the model in Section 5.2. The functional model is summarised in Appendix B – Functional Model.

4.4 Evaluation of Set B Recommendations

Set B recommendations provide a system to ensure that efficiency opportunities the industry is structurally less likely to identify are nonetheless surfaced and acted upon. The evaluation of Set B recommendations is based on whether the transparency and accountability mechanisms proposed create sufficient incentive for efficiency improvement at an industry-level, given the structural limitations described in Section 3.3.

Consumer benefit remains the primary objective but Set B recommendations do not deliver it directly. They create the conditions under which efficiency opportunities can be identified and acted upon on an ongoing basis. Implementation readiness is generally less important for Set B than for Set A, because these recommendations address structural issues that individual EDBs and ENA cannot resolve independently, and several require Government action to implement. The absence of ENA or EDB endorsement for Set B is not a weakness and reflects the logic of why Set B exists: the mechanisms needed to surface broader efficiency opportunities are precisely those that EDBs and ENA are less likely to propose themselves.

Section 6.2 provides a summary of the prioritised Set B recommendations.

5 Recommendations Arising from EDB Input

5.1 Overview

The industry engagement and responses to the letter of expectations produced a valuable set of actions identified by EDBs and groups of EDBs. The recommendations associated with these actions are set out in this section, prioritised using the framework outlined in Section 4.

5.2 Summary of Recommendations Arising from EDB Input

#	Recommendation	Primary Actor	Timeframe	Priority
A1	**Formalise and scale shared services and joint operating models**	Regulator, ENA, EDBs	2026-2027	High
A2	**Standardise connections and form common shop-front roadmap**	ENA, EDBs	2026-2027	High
A3	**Formalise national mutual aid and assess critical spares platform**	ENA, EDBs	2026-2027	High
A4	**Establish Smarter Networks coordination group and DSO framework**	ENA, EDBs, Transpower, regulators	2026-2027	High
A5	**Standardise flexibility services procurement**	ENA, EDBs, Transpower	2027-2028	High
A6	**Improve LV network data use and standardise LV monitoring**	ENA, EDBs, Electricity Authority	2028-2029	High
A7	**Standardise network planning framework and methodologies**	ENA, EDBs, Transpower	2028-2029	Moderate
A8	**Assess feasibility of a collective EDB financing mechanism**	NEG, EDBs	2027-2028	Moderate
A9	**Assess external cost drivers**	NZTA, Govt.	2027-2028	Moderate

Table 4: Summary of Recommendations Arising from EDB Input

Recommendations A1-A3 are standalone and may be pursued independently. Recommendation A4 proposes the establishment of an integrated Smarter Networks coordination group. Recommendations A5-A7 are workstreams that should proceed under the governance and support of that group. Recommendation A9 is outside the remit of EDBs and ENA and would require engagement with regulators and other

agencies to advance. Recommendations A2-A6 and A9 are broadly aligned with new actions and other feedback raised in the ENA response to the letter of expectations, indicating a level of EDB consensus in relation to these issues.

Figure 1 shows how the Set A recommendations relate to the elements of the functional model referred to in Section 4.3. Rationale for the mapping is provided in Appendix C – Mapping Set A Recommendations to Functions.

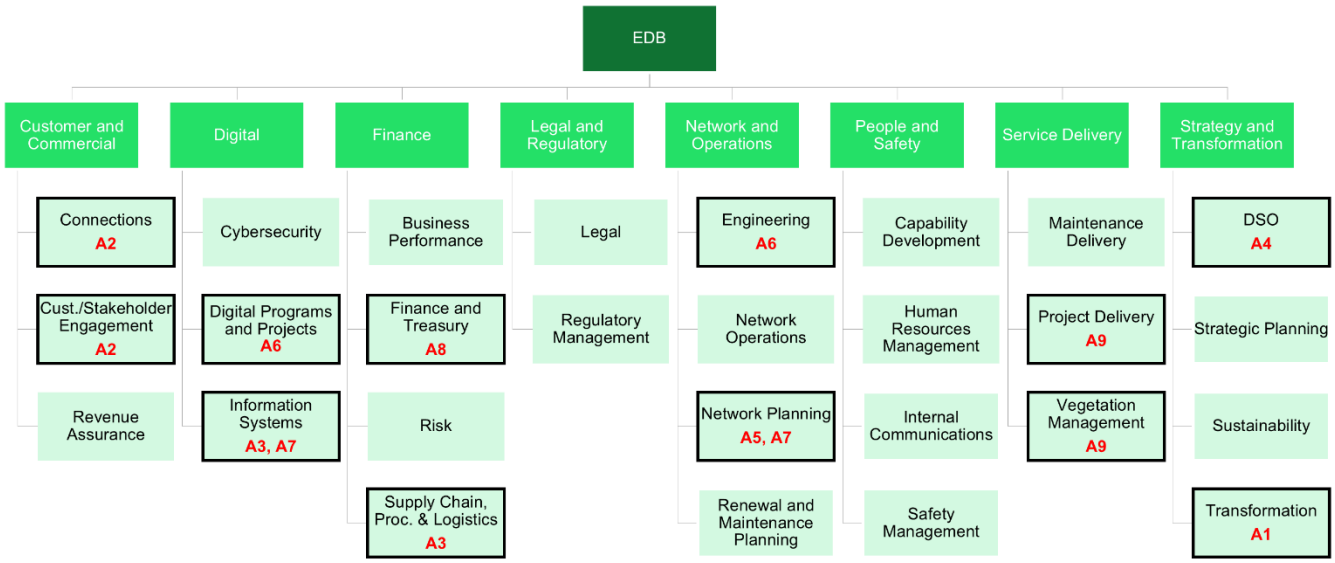

Figure 1: Functional model and Set A Recommendations

Each recommendation is discussed in further detail below with supporting evidence from each of the three inputs outlined in Section 3.1. Note: the specific stakeholder is not named in respect of the industry engagement evidence.

5.3 A1: Formalise and Scale Shared Services and Joint Operating Models

The most substantive actions committed to in responses to the letter of expectations relate to shared services, partnerships, and joint operating models. The December 2025 Alpine Energy/Aurora Energy joint operational services announcement, the February 2026 Counties Energy/The Lines Company Shared Platform and Services Partnership, and several other partnerships under development represent a wave of collaboration that could deliver consolidation-like efficiency benefits without requiring ownership change.

However, the history of EDB joint ventures includes examples of arrangements that did not endure. This includes the breakdown of the Alpine Energy/Network Waitaki partnership, Marlborough Lines' exit from the OtagoNet Joint Venture, and the more recent divestment of Electricity Invercargill's ownership interest in PowerNet. Without understanding why these arrangements failed, and without good practice frameworks to guide new ones, there is a risk that mistakes are repeated. Announced partnerships that do not progress or lead to benefits also risk creating an appearance of action without substance.

5.3.1 Recommendations

Root Cause Analysis: A regulator with relevant investigation and evidence gathering powers should undertake a root cause analysis of EDB collaborative arrangements, including joint ventures and shared services, that were discontinued before achieving intended objectives. It is proposed that such analysis aligns best with the Commerce Commission's existing responsibilities. Key findings should be made available to EDBs and other interested parties, with appropriate treatment of commercially sensitive material.

Shared Services/Joint Venture Good Practices: ENA should develop and publish a good practice framework for EDBs seeking to establish shared services or joint operating models, drawing on the root cause analysis, good practice from joint venture governance in other contexts, and the Alliance Charter concept proposed by Counties Energy and The Lines Company (a governance and operating framework that would enable other EDBs to join the partnership model as it matures). The framework should include a requirement for EDBs entering joint operating arrangements to develop a contingency plan at establishment, stating how each EDB would reestablish independent operational capability if the arrangement were to fail. Working through contingency plans at the outset could also assist in assuaging concerns about capability loss and lock-in raised in the industry engagement, and lack of contestability for services raised in Electricity Invercargill's response to the letter of expectations.

Monitoring Partnerships: MBIE should establish a monitoring function to track whether announced partnerships are progressing as committed and delivering expected benefits. Progress should be reported annually and entered into the register maintained under Recommendation B1.

Consolidation of Asset Management Plans: ENA should engage with the Commerce Commission to explore options for consolidated asset management plans among joint venture partners, including what level of operational integration would be required, what flexibility exists within the Information Disclosure Determination, and any other conditions that would need to be met in order for joint venture partners to produce a consolidated AMP (or components thereof).

5.3.2 Evidence

Industry Engagement

Shared services and joint operating models were consistently identified as a significant near-term opportunity during the industry engagement by a number of EDBs. One EDB argued that efficiency benefits are maximised through ownership consolidation rather than standardisation and collaboration, and to encourage this, existing barriers to mergers and acquisitions should be removed. This issue is discussed in Recommendation B4. Opportunities to improve efficiency of asset management plan production for EDBs in a joint venture or management services context were discussed.

Reference: Deliverable 1, Sections 5.7, 5.10; interviews

Letter of Expectations

Nine EDBs or groups of EDBs proposed formal shared service collaborations as new actions in their responses. Deliverable 2 assessed shared services and joint operating models as the highest-impact theme across new actions proposed by EDBs.

Powerco's response to the letter of expectations identified historical joint venture failures as context for its recommendations, noting that understanding why these arrangements failed would assist in designing more durable models. Electricity Invercargill's response raised the lack of contestability for services as a specific concern with shared services arrangements, noting that once an EDB becomes dependent on a shared services provider, the ability to seek alternative arrangements may be limited.

Reference: Deliverable 2, Section 7.5.3; multiple EDB responses to the letter of expectations.

International Research

Finland's Energy Authority now allows DSOs to form joint ventures for network operation and control, something that was previously not permitted due to concerns about operational risk during storms and other network events. The regulatory change was made to enable improved efficiency, with a key condition that any joint venture must be established with a well-developed contingency plan documenting how each DSO would reestablish its own independent operational capability if the arrangement were to dissolve.

Reference: Energiavirasto, interview 28 January 2026.

5.4 A2: Standardise Connections and Form Common Shop-Front Roadmap

The lack of consistency in how EDBs manage connections covering processes, pricing, and customer-facing systems affects both efficiency and customer experience. The Electricity Authority has an active work programme on connection reform with new rules for connection pricing methodologies coming into effect from 1 April 2026 and changes to application processes for connecting distributed generation and large loads coming into effect from 1 December 2026 (with load application processes following on 1 June 2027).

The common shop-front concept that EDBs consistently raised in the industry engagement goes further, and suggestions were made in relation to improved digital platforms, standard engineering design packages, and a consistent end-to-end customer experience.

5.4.1 Recommendations

ENA and EDB Coordination: ENA should work with EDBs to ensure the connection-related projects raised in its response to the letter of expectations are implemented across the industry as a baseline standard. EDBs should be able to deviate from

ENA's standard only where they can demonstrate that customised arrangements better serve customer interests.

ENA and Electricity Authority Coordination: ENA and the Electricity Authority should maintain active coordination to ensure their respective standardisation initiatives and reform work remain aligned.

Connections Shop-Front Roadmap: ENA with involvement from EDBs and in consultation with the Electricity Authority should develop a longer-term roadmap toward a common shop-front for connections covering digital platforms, engineering design packages, and consistent pricing methodologies. Initiatives should be selected based on their alignment with the outcomes stated in the letter of expectations or updated guidance should it become available.

Standardised Performance Measures: EDBs should put in place standardised performance measures associated with connections that could be included in customer charters. They should also standardise their approach to measuring and reporting complaints, including in relation to connections. This would provide feedback that the changes are improving customer experience in alignment with the letter of expectations.

Reporting: Actions should be entered into the register proposed in Recommendation B1 as current initiatives on establishment, with progress reported against ENA's June 2026 and June 2027 milestones.

5.4.2 Evidence

Industry Engagement

The common shop-front concept emerged consistently across interviews as a practical near-term opportunity. Interviewees confirmed a lack of consistency in end-to-end connection processes, charges, and customer experience across EDBs, with the variation creating inefficiency for both EDBs and customers, particularly those seeking connections across multiple network areas.

The use of customer charters to document customer expectations and standardised approaches to categorising and measuring complaints were identified as opportunities for good practices developed in some EDBs to be applied across the industry.

Reference: Deliverable 1, Section 5.2; interviews

Letter of Expectations

ENA committed to "Connection quick wins" by June 2026 and "Standard connection contracts" and "Standardised technical standards" by June 2027. Electra committed to implement ENA industry connection process by December 2026. Alpine Energy and Aurora Energy reported delivering standardised connection processes, common digital channels, and consistent support for distributed energy resources. ETNZ supported connection standardisation to improve service quality and efficiency.

Reference: Deliverable 2, Section 6.3.3; ENA, Electra, Alpine Energy/Aurora Energy, ETNZ responses to the letter of expectations

International Research

Germany mandated that all DSOs digitise and standardise the connection process, creating the same digital interface and process for customers regardless of which DSO they deal with. In the future, connection planning and pricing will be driven by a centrally developed algorithm; the legal and regulatory basis for requiring this is in place. The German experience confirms that full standardisation of the customer-facing connection process is achievable across a fragmented multi-EDB sector.

The German regulator noted that a key recent success has been requiring DSOs to establish a common web platform where any customer can input their address to identify their DSO and get links to key information including the connection tool and network development plan. Initially the DSOs were reluctant to implement this, but they now support it as it has assisted their engagement with customers.

Reference: Federal Network Agency (BNetzA), interview 20 January 2026

5.5 A3: Formalise National Mutual Aid and Assess Critical Spares Platform

EDBs already collaborate effectively during major weather events, sharing crews, equipment, and operational support across network boundaries. This system is at different levels of formality in different parts of the country, for example the South Island EDBs have a formal mutual aid agreement, whereas in the North Island arrangements are more informal.

The industry engagement identified examples of cross-network support during Cyclone Gabrielle and the October 2025 Southland storms that accelerated restoration. The South Island mutual aid agreement demonstrates that formalisation is achievable and provides a working model for a national framework.

The case for formalisation is to provide assurance that the existing outcomes delivered under a more informal approach will continue to apply as organisations change and develop, especially in the context of potentially worsening severity and frequency of storms due to climate change. Evidence on mutual aid frameworks in the US electricity sector confirms that the benefits of formalisation, including faster mobilisation, pre-agreed cost recovery, clearer crew competency standards, and defined escalation protocols, are difficult to replicate through informal arrangements alone, particularly as events increase in scale and frequency.

5.5.1 Recommendations

Formalised Mutual Aid Agreement: ENA should facilitate the development of a national mutual aid agreement covering line crews and other resource sharing (such as network controllers), equipment lending, and coordination protocols, building on the

South Island model. This is aligned with ENA's action proposed in the response to the letter of expectations.

Cost-Benefit Analysis for Spares Visibility Platform: ENA should undertake a feasibility assessment and cost-benefit analysis for establishment of a virtual critical spares visibility platform. Such a platform would record each EDB's (and potentially also Transpower's) critical spares holdings, with detail such as equipment type, specification, location, and point of contact for access. The data held would need to provide sufficient detail to enable rapid identification of available stock following a major network event. This work would be strongly supported by the development of a common spares data model so that holdings are recorded in a consistent and searchable format across all participating EDBs.

A secondary benefit of improved spares visibility is that EDBs will over time be able to rationalise their own stockholding as confidence in the broader availability of industry-wide spares increases. A tertiary benefit of undertaking such a project is that it would provide a precedent for a standardised asset data model, with significant learning and the potential to identify further opportunities for standardising data models across the industry.

This project will be technically challenging due to the range of enterprise resource planning (ERP) and asset management information systems in use across the industry, and a lack of standardised catalogue master data. A practical starting point would be to select a more mature EDB's master data catalogue to standardise against; develop interfaces for EDBs using SAP and Maximo, as these are the most commonly used platforms and are generally used by larger EDBs with larger stock holdings; and to start with a small number of the highest criticality equipment types as a pilot. If successful, interfaces could then be developed for the next most prevalent systems in use across the industry, and other equipment types.

Reporting: Both actions should be entered into the register proposed in Recommendation B1 as current initiatives on establishment, with progress reported against ENA's December 2026 and June 2027 milestones.

5.5.2 Evidence

Industry Engagement

The industry engagement was unanimous in its feedback that EDBs collaborate well during and in the aftermath of extreme events such as storms. Mutual aid and resilience were consistently raised topics in the industry engagement, with strong convergence on both the value of existing arrangements and the case for formalisation.

Reference: Deliverable 1, Section 5.8, 5.9; interviews

Letter of Expectations

Mutual aid and resilience were identified in Deliverable 2 as a high-impact theme among new actions proposed, noting that proposed initiatives align with the letter of expectations' requirements for improved security and resilience.

ENA committed to developing a national mutual aid agreement, noting that while networks already assist each other and share resources in emergencies, there is an opportunity to formalise arrangements nationally in a similar way to what is in place for South Island EDBs. ENA also proposed a virtual spares visibility platform, which it described as a "virtual store where EDBs keep a record of their critical spares holdings and associated details so all EDBs have visibility."

Five EDBs described resource sharing during events as an existing practice.

Reference: Deliverable 2, Section 6.7.1, 7.5.2; ENA response to the letter of expectations; multiple EDB responses to the letter of expectations

International Research

The National Association of Regulatory Utility Commissioners (NARUC) paper "Regional Mutual Assistance Groups: A Primer" provides a comprehensive analysis of formalised mutual aid frameworks in the US electricity sector. The paper explains that formalisation delivers benefits that informal coordination cannot consistently provide including faster mobilisation, pre-agreed liability and cost recovery terms, clearer crew competency standards, and scalability to events that exceed any single utility's capacity.

The US has established at least four initiatives that promote partnerships within the wider electricity sector to share spare equipment to support grid resilience. While these are primarily targeted at the transmission level, the SpareConnect programme covers distribution transformers and other equipment. It provides decentralised access to points of contact at member utilities so that members can connect with one another about equipment availability in an emergency.

References: Regional Mutual Assistance Groups: A Primer, Keogh and Thomas, prepared with US Department of Energy support; Spare Equipment and Grid Resilience, Edison Electric Institute.

5.6 A4: Establish Smarter Networks Coordination Group and DSO Framework

New Zealand's electricity system is undergoing rapid change. Distributed energy resources (DER) including solar PV, batteries and electric vehicles are being connected to distribution networks in growing numbers. Flexibility services are emerging as a lower-cost alternative to network reinforcement in some situations. Distribution system operation (DSO) which could see EDBs actively managing two-way power flows and coordinating DERs is increasingly being discussed as an evolution of the traditional distribution network operator function. Economic modelling by BCG referred to in Vector's response to the letter of expectations estimated total system cost savings of $23.7b between 2022 and 2050 if New Zealand were to follow a 'smart system' scenario where these capabilities are realised.

There are two key strategic risks that need to be considered in this context. The first is that EDBs fail to innovate to realise these benefits. The second is that EDBs work independently producing fragmented capability that lacks interoperability and therefore cannot be scaled. The industry engagement and responses to the letter of expectations identified a range of activities that EDBs are undertaking to consult on, trial, and implement such capabilities, which suggests the first risk has been identified and is being mitigated. However, the industry engagement raised concerns such as that EDBs have their own DSO ambitions and are in some cases undertaking similar flexibility trials using different and potentially incompatible technologies and protocols.

ENA's proposed 'Smarter Networks' group modelled on the ENA UK Open Networks programme is targeted at managing the second risk. In its response to the letter of expectations, ENA proposed establishment of the group to develop a DSO Framework, with key tasks including:

- Define and refine capabilities, roles and functions (CRFs) DSOs will perform
- Determine which CRFs would benefit from consistent and standardised policies
- Develop policies and standards to ensure common and consistent DSO operating models across New Zealand

5.6.1 Recommendations

Smarter Networks Coordination Group: ENA should work with stakeholders to establish the Smarter Networks coordination group. Participants should include EDBs, Transpower (with both System Operator and Grid Owner represented), the Electricity Authority, the Commerce Commission, EECA, MBIE, and the Electricity Engineers' Association (EEA). A key initial consideration should be governance and resourcing of the group. While ENA may play a key role in motivating the establishment of the group, its scale and role as an advocacy organisation rather than a technically led entity may mean that leadership is required from another participant, or from a newly established body. A clear line of accountability for the group's outputs should be established, identifying who is responsible for progress, and to whom they are accountable. This would ensure the group delivers against the outcomes set in the letter of expectations.

The group should be sufficiently resourced to maintain an active work programme. The ENA UK Open Networks programme provides a model for the scope and pace of work that a well-resourced coordination group can deliver. Over five years that programme produced more than 350 published outputs including tools, methodologies, frameworks and standards. The structure of the Smarter Networks group should specifically consider the ability of smaller EDBs to participate, and its work should consider their ability to adopt outputs.

Regulatory participants should engage substantively rather than just as observers. Vector's response to the letter of expectations noted that regulatory support would be required to clarify roles between EDBs, shared DSO services, and the system operator. Counties Energy called for regulators to actively support rather than

inadvertently constrain innovation. The Smarter Networks group would provide the forum for these regulatory questions to be worked through in a coordinated way.

Reporting: This action should be entered into the register proposed in Recommendation B1 as a current initiative on establishment.

5.6.2 Evidence

Industry Engagement

DSO development, flexibility standardisation, and LV visibility were frequently discussed in the industry engagement. A range of interviewees identified differences in the approaches being taken by individual EDBs and emphasised the importance of combining efforts to avoid fragmented and potentially incompatible capability development. EDBs noted the importance of leadership from Government and regulators to ensure an integrated approach is taken across the sector.

Reference: Deliverable 1, Section 5.17; interviews

Letter of Expectations

ENA committed to establishing a Smarter Networks group modelled on ENA UK's Open Networks programme, to work with EDBs and other stakeholders to define DSO capabilities, roles, and functions, and to determine what industry policies are needed. Deliverable 2 noted that this proposal may address concerns that individual EDB ambitions in this space could become a barrier to collaboration and suggested that MBIE participation could provide useful insight into the level of EDB engagement. Multiple EDB responses to the letter of expectations supported the case for a coordinated structure.

Reference: Deliverable 2, Section 7.7.1; ENA, Vector, Counties Energy, Unison Networks, Electra responses to the letter of expectations.

International Research

The UK Energy Networks Association's Open Networks programme is the primary international reference point for this recommendation. Launched in 2017, the programme brought together electricity network companies, Ofgem, government and industry stakeholders to develop a coordinated approach to the transition to DSO, including defining key DSO functions and developing the tools, frameworks, and implementation roadmaps required to support it.

Reference: ENA UK Open Networks programme 2017-2022; ENA UK Publications

5.7 A5: Standardise Flexibility Services Procurement

This recommendation is proposed as a workstream within the Smarter Networks coordination group established under Recommendation A4.

Flexibility services are a type of non-network solution that involve the use of controllable loads, distributed generation and storage to manage network constraints and thereby defer capital investment. In the industry engagement and letter of expectations EDBs reported on a range of trials completed and underway. As discussed above, a key risk to the efficiency of the electricity sector is that EDBs take different approaches to DSO-related capabilities, resulting in fragmentation, inefficiency, and inability to realise the full benefits of this capability at each level of the power system.

5.7.1 Recommendations

Flexibility Services Standardisation: The Smarter Networks group should establish flexibility services standardisation as a priority workstream. The group should build on ENA's commitment to defining a consistent industry-standard approach to flexibility services, which ENA described as potentially covering standardised terminology, common flexibility products, aligned performance standards, and template contracts, with a standardised industry flexibility outcome targeted by December 2028.

Flexibility Marketplace Scalability: Vector, Unison, and Powerco are jointly developing a flexibility marketplace through Innovation and Non-Traditional Solutions Allowance (INTSA) funding. The Smarter Networks group should assess the outputs of this project for broader applicability across the industry.

Reporting: Both actions should be entered into the register proposed in Recommendation B1 as current initiatives on establishment, with progress tracked through the Smarter Networks group work programme.

5.7.2 Evidence

Industry Engagement

Demand flexibility and demand response were regularly discussed in the industry engagement, with both EDBs and regulators consistently identifying the need for a standardised approach.

Following the industry engagement, EECA provided a policy memo setting out its position on EDB standardisation and collaboration for demand flexibility. The memo notes that EECA's FlexTalk 1.0 and 2.0 programmes have demonstrated that coordinated control of solar and storage, EV chargers, hot water, and heating systems can reduce load peaks, defer network upgrades, and deliver bill savings of 15-50% for consumers; good evidence for the impact of flexibility services on electricity affordability.

Reference: Deliverable 1, Sections 5.6, 5.12, 5.17; Policy memo - EDB Standardisation and Collaboration, EECA, Nov 2025; interviews

Letter of Expectations

Responses to the letter of expectations frequently discussed the importance of flexibility services to improving network utilisation. Flexibility services were discussed in Deliverable 2 in the context of existing collaborative initiatives and new actions. The key new action was ENA's proposed standardised industry flexibility covering terminology, common products, performance standards, and template contracts.

Reference: Deliverable 2, Sections 6.8.2, 6.8.3, 7.3.5; ENA response to the letter of expectations

International Research

Standardisation of flexibility services procurement has been, and continues to be, extensively considered by the ENA UK Open Networks programme and subsequent workstreams. This includes consideration of technology, standardised flexibility products, commercial agreements, conflict management, and performance measurement.

Reference: ENA UK Publications

5.8 A6: Improve LV Network Data Use and Standardise LV Monitoring

This recommendation is a workstream within the Smarter Networks coordination group established under Recommendation A4.

LV network visibility is the capability to monitor capacity, utilisation, and power quality at the low voltage level. It is an enabler of the DSO capabilities described in Recommendation A4 and the flexibility services standardisation in Recommendation A5. Without it, EDBs cannot identify where network constraints are emerging, optimise the timing of capital investment, or manage the growing volume of DER being connected to LV networks.

In the industry engagement, and in a number of responses to the letter of expectations, EDBs reported that limited access to smart meter data remains a central barrier to effective LV monitoring. This is despite DPP4 including an allowance for smart meter data and the Electricity Authority assessing prices in 2025 for this data from metering equipment providers (MEPs) and finding them acceptable. The limits to smart meter data access cited by EDBs include ongoing access costs, data ownership by MEPs, inconsistent data rights and availability across providers, and a lack of standardised access to power quality and voltage data needed for LV monitoring.

ENA's response to the letter of expectations recognised these issues and committed to a cost-benefit analysis exploring how EDBs can better use and share LV data nationally. This work aims to unlock the value of data to support risk-based

management of LV headroom, help defer network upgrades, and enable a more dynamic, data-driven approach to distribution system operation.

5.8.1 Recommendations

Cost-Benefit Analysis on LV Network Data: ENA should complete its research and cost-benefit analysis on how EDBs can use and share LV network data, including capacity information. The outputs of this work should inform a standardised LV monitoring framework developed within the Smarter Networks group, covering common approaches to monitoring equipment, data models, and stakeholder communication, that can be adopted across EDBs at different levels of existing maturity. This work should provide clear and evidence-based guidance on what level of data access is required for EDBs to undertake effective LV network management.

Reporting: Progress on ENA's research and cost-benefit analysis should be entered into the Recommendation B1 register and be tracked through the Smarter Networks coordination group work programme.

5.8.2 Evidence

Industry Engagement

LV visibility was discussed extensively in interviews as a high-value area that may be under progressed in some EDBs. The industry engagement found that LV visibility is foundational to DSO functions and flexibility markets, and that economic modelling completed for ENA had shown strong benefits of improved LV visibility at system level. The notion that EDBs require ubiquitous smart meter data for LV monitoring was challenged in one instance, a claim which is deserving of consideration in ENA's research.

The varying approaches to determining and communicating network capacity to stakeholders were discussed, with the suggestion that this should be standardised.

Reference: Deliverable 1, Sections 5.6, 5.17; interviews

Letter of Expectations

In addition to ENA's commitment to research and cost-benefit analysis on LV data, Counties Energy and Unison Networks stated their commitment to collaborating on modern LV network architecture principles with a focus on enhanced monitoring and control. Vector noted that the EDB Data Group involving seven EDBs is collaborating on advanced analytics, AI applications, and LV visibility solutions.

Six EDB responses to the letter of expectations raised smart meter data access as an external constraint with various solutions, including centralisation and mandating of free access.

Reference: Deliverable 2, Sections 6.4.4, 7.4.1, 8.6.1; various EDB responses to the letter of expectations

International Research

Finland's approach to smart meter data access provides the most relevant international reference point. Energiavirasto described a regulated centralised data hub that collects consumption and other smart meter data from all 77 Finnish DSOs. The hub is now operational and accepted within the industry after initial resistance. The Finnish model is noted here as context for the regulatory review recommended above rather than as a recommendation for direct adoption. A similar approach is being adopted in Germany with 2029 being targeted for implementation.

Reference: Energiavirasto, interview 28 January 2026; Federal Network Agency (BNetzA), interview 20 January 2026

5.9 A7: Standardise Network Planning Framework and Methodologies

This recommendation is a workstream within the Smarter Networks coordination group established under Recommendation A4.

Network planning is the process by which EDBs forecast demand, assess network capacity, and determine investment requirements. It is currently undertaken independently by each EDB using different decision-making frameworks, criteria, methods, and assumptions. Regional collaboration on planning has been undertaken in some parts of the country and has delivered benefits including reduced transmission charges and deferred capital investment. However, the lack of consistent planning frameworks means that good practice and innovation propagate slowly across the sector. As non-network solutions including flexibility services become a more important tool for EDBs to maximise network utilisation, it is also critical that network capacity information is communicated to access seekers in a consistent and actionable manner.

The Electricity Authority has a plan to improve the consistency of EDBs' capacity maps and the data underpinning them, starting at the high voltage level. This work will contribute directly to the goal of this recommendation and complements the LV network data use work proposed under recommendation A6.

Improving the standardisation of network planning frameworks and methodologies is a longer-term workstream that depends on the Smarter Networks coordination group being established and operational. It is assigned Moderate priority because no EDB or ENA made an explicit commitment to planning standardisation as a new action, and the pathway to implementation requires the coordination structure of Recommendation A4 to be in place first.

5.9.1 Recommendations

Network Planning Standardisation Workstream: The Smarter Networks group should establish network planning standardisation as a workstream with common demand forecasting and decision-making methodologies as initial priorities. Different

EDBs are at different levels of planning maturity, and the framework should accommodate this, with defined maturity levels that allow smaller EDBs to adopt common approaches progressively rather than requiring immediate full adoption. The material produced should be consolidated into planning guidance by the EEA in a similar manner to the EEA's work on asset criticality, asset health, and resilience.

Network Capacity Communication Standardisation Workstream: The Smarter Networks group should develop a standard approach to communicating available network capacity to access seekers. Ideally this should present both transmission and distribution constraints together. Inconsistent approaches to capacity communication were identified in the industry engagement as a barrier for parties seeking to connect generation, storage, or large loads across multiple EDB networks. A common format and publication standard building on the Electricity Authority's planned work would reduce transaction costs for access seekers and promote efficient location of DER, considering both transmission and distribution constraints.

Reporting: Progress on both workstreams should be entered into the Recommendation B1 register and tracked through the Smarter Networks group work programme.

5.9.2 Evidence

Industry Engagement

Network planning standardisation was discussed in interviews as an area where further consistency could deliver efficiency benefits, though it was not among the most prominent themes. EDBs reported existing regional network planning collaboration, primarily through coordination with Transpower on transmission constraints and load management. Network planning standardisation was characterised by some stakeholders as a coordination and incentive problem rather than a capability problem.

Inconsistent approaches to communicating available network capacity to access seekers were identified as a specific practical barrier for parties seeking to connect generation, storage, or large loads across multiple network areas.

One EDB referred to current work on using machine learning to support load forecasting, which could provide the basis for an improved and standardised approach. This recommendation seeks the propagation of such innovations across the industry.

Reference: Deliverable 1, Sections 5.6, 5.12; interviews

Letter of Expectations

Network planning standardisation was notably absent from new actions proposed in letter responses. Deliverable 2 identified this explicitly as a gap, noting that actions to standardise network planning practices were less prominent than anticipated. Deliverable 2 observed that standardisation in connection practices is likely to contribute to greater consistency in network planning over time, and that there may be further opportunities to bring consistency to planning decision-making criteria and underlying assumptions.

WEL Networks discussed its new risk-based approach to security of supply that considers asset condition, network interconnectedness, load criticality, and the availability of storage and demand response. Such an approach recognises that flexibility and non-network solutions can in some cases obviate the need for strict N-1 network security which would enable network investment to be deferred. This recommendation seeks the propagation of such innovations across the industry.

Reference: Deliverable 2, Section 7.8; WEL Networks response to the letter of expectations

International Research

BNetzA (Germany) has recently introduced a requirement for coordinated regional network planning using a scenario-based approach. DSOs were required to collaborate within six defined network regions to develop regional network development plans. This initiative has been successful in producing more integrated regional plans and in facilitating engagement with transmission system operators (TSOs), although each region adopted a different approach.

Reference: Federal Network Agency (BNetzA), interview 20 January 2026

5.10 A8: Assess Feasibility of a Collective EDB Financing Mechanism

EDBs currently finance capital investment through commercial debt at rates that are materially higher than those available to local government through the Local Government Funding Agency (LGFA). As an estimated $22 billion of network investment is required over the next decade to support electrification, the cost of that debt will be a significant driver of future distribution charges. Northern Energy Group (NEG) and several EDBs proposed a collective financing mechanism modelled on the LGFA.

This recommendation is assigned Moderate priority and a later timeframe because it may require Government support, involves financial sector participation beyond EDBs and ENA, and requires governance and institutional design work before any mechanism could be established.

5.10.1 Recommendations

Feasibility Assessment: EDBs in consultation with Government should commission an assessment of whether a collective EDB financing mechanism could materially reduce EDB cost of debt, and what governance arrangements would be required. The assessment should consider the LGFA model as a reference point, examine what ownership and governance structures would be required for EDBs to participate, and address how a consumer pass-through condition could be designed and enforced. Top Energy's offer to pilot the mechanism with a commitment to pass all savings to consumers should be considered as a starting point for the assessment.

Any recommendation to proceed should be conditional on a credible consumer pass-through mechanism being in place. A financing mechanism that reduces EDB borrowing costs without ensuring those savings flow to consumers would improve EDB financial performance without delivering the affordability outcome the recommendation is designed to achieve.

5.10.2 Evidence

Industry Engagement

Opportunities to reduce EDBs' cost of debt were occasionally raised in the industry engagement.

References: interviews

Letter of Expectations

Deliverable 2 noted that lowering EDBs' cost of debt could improve industry efficiency and electricity affordability if savings are passed through to consumers, and that it would also support the major capital investment required for electrification.

The Northern Energy Group (NEG) response to the letter of expectations proposes working with Government to explore shared funding mechanisms and LGFA-aligned models. It refers to its engagement with the Minister for Energy on this topic.

Top Energy's response to the letter of expectations provided the most detailed consideration of this topic. Its analysis suggests that given total EDB debt of $5 billion, a 0.5% reduction in debt costs would translate into approximately $25 million savings per annum, or $40 per consumer connected to Top Energy's network.

References: Deliverable 2, Section 6.5.1; NEG, Top Energy responses to the letter of expectations

International Research

No direct evidence.

5.11 A9: Assess External Cost Drivers

Two categories of external cost driver were consistently raised in the industry engagement and letter responses: temporary traffic management (TTM) rules and vegetation management regulations. These are costs imposed on EDBs by external regulatory and policy settings that are outside EDBs' direct control. They represent a substantive component of network operating and capital expenditure, and reducing

them would improve EDB efficiency and, if passed through, reduce distribution charges for consumers.

These matters are assigned Moderate priority because the primary actors are outside ENA and EDBs: NZTA, and Government respectively, and EDB influence over outcomes is limited. They are nonetheless included in Set A because they were consistently and specifically raised by EDBs across both inputs, with quantified cost impacts in several cases.

5.11.1 Recommendations

TTM Review: NZTA should review whether risk-based adjustments to TTM requirements could reduce costs without compromising public safety. Options such as tiered requirements based on traffic volume or simplified approvals for low-risk sites were identified in responses as practical starting points. ENA should provide NZTA with the sector's quantified cost evidence to support this review.

Vegetation Management Review: Government should review vegetation management cost recovery arrangements, specifically whether costs associated with trees owned by commercial landowners, particularly forestry operators, should be recoverable from those landowners rather than socialised across all consumers.

5.11.2 Evidence

Industry Engagement

TTM costs and vegetation management were raised in the industry engagement and reported in Deliverable 1 as structural cost pressures borne by consumers. TTM and vegetation management were raised by geographically and structurally diverse EDBs.

References: Deliverable 1, Section 5.16; interviews

Letter of Expectations

These two cost drivers were identified as high-impact topics in Deliverable 2's Other Relevant Topics chapter, selected on the basis of breadth of respondent support, quantifiable cost impacts cited, and broad applicability across the industry.

Five EDBs and ENA reported that changes to TTM rules have significantly increased the cost of working in road corridors, with costs approaching the quantum of labour and materials costs on some projects. ENA documented TTM costs rising 208% since 2019.

On vegetation management: five EDBs and ENA argued that vegetation management regulations impose costs that should be better attributed to tree owners, particularly commercial landowners. ENA estimated that 6-8% of the industry's vegetation management costs could be avoided if councils and forestry companies managed trees adjacent to networks.

References: Deliverable 2, Sections 8.3.2, 8.3.4; ENA and various EDB responses to the letter of expectations

International Research
No direct evidence.

6 Recommendations to Support Further Efficiency Improvement

6.1 Overview

A primary objective expressed in the letter of expectations is improved affordability for New Zealand electricity consumers. Improved standardisation and collaboration is identified as a key pathway to that outcome, and the recommendations in Section 5 address the actions EDBs have identified for themselves. However, as Section 3.3 discusses, there are structural reasons why engagement with EDBs cannot be relied upon to surface the full landscape of opportunities. The recommendations in this section address these issues through three primary elements:

1. A register of standardisation and collaboration initiatives maintained by ENA that provides visibility of activity across the industry
2. Comparative efficiency benchmarking that provides an objective, publicly available picture of relative efficiency at the individual EDB level
3. Expanded information disclosure requirements and analysis by the Commerce Commission covering what lower-performing EDBs are doing to improve efficiency and what higher-performing EDBs are doing that others could learn from

Together these elements create a system of transparency and accountability. The register makes industry-wide standardisation and collaboration activity visible. Benchmarking provides an objective picture of relative efficiency. Expanded information disclosure requirements and analysis by the Commerce Commission provides visibility of improvement activity among lower performers and of good practice among higher performers. Stakeholders including the Government and consumers can draw conclusions from this published information. Accountability is achieved through transparency, with each element producing outputs that are made publicly available, ensuring that the performance of individual EDBs is visible.

In addition to these recommendations, Recommendation B4 proposes a review of regulatory incentives to better align them with the efficiency objective. Recommendation B5 proposes extending price-quality regulation to currently exempt EDBs be considered if the lighter-touch mechanisms in Recommendations B1-B3 do not produce sufficient improvement.

6.2 Summary of Recommendations to Support Further Efficiency Improvement

#	Recommendation	Primary Actor	Timeframe	Priority
B1	**Establish register of standardisation and collaboration initiatives**	ENA	2026	High

#	Recommendation	Primary Actor	Timeframe	Priority
B2	**Enable comparative efficiency benchmarking of individual EDBs**	Government / Commerce Commission	2026-2028	High
B3	**Information disclosure on standardisation and collaboration**	Commerce Commission	2028 onwards	High
B4	**Review incentives for standardisation and collaboration**	MBIE / Commerce Commission	2028-2029	Moderate
B5	**Review extension of price-quality regulation to currently exempt EDBs**	Government / Commerce Commission	Longer-term	Conditional

Table 5: Summary of Recommendations to Support Further Efficiency Improvement

Each Set B recommendation is designed to address one or more of the structural limitations identified in Section 3.3. Table 6 maps each recommendation against the five structural limitations, indicating where a recommendation primarily addresses a limitation and where its contribution is partial. Further rationale for this mapping is provided in Appendix D – Mapping Set B Recommendations to Structural Limitations.

#	EDB interests	ENA consensus	Multi-EDB alignment	Exempt EDBs	Industry-wide analysis
B1		Partial	Primary		Primary
B2	Primary			Primary	Primary
B3	Primary		Partial	Primary	Partial
B4	Primary		Partial	Partial	
B5				Primary	

Table 6: Structural Limitations Addressed by Set B Recommendations

Each Set B recommendation is discussed in further detail below with supporting evidence from each of the three inputs outlined in Section 3.1. Note: the specific stakeholder is not named in respect of the industry engagement evidence.

6.3 B1: Establish Register of Standardisation and Collaboration Initiatives

ENA is well placed to establish and maintain a register of standardisation and collaboration initiatives given its existing coordination role and industry-wide relationships. This would improve the visibility of these initiatives for EDBs as a means of generating wider participation and avoiding duplication, and for other stakeholders to provide assurance that the industry is seeking continual efficiency improvement. It would also address a concern raised frequently in interviews, that while significant collaboration is already occurring across the industry, it is not made visible to stakeholders.

6.3.1 Recommendations

Establish Register: ENA should establish and maintain a publicly accessible register of standardisation and collaboration initiatives across the industry. The register should capture three categories of initiative:

1. **Completed Initiatives:** This should include scope, participating EDBs, governance arrangements, benefits achieved, and outputs available for adoption by other EDBs such as standards, templates, frameworks, tools, and expertise.
2. **Current Initiatives:** This should cover status, participating EDBs, expected benefits, and expected outputs. This provides visibility of activity underway to spark further collaboration and knowledge sharing and prevents duplication of effort.
3. **Identified Future Opportunities:** This should include opportunities that have been assessed as potentially worthwhile but not yet progressed, with sufficient analysis to allow prioritisation. ENA should actively identify and assess opportunities across the industry that warrant further consideration, drawing on EDB input, cross-sector analysis, and international evidence where relevant.

ENA is the appropriate owner because it already has the industry-wide relationships and coordination infrastructure to gather this information, and maintaining such a register is generally consistent with its existing activities (in interviews ENA noted that it had commenced establishing a list of such initiatives). Maintaining the register, including establishing processes to ensure that information flows from EDBs are effective, should be built into ENA's operating model, and be appropriately resourced.

The register provides an independent evidence base that stakeholders can use to validate and contextualise information disclosed by EDBs about their standardisation and collaboration improvement activity under Recommendation B3.

Register Existing Actions: The actions associated with Recommendations A1-A8 (EDB-driven standardisation and collaboration actions) should be entered into the register as a first tranche of current and future initiatives, providing an immediate evidence base and establishing the register as a live process from the outset. Even if the other Set B recommendations are not taken up, establishing the register remains a natural complement to the Set A recommendations, and would enable tracking and benefits management.

6.3.2 Evidence

Industry Engagement

ENA and several EDBs acknowledged the absence of a rigorous centralised record of standardisation and collaboration activities occurring across the industry. Collaboration occurs in self-selected, issue-driven groups and remains largely informal and undocumented at the industry-level, limiting visibility and meaning it is not possible to systematically quantify benefits.

In interviews ENA said that it had established a list as an initial response to the issue of the letter of expectations. Other EDBs suggested they are maintaining a structured record of initiatives they are involved in.

Reference: Deliverable 1, Sections 4.2 and 4.3; interviews

Letter of Expectations

No EDB proposed a centralised register as a new action, despite the industry engagement evidence identifying the gap. The absence of this action in responses to the letter of expectations is consistent with the structural limitations discussed in Section 3.3. No individual EDB has the incentive to propose infrastructure where a primary benefit is industry-wide visibility.

ENA's response to the letter of expectations identified "Sharing of asset management practices" and "Data initiative" as two new actions. These items both involve ENA coordinating cost-benefit analysis to determine possible new opportunities to improve standardisation and collaboration in particular areas. Under this recommendation, the register would provide the location for identified opportunities to be consistently registered and tracked.

Reference: Deliverable 2, Sections 6.6.1, 7.6.1, 7.8; ENA response to letter of expectations

International Research

The ENA UK's Open Networks programme maintained a structured library of published outputs including standards, frameworks, and tools developed through its workstreams that enabled distribution network operators (DNOs) to adopt common approaches without duplicating development effort. These outputs are similar to the "Completed initiatives" category of the New Zealand standardisation and collaboration register should aim to produce.

Reference: ENA UK Publications; ENA UK Flexibility Services Standard Agreement (specific example)

6.4 B2: Enable Comparative Efficiency Benchmarking of Individual EDBs

An objective, evidence-based foundation is needed to understand relative efficiency across the industry to enable identification and prioritisation of improvement opportunities. This perspective is fundamental to advancing the efficiency objective in the letter of expectations.

6.4.1 Recommendations

Enable Comparative Efficiency Benchmarking: The Government should enable comparative efficiency benchmarking of individual EDBs, either by repealing section 53P(10) of the Commerce Act or by requiring the Commerce Commission to undertake benchmarking for this purpose (and not those restricted purposes stated in the legislation).

Implement Comparative Efficiency Benchmarking: The Commerce Commission should design and implement a benchmarking framework drawing on existing information disclosure data as the primary source, to assess both regulated and exempt EDBs. The framework should normalise for factors outside the control of EDBs such as network density, terrain, and load growth. EDBs and other stakeholders should be consulted on the framework design. Requirements for information inputs that would improve the benchmarking capability should be considered and where identified, should be added to information disclosure requirements.

Publish Comparative Efficiency Benchmarking Results: Results should be published at the individual EDB level. Published results will provide the evidence base for the Commerce Commission's proposed activities under Recommendation B3, with relevant findings also added to the register maintained under Recommendation B1.

Public disclosure of this information makes the performance of individual EDBs visible to their stakeholders, creating an incentive for boards to direct management to improve efficiency.

6.4.2 Evidence

Industry Engagement
No direct evidence.

Letter of Expectations
Powerco’s response to the letter of expectations provided the most developed benchmarking argument, identifying s53P(10) of the Commerce Act as a specific barrier and proposing its repeal to enable comparative efficiency benchmarking, with draft legislative amendments provided in an appendix. Electra noted that extending the current information disclosure requirements and including additional analysis by the Commerce Commission could support the outcomes of the letter of expectations (rather than applying price-quality regulation to

exempt EDBs). Top Energy cited the CEPA report (industry productivity analysis) which suggests its support for better understanding EDB performance quantitatively.

Unison Networks proposed a nationally consistent KPI framework to measure sector performance and consumer outcomes. ENA proposed incorporating any new measures within the existing information disclosure framework rather than establishing a parallel oversight regime.

Reference: Deliverable 2, Section 5; ENA, Powerco, Electra, Top Energy, Unison Networks responses to the letter of expectations

International Research

Benchmarking the relative efficiency of electricity transmission and distribution businesses is well-established in Australia under the Australian Energy Regulator. This process considers the characteristics of each network business and how their productivity compares at the aggregate level and for the outputs they deliver to consumers. This analysis uses data that is publicly disclosed by businesses.

The US-based independent economist noted that benchmarking cost structures provides an objective, independent basis for assessing EDB efficiency and in addition to peer group comparisons, should also involve comparing EDB performance against prior years and international comparators.

Finland's Energy Authority benchmarks all 77 DSOs using a data envelopment analysis methodology focused on controllable operating costs. DSOs are grouped into cohorts of similar organisations before benchmarking is applied, ensuring that differences that are uncontrollable by management are accounted for before conclusions are drawn about relative efficiency. An attempt was made to incorporate capital expenditure into the benchmarking model but proved difficult. The Finnish framework therefore generally focuses on operating costs.

Germany operates a tiered benchmarking system across approximately 860 DSOs, all of which are subject to incentive regulation through revenue caps. The largest 200 or so DSOs are subject to full efficiency benchmarking against each other, with individual efficiency scores directly determining allowed revenues. DSOs with fewer than 30,000 customers may choose to participate in a simplified procedure under which a general efficiency level is determined and applied uniformly to the group rather than benchmarking each DSO individually.

Reference: Annual Benchmarking Report – Distribution and Transmission, Australian Energy Regulator; US-based independent economist, interview 5 December 2025; Energiavirasto, interview 28 January 2026; Federal Network Agency (BNetzA), interview 20 January 2026; The main tools of incentive regulation in Germany

6.5 B3: Information Disclosure on Standardisation and Collaboration

Published benchmarking results will identify EDBs that are underperforming relative to their peers. However, this will not reveal what those EDBs are doing in response, or

whether the gap is being addressed. Expanded information disclosure requirements, combined with the Commerce Commission's obligation to publish summary and analysis of disclosed information, would provide visibility of improvement activity among lower-performing EDBs and of what is contributing to strong performance among higher-performing ones. The Commerce Commission has relevant statutory powers under the Commerce Act to support this function.

6.5.1 Recommendations

Information Disclosure on Standardisation and Collaboration: The Commerce Commission should expand its information disclosure requirements under section 53C(2) of the Commerce Act to require EDBs to disclose information about what actions they are taking to improve efficiency through standardisation and collaboration, and whether those actions are likely to close any identified efficiency gap (through benchmarking under Recommendation B2). Once disclosed, the Commission should publish summary and analysis of this information under section 53B(2) of the Commerce Act, drawing on the evidence base developing through the register maintained under Recommendation B1. Publication of these findings will provide transparency to stakeholders on the improvement activity of individual EDBs.

Understanding High Performance: As part of, or as an extension to, its existing industry engagement activities, the Commerce Commission should engage with EDBs identified through benchmarking as higher performers to understand what is contributing to their efficiency. The Commerce Commission's findings should be published, providing an evidence base that lower-performing EDBs can draw on when developing their own improvement approaches, including through standardisation and collaboration with peers.

The Commerce Commission's independence from EDBs, its existing powers, and its familiarity with financial and non-financial performance of EDBs make it well placed to perform these functions.

6.5.2 Evidence

Industry Engagement

EDBs noted the absence of a centralised priority-setting or coordination framework for industry standardisation and that the benefits generated by standardisation and collaboration initiatives are not consistently measured or reported. There was also feedback that the effectiveness of industry bodies depends on their ability to balance inclusivity with ambition, and that industry-led improvement has limits where initiatives can require EDBs to act against their short-term interests.

Reference: Deliverable 1, Section 4.3; interviews

Letter of Expectations

No responses to the letter of expectations proposed an independent oversight body. Deliverable 2 notes that the new actions proposed by ENA and EDBs do not fully address the supporting and enabling structures required to advance standardisation and collaboration at an industry level.

Reference: Deliverable 2, Section 7.8

International Research

As discussed in Section 6.4.2, efficiency benchmarking is used extensively as part of regulating DSOs in Germany. Published determinations create transparency about relative performance across the sector, and top-performing networks are identified as exemplars to foster sector-wide learning on efficiency drivers. This approach demonstrates that transparency and public identification of relative performance can create pressure for underperformers to close efficiency gaps.

Reference: Bundesnetzagentur publishes determinations on cost regulation for electricity and gas network operators, Federal Network Agency (BNetzA); Federal Network Agency (BNetzA), interview 20 January 2026

6.6 B4: Review Incentives for Standardisation and Collaboration

The industry engagement and the responses to the letter of expectations both identified regulatory incentive settings as a factor that influences the pace and extent of standardisation and collaboration. This recommendation proposes a review to assess whether current incentive frameworks are well aligned with the objective of improved efficiency through standardisation and collaboration, and whether changes could better support and reward collaborative behaviour.

6.6.1 Recommendations

Undertake Review: Given that the Minister for Energy has identified improved standardisation and collaboration as a key means of improving EDB efficiency, there is a strong case for reviewing whether incentive frameworks could be better aligned to that objective. The interaction with existing price-quality regulation would need to be carefully considered in any such review, which is why a joint approach involving MBIE and the Commerce Commission is proposed. The timing of any such review should also take into account default price-quality path (DPP) resets and the Commerce Commission's work programme leading up to that time.

The review should consider ideas that arose during the industry engagement and from EDBs' responses to the letter of expectations, including:

- Whether Incremental Rolling Incentive Scheme (IRIS) carry-forward periods are well-matched to the timescales over which standardisation benefits accrue
- Whether DPP opex constraints prevent efficient collaborative expenditure

- Whether the collaboration incentives available under the INTSA mechanism, which currently applies to price-quality regulated EDBs, should be expanded, for example through new Government funding distributed to qualifying initiatives that, if successful, would lead to improved efficiency for participants and could be scaled more broadly across the industry.
- Whether regulatory settings could be adjusted to recognise and reward EDBs that move early to standardise, share platforms, and build scalable service models

The review could also consider whether ownership consolidation could contribute to improved efficiency, including whether funding assistance may be required to enable EDB amalgamation and whether mergers and acquisitions that would, on the evidence available, lead to improved efficiency should be incentivised.

6.6.2 Evidence

Industry Engagement

The industry engagement frequently identified the risk of misaligned regulatory incentives to improved efficiency through standardisation and collaboration. The mismatch between the timescales over which standardisation benefits accrue and IRIS carry-forward periods was identified as a specific design problem.

Some interviewees observed that the INTSA mechanism, while useful for innovation projects among price-quality regulated EDBs, is not available to exempt EDBs and therefore could act as a barrier to exempt EDBs participating. Exempt EDBs are not subject to the same revenue restrictions and can fund such projects without requiring a specific allowance, though it was not always clear whether this was understood by interviewees.

Reference: Deliverable 1: Section 5.10; interviews

Letter of Expectations

Two EDBs made the most substantive proposals on incentives for collaboration and standardisation. Powerco argued that incentives for collaboration and standardisation are necessary to realise improved industry efficiency, contending that mandating such behaviour risks producing compliance-driven responses that do not deliver genuine outcomes. Powerco further argued that incentive mechanisms should extend to encouraging mergers and acquisitions. Alpine Energy and Aurora Energy proposed that economic regulation should explicitly recognise and reward EDBs that standardise, share platforms, and implement scalable service models.

Consistent with their broader responses, Wellington Electricity and Powerco suggested that mergers and acquisitions should be incentivised. Wellington Electricity suggested that transaction costs create barriers to divestment for smaller operators, particularly trust-owned businesses, and noted that there have been international cases where Government funding assistance catalysed structural change.

Reference: Deliverable 2: Section 5.3.4; Powerco, Alpine Energy/Aurora Energy, Wellington Electricity responses to the letter of expectations

International Research

In Finland, the regulatory framework provides modest but structured incentives for distribution system operators (DSOs) to collaborate and innovate in ways that improve efficiency and benefit consumers. DSOs can apply an innovation incentive allowing limited cost pass through (around one percent of annual turnover) which supports pilot projects such as new technologies, software development, or demand response initiatives. Larger DSOs have used this mechanism, while smaller ones often find the administrative burden too high relative to potential gains. Operators must publish the results of funded studies or innovations, providing transparency though not mandating open sharing of intellectual property. Finland is also piloting targeted incentives for demand response and congestion management, allowing DSOs to recover limited costs where measurable energy savings are achieved. These pilots are expected to expand over the next four years, with increasing emphasis on reporting verified consumer benefits in the form of kilowatt hours saved and improved network efficiency.

Reference: Energiavirasto, interview 28 January 2026.

6.7 B5: Review Extension of Price-Quality Regulation to Currently Exempt EDBs

The lighter-touch mechanisms in Recommendations B1-B3 are the preferred pathway for improving efficiency among currently exempt EDBs due to compliance costs and a preference for less intervention. However, extending price-quality regulation could be considered if this was not effective.

6.7.1 Recommendations

Government should review whether extending price-quality regulation to currently exempt EDBs would support improving sector efficiency. This recommendation is conditional. It is not proposed as an immediate action but is an appropriate response if:

- Monitoring of progress against implementation of Set A recommendations shows a lack of progress by exempt EDBs
- The benchmarking outputs from Recommendation B2 show that exempt EDBs are materially underperforming compared to price-quality regulated peers
- The information disclosed under Recommendation B3 indicates that exempt EDBs identified as underperforming are not taking credible steps to improve their efficiency

The review should assess implementation costs against likely efficiency improvement benefits before any decision to proceed.

6.7.2 Evidence

Industry Engagement

During the industry engagement one EDB noted that improving its internal standardisation around material types used on the network would not have been possible without the CPP process it had gone through. This is generally supportive of price-quality regulation. Exempt EDBs cited faster decision-making and greater agility as advantages of the status quo, with comments coming from personnel who have worked in both price-quality regulated and exempt businesses.

Reference: Deliverable 1, Sections 4.4, 5.10; interviews

Letter of Expectations

Five exempt EDBs, PowerNet, and ETNZ opposed extension. Three price-quality regulated EDBs, Powerco, Top Energy, and Wellington Electricity supported it, primarily on level-playing-field grounds. Top Energy cited the CEPA report showing regulated businesses marginally outperformed unregulated businesses over ten years. Network Waitaki estimated compliance costs could exceed $200,000 per annum for smaller networks.

Reference: Deliverable 2, Section 5.2; various EDB responses to the letter of expectations

International Research

All Finnish DSOs are treated equally under economic regulation. Energiavirasto states that the fact that different elements of regulation produce different outcomes for different DSOs is no justification for the regulatory methods not being applied. All German DSOs are subject to incentive regulation (revenue caps). Efficiency benchmarking is applied using a tiered approach based on number of connections (see International Research Evidence in Section 6.4 for further detail).

Reference: Energiavirasto, interview 28 January 2026; Regulation methods in the sixth regulatory period… (p. 12), Energiavirasto; *Federal Network Agency (BNetzA), interview 20 January 2026.*

Appendix A – Application of Prioritisation Framework to Set A Recommendations

#	Recommendation	Primary Actor	Consumer Benefit	Implementation Readiness	ENA and Industry Alignment	Overall Priority	Interdependencies	Timeframe
A1	**Formalise and scale shared services and joint operating models**	Regulator, ENA, EDBs	**High:** deep collaboration delivers consolidation-like efficiency gains across multiple EDBs and consumers	**High:** wave of active partnerships already underway; NEG members considering good practice framework	**High:** ENA committed; nine EDB responses proposed formal collaborations	**High**	Independent	2026-2027
A2	**Standardise connections and form common shop-front roadmap**	ENA, EDBs	**High:** reduces cost and complexity for all connection seekers across NZ	**High:** ENA committed to specific deliverables with dates; Electricity Authority reforms already underway	**High:** ENA committed to quick wins June 2026 and standard contracts June 2027, EDB responses aligned	**High**	Independent	2026-2027
A3	**Formalise national mutual aid and assess critical spares platform**	ENA, EDBs	**Moderate/High:** value realised during major events but significant when needed; critical spares visibility platform could be expensive to implement	**High:** South Island model already exists; ENA committed to national agreement by December 2026	**High:** ENA committed to both mutual aid agreement and spares visibility analysis; EDB interview feedback aligned	**High**	Independent	2026-2027
A4	**Establish Smarter Networks coordination group and DSO framework**	ENA, EDBs, Transpower, regulators	**High:** BCG modelling projects $23.7bn total system cost savings to 2050 under 'smart system' scenario; Smarter Networks coordination a key enabler	**Moderate:** requires establishment of new coordination structure; multiple actors; no single owner has yet been identified; resource required	**High:** ENA committed to establishing Smarter Networks group	**High**	Independent	2026-2027

#	Recommendation	Primary Actor	Consumer Benefit	Implementation Readiness	ENA and Industry Alignment	Overall Priority	Interdependencies	Timeframe
A5	**Standardise flexibility services procurement**	ENA, EDBs, Transpower	**High:** defers capital expenditure; unlocks demand-side participation at scale; EECA research found that coordinated DER control could lead to 15-50% bill savings	**Moderate:** relevant INTSA-funded project underway; technology/protocol standardisation not yet progressed	**Moderate/High:** ENA committed to standardised industry flexibility initiative; EDB interviews found some variance in views about priority/value across the industry	**High**	Dependent on A4	2027-2028
A6	**Improve LV network data use and standardise LV monitoring**	ENA, EDBs, Electricity Authority	**High:** enables network optimisation; avoids inefficient capital investment in LV networks	**Moderate:** smart meter data access a constraint for some EDBs; varying current maturity across the industry could make agreement on priorities a challenge	**Moderate:** ENA committed to LV data initiative; smart meter access raised by six EDBs, solution addressing all concerns not yet determined	**High**	Dependent on A4	2028-2029
A7	**Standardise network planning framework and methodologies**	ENA, EDBs, Transpower	**Moderate:** ensures good practices and innovation diffuse across the industry; establishes minimum baseline planning capability; improves investment efficiency	**Moderate:** some EDBs already involved in regional planning collaboration; currently limited technical standards/guidance on network planning for the industry to use	**Moderate:** No explicit commitment by ENA; some support from regulators and EDBs during industry engagement	**Moderate**	Dependent on A4	2028-2029
A8	**Assess feasibility of a collective EDB financing mechanism**	NEG, EDBs	**Moderate:** Top Energy quantified $25m pa sector saving if a 0.5% rate reduction could be achieved	**Moderate:** NEG response suggests interest from Minister for Energy in network funding support via a mechanism similar to the LGFA; could require legislative change if led by Government; may not progress if change of Government	**Moderate:** NEG and various EDBs raised this concept in responses to letter of expectations; ENA has not made explicit commitment	**Moderate**	Independent	2027-2028

#	Recommendation	Primary Actor	Consumer Benefit	Implementation Readiness	ENA and Industry Alignment	Overall Priority	Interdependencies	Timeframe
A9	**Assess external cost drivers**	NZTA, Government	**High:** ENA quantified $47-78m pa TTM saving; vegetation $71m pa with 6-8% avoidable if costs transferred to landowners	**Low:** diverse set of actors to engage with; EDB efficiency considerations are just one set of a wide range of considerations when determining policy.	**High:** Supported by ENA and many EDBs in both industry engagement and responses to letter of expectations.	**Moderate**	Independent	2027-2028

Appendix B – Functional Model

Overview

The EDB functional model was developed using publicly available information on organisational design of New Zealand EDBs. It is established at two levels.

Function	Description
Level 1 Function	Represents the highest organisational grouping that defines the EDB's core operational, commercial, and strategic domains. Accountability for each Level 1 Function is typically assigned at the executive management level.
Level 2 Function	Defines the major business capability areas within each level 1 function that deliver specific outcomes or services. Responsibility for each Level 2 Function is typically assigned at the line management level.

Summary of Functional Model

Each Level 2 Function is described below.

Level 1 Function	Level 2 Function	Description
Customer and Commercial	Connections	Oversees new and altered network connections, ensuring timely, safe, and efficient service delivery in line with network standards.
Customer and Commercial	Customer / Stakeholder Engagement	Manages relationships with customers and stakeholders through effective communication and service experience.
Customer and Commercial	Revenue Assurance	Ensures revenue recovery while maintaining compliance with market rules and customer expectations.
Digital	Cybersecurity	Protects information systems and network assets from cyber threats through proactive monitoring, governance, and response.
Digital	Digital Programmes and Projects	Plans and delivers technology projects that modernise business systems and support digital transformation.

Level 1 Function	Level 2 Function	Description
Digital	Information Systems	Maintains and supports core information systems and applications that enable daily business operations and asset management functions.
Finance	Business Performance	Analyses operational and financial performance to inform decision making and continuous improvement.
Finance	Finance and Treasury	Oversees financial management, including budgeting, accounting, and performance reporting for organisational transparency. Manages cash flow, investments, and debt to ensure financial stability and optimal capital utilisation.
Finance	Risk	Implements corporate risk management framework in collaboration with all functions and provides consolidated reporting to Board and executive to support decision-making.
Finance	Supply Chain, Procurement & Logistics	Coordinates purchasing, inventory, and material logistics to support maintenance and capital delivery programmes.
Legal and Regulatory	Legal	Provides legal advice and governance support to ensure compliance with laws, contracts, and corporate policies.
Legal and Regulatory	Regulatory Management	Manages compliance with economic regulation, industry regulation, and other requirements, and engages with stakeholders on regulatory issues.
Network and Operations	Engineering	Establishes engineering standards and approves engineering change.
Network and Operations	Network Operations	Manages real time network control, fault response, and operational coordination to ensure safe, continuous supply.
Network and Operations	Network Planning	Develops long-term plans for development of networks to ensure safe, secure, compliant and efficient services.
Network and Operations	Renewal and Maintenance Planning	Schedules and prioritises asset renewals and maintenance activities based on condition, risk, and performance data.
People and Safety	Capability Development	Builds workforce capability through targeted training, leadership, and professional development initiatives.

Level 1 Function	Level 2 Function	Description
People and Safety	Human Resources Management	Manages recruitment, employment relations, and workforce planning to attract, retain, and support employees.
People and Safety	Internal Communications	Delivers clear, consistent internal messaging that supports engagement, culture, and organisational alignment.
People and Safety	Safety Management	Promotes a proactive and accountable safety culture through engagement, systems, and continuous improvement.
Service Delivery	Maintenance Delivery	Executes scheduled and reactive maintenance tasks to ensure the safe and reliable operation of network assets.
Service Delivery	Project Delivery	Implements local capital and renewal projects in alignment with approved network plans and safety requirements.
Service Delivery	Vegetation Management	Manages vegetation near network assets to ensure safety, compliance, and network reliability.
Strategy and Transformation	Distribution System Operation	Prepares organisation for transition to distribution system operation.
Strategy and Transformation	Strategic Planning	Consolidates and integrates strategic plans from across the enterprise and facilitates implementation.
Strategy and Transformation	Sustainability	Develops and embeds environmental, social, and governance (ESG) practices across the organisation’s operations.
Strategy and Transformation	Transformation	Drives organisational change and innovation to improve efficiency, agility, and digital capability.

Appendix C – Mapping Set A Recommendations to Functions

The following table provides rationale for the mapping between Recommendations A1-A9 and the functional model introduced in Section 4.3. The mapping focuses on the most important relationships, and in practice further relationships are anticipated.

#	Recommendation	Rationale for Mapping (Level 2 Function)
A1	**Formalise and scale shared services and joint operating models**	**Transformation** Shared services and joint operating models have transformative implications for EDBs and could apply across any business function.
A2	**Standardise connections and form common shop-front roadmap**	**Connections** Standardisation of connection processes and supporting capabilities is the core focus of this recommendation. **Customer/Stakeholder Engagement** Customer engagement processes should be considered alongside technical aspects to ensure an effective end-to-end customer experience.
A3	**Formalise national mutual aid and assess critical spares platform**	**Supply Chain, Procurement & Logistics** A virtual critical spares platform would create opportunities for procurement teams to optimise spares holdings and reduce individual EDB stockholding over time. **Information Systems** An interface between EDB asset management information systems and the virtual critical spares platform would need to be developed to enable consistent recording and searching of spares holdings across participating EDBs.
A4	**Establish Smarter Networks coordination group and DSO framework**	**Distribution System Operation** The DSO function, which prepares the organisation for transition to distribution system operation, would be the primary internal sponsor of participation in the Smarter Networks coordination group.
A5	**Standardise flexibility services procurement**	**Network Planning** Standardisation of flexibility services procurement requires network planners to incorporate flexibility services consistently as an alternative to capital investment in their decision-making.
A6	**Improve LV network data use**	**Digital Programmes and Projects**

#	Recommendation	Rationale for Mapping (Level 2 Function)
	and standardise LV monitoring	Standardised LV monitoring requires investment in monitoring equipment, data infrastructure, and integration with existing systems. **Engineering** Standardised LV monitoring requires engineering input to define technical specifications for monitoring equipment and data models adoptable across EDBs at different levels of maturity.
A7	**Standardise network planning framework and methodologies**	**Network Planning** Standardised network planning approaches would require adjustment to existing planning processes, particularly for EDBs at lower levels of planning maturity. **Information Systems** Adopting increasingly standardised network planning approaches would have data and information management implications for EDBs with lower levels of maturity.
A8	**Assess feasibility of a collective EDB financing mechanism**	**Finance and Treasury** A collective financing mechanism would have implications for the Finance and Treasury function of participating EDBs.
A9	**Assess external cost drivers**	**Project Delivery** Changes to TTM requirements would affect project specifications, technical standards, procedures, scheduling, and cost estimation across EDB capital works programmes. **Vegetation Management** Changes to vegetation management cost recovery responsibilities would require adjustment to EDB vegetation management processes and contracts.

Appendix D – Mapping Set B Recommendations to Structural Limitations

The following table provides rationale for the mapping between Recommendations B1-B5 and the structural limitations raised in Section 3.3.

#	Recommendation	Rationale for Mapping
B1	**Establish register of standardisation and collaboration initiatives**	**Multi-EDB alignment – Primary** The register addresses the lack of an industry-wide view by consolidating information on standardisation and collaboration initiatives across all EDBs, making opportunities requiring multiple EDB alignment visible. **Industry-wide analysis – Primary** The register provides an enabler to support industry-wide analysis and identify industry-level opportunities that might otherwise be missed. **ENA consensus – Partial** A publicly accessible register would make ENA's coordination activity with respect to standardisation and collaboration visible to external stakeholders. This could create some accountability that could mitigate the tendency to converge toward uncontroversial positions through the objective evidence it provides.
B2	**Enable comparative efficiency benchmarking of individual EDBs**	**EDB interests – Primary** Publicly available benchmarking results at the level of individual EDBs make relative performance visible to stakeholders. An EDB that is publicly identified as being less efficient than its peers is incentivised to make improvements. **Exempt EDBs – Primary** Benchmarking is the primary mechanism for making the efficiency gap visible for exempt EDBs, which is a precondition for any improvement action. **Industry-wide analysis – Primary** Comparative benchmarking is the sort of industry-wide analysis that no individual operator has the mandate or incentive to commission at present.
B3	**Information disclosure on standardisation and collaboration**	**EDB interests – Primary** Public disclosure of what lower-performing EDBs are doing to improve makes improvement activity visible to stakeholders, creating accountability for boards to direct management to deliver.

#	Recommendation	Rationale for Mapping
		Exempt EDBs – Primary Expanding information disclosure requirements to cover standardisation and collaboration improvement activity, and publishing analysis of that information would make the efficiency improvement responses of exempt EDBs visible to stakeholders. **Multi-EDB alignment – Partial** Published information about improvement activity may create indirect pressure to align on common approaches. **Industry-wide analysis – Partial** The high performer analysis component surfaces information about what contributes to strong performance.
B4	**Review incentives for standardisation and collaboration**	**EDB interests – Primary** Better-aligned incentives directly address the misalignment between EDB organisational interests and consumer outcomes. **Multi-EDB alignment – Partial** Incentives for early movers and shared platforms could encourage EDB collaboration. **Exempt EDBs – Partial** Incentive changes could be extended to encourage exempt EDB improvement but may be more difficult compared to EDBs that are subject to price-quality regulation.
B5	**Review extension of price-quality regulation to currently exempt EDBs**	**Exempt EDBs – Primary** Directly targets the reduced efficiency incentive for exempt EDBs by subjecting them to the same regulatory framework as price-quality regulated EDBs.

Glossary

Terms in this glossary have been drawn from the Electricity Networks Aotearoa Glossary where possible.

Term	Definition
ADMS	Advanced distribution management system – information system used by some EDBs to automate outage restoration and optimise the performance of the distribution network.
BNetzA	Bundesnetzagentur – the German Federal Network Agency, responsible for regulating energy networks in Germany.
CPP	Customised Price-Quality Path – alternative to the Default Price-Quality Path, allowing an EDB to apply to the Commerce Commission for a customised price path that better reflects its specific circumstances.
DER	Distributed energy resources – any resource on the distribution system that produces or stores electricity, or load that can be controlled to use electricity in response to network or market signals. Includes rooftop solar, batteries, electric vehicles, and controllable loads.
DPP	Default Price-Quality Path – price path the regulator approves for EDBs that do not make a Customised Price-Quality Path (CPP) application.
DSO	Distribution system operation – role that enables maximum value to be realised from flexible resources, including DER, connected to electricity distribution networks.
Electricity Authority	Regulator of the electricity industry; sets and administers market rules and conducts operational activities to support the efficient operation of the electricity market for the long-term benefit of consumers.
EDB	Electricity distribution business.
EEA	Electricity Engineers' Association – New Zealand's professional association for electrical engineers.
EECA	Energy Efficiency and Conservation Authority – Crown-owned entity that encourages the use of sustainable energy in New Zealand.
ENA	Electricity Networks Aotearoa – industry association for EDBs.
ENA UK	Energy Networks Association UK – body that represents the energy networks in the UK and Ireland.
Energiavirasto	Finnish Energy Authority – regulator of the energy sector in Finland, responsible for economic regulation of electricity distribution networks.

ETNZ	Energy Trusts of New Zealand – organisation that represents New Zealand's regional energy trusts.
INTSA	Innovation and Non-Traditional Solutions Allowance – regulatory mechanism enabling an EDB subject to the DPP to apply for an additional allowance for investment in innovative or non-traditional solutions.
IRIS	Incremental Rolling Incentive Scheme – part of the regulatory price and quality path setting to appropriately reward EDBs for cost savings.
LGFA	Local Government Funding Agency – organisation that specialises in financing the New Zealand local government sector.
LV	Low voltage – the street-level network that delivers power to homes and small businesses.
MBIE	Ministry of Business, Innovation and Employment.
NEG	Northern Energy Group – collective of six North Island EDBs: Electra, Northpower, The Lines Company, Top Energy, Vector, and Waipā Networks.
NZTA	New Zealand Transport Agency – Crown entity responsible for transport infrastructure and regulation, including road corridor rules.
TTM	Temporary Traffic Management – approach to managing risk when work is occurring in the road corridor, including requirements for signage, traffic control, and lane closures.

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