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Electricity Authority
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Submitted via email: distribution.feedback@ea.govt.nz

To whom it may concern,

Electricity Networks Aotearoa (ENA) is the industry membership body that represents the 29 electricity distribution businesses (EDBs) that take power from the national grid and deliver it to homes and businesses (our members are listed in Appendix B).

EDBs employ over 7,800 people, deliver energy to more than two million homes and businesses, and have invested $6.2 billion in network assets over the last five years. ENA harnesses members' collective expertise to promote safe, reliable, and affordable power for consumers.

We welcome the opportunity to provide feedback to the Electricity Authority on the *Exploring network visibility: costs, benefits and value* discussion paper. We also thank the Authority for the opportunity to discuss these proposals further at the recent workshop in Wellington on 18 September 2025. Our response to the Authority's specific questions (in the requested format) is included as Appendix A. We have also provided some further thoughts and commentary in the body of this cover letter, as follows.

ENA is supportive of initiatives designed to improve customer service and we acknowledge that enhanced and accessible network visibility information (via capacity map tools or otherwise) may assist some customers who are looking to connect to distribution networks. ENA is encouraged to see the Authority investigating this issue more deeply, prior to considering any regulatory intervention, and we are equally interested in the insights that this consultation will provide. We have also been considering improvements that can be made in this area, and some of our key insights to date are provided in this submission.

Diverse needs and contexts

In considering the issue of network visibility, we think it is important to consider the needs of different groups of customers, as they do not all want or need the same services from EDBs. Some are more interested in easy access to human support within EDBs for 1:1 meetings (e.g. pre-application interviews), while others want simple, low contact processes for simple connections and still others may be able to conduct their own sophisticated analysis of 'raw' network data. Within this disparate array of customer needs, ENA considers that network visibility tools will most likely be of significant immediate benefit to those customers who have:

1. comparatively high value connections (e.g. are seeking connections at the MV or HV network layers); and
2. a relatively high degree of locational flexibility about where precisely they wish to connect.

Note that these are by no means the *only* customers who could benefit from greater network visibility and transparency, but these are probably the first group, in terms of receiving significant benefit from these sorts of tools. In due course, there may be a need for greater visibility of the LV network layers and its capacity and constraints, for example to enable more dynamic operation of load and generation.

In addition to considering the needs of different customer groups, there is also a need to reflect the different context of EDBs and their distribution networks. For some EDBs, their networks are relatively unconstrained and the volume of connection requests they receive is largely static. In these cases, it will be difficult for the EDB to justify the additional costs of developing network visibility tools, which would be borne by existing network customers, for the benefit of a very limited pool of prospective new customers. Other EDBs will be in the reverse situation, and in those cases the benefits of developing network visibility tools may be much clearer and so the costs easier to justify. It is therefore important for the Authority to bear this diversity of customer needs and network circumstances in mind when contemplating regulatory prescription with respect to network visibility.

Existing and imminent network visibility data

There has also been progress in relation to developing greater network visibility in recent months. Two tranches of information disclosure (ID) requirements from the Commerce Commission (Commission) were enhanced this year, with March and August deliverables - see further detail below and in Appendix C. We're confident that some of the data within these disclosures will be helpful for those seeking greater network visibility, while we also acknowledge that the presentation and accessibility of this data for access seekers could be improved.

Several EDBs have also recently launched their own capacity maps (e.g. Network Waitaki and Unison), and ENA is aware of several other EDBs actively developing similar tools. In addition, ENA's Future Networks Forum (FNF), has a project underway to produce a set of recommendations for the distribution sector on how best to provide network visibility to access-seekers, including recommendations for standardised approaches where that would be useful.

Commerce Commission activity

In addition, and as the Authority notes in the appendix to this paper, the Commission has recently updated the information disclosure obligations on EDBs. Their targeted information disclosure review (2024) introduced and/or amended two tranches of disclosures:

- from disclosures due by 31 August 2024, all EDBs were required to enhance their existing capacity and constraint disclosures in Sch 9e
- from disclosures due by 31 March 2025, all EDBs were required to enhance their existing network constraints reporting (Sch 12b) to include:
    - for each zone substation (Sch 12b(i))
        - current and forecast peak loads
        - capacity and constraints
- from disclosures due by 31 August 2025, all EDBs are also required to:
    - provide a GIS file containing
        - the name and location of each zone substation, along with
        - the names of any feeders connected to it,

    - the input and output voltages it primarily transforms, and
    - the boundary of the area it serves.

Those disclosures are in addition to other information that may be useful to connecting parties, such as:

- providing information on the worst performing feeders
- information on capital expenditure projects, including commentary on the purpose and affected assets
- information on physical service life potential of assets
- pricing methodologies, including approaches for non-standard contracts and distributed generation, pricing changes from the prior year and their policy or methodology for determining capital contribution policies
- prescribed quality and outage metrics
- asset management plans, which include:
    - information on long-term management plans and performance expectations
    - identification of material changes to network development or lifecycle management plans
    - reports on interruptions and duration (Sch 12d)
    - forecast network demand (Sch 12c)
- explanatory notes.

The requirements and reporting are available publicly on the Commission website, as well as each EDB publishing these on their own websites. The Commission also publishes the reporting it receives, both in raw form, as well as developing their Performance Accessibility Tool in recent years.

The Commission has also been quite deliberate in its selection of disclosure measures. Whilst we understand the Authority's interest in drawing from Australian examples, the Commission have published several papers in recent years that explain their approaches to disclosures and assess network visibility concerns and future plans. We feel there is value in drawing their conclusions more tightly into the Authority's network visibility work programme.

We particularly draw the Authority's attention to the draft and final decisions for the Targeted Information Disclosure Review 2024 and the Commission's paper specifically on LV visibility, which was published earlier this year. We provide more context on these papers in Appendix C.

Electricity Authority activity

The Authority is also no doubt also aware that its recent decisions arising from the Network Connection (stage one) project, will require EDBs to disclose (where known), approximately quarterly:

i. location and available capacity of zone substation distribution feeders; and
ii. location and available capacity of transformers 500 kVA and above.

Conclusion

Given this range of initiatives across the ENA, the Commission and the Authority, as well as the individual efforts of EDBs, we encourage the Authority to allow these workstreams time to mature, before considering any more prescriptive regulatory intervention. If the Authority decides that intervention is necessary, we suggest that it simply define the outcomes it wishes to see in the sector (and when), then allow the sector the flexibility to define the exact mechanisms by which those outcomes are provided, as it sees fit.

We would welcome the opportunity to engage with the Authority further on your considerations of network visibility, and also very interested in the insights generated from this consultation. Please contact Richard Le Gros (richard@electricity.org.nz), Policy and Innovation Manager at ENA, if you have any questions.

Regards,

Richard Le Gros
Policy and Innovation Manager

Appendix A: ENA feedback to EA paper *Exploring network visibility: costs, benefits and value*

Submitter	Richard Le Gros, ENA
What is your interest in network visibility?	Improved network visibility is critically important to the distribution sector to enable advanced management of the network (smart grids), including many/most DSO functions, and to better service the needs of access-seekers and existing connected customers.

Questions	**Comments**
Q1. Are you aware of the extent of the information currently being provided by distributors (including through disclosures)?	Yes
Q2. How do current distributor disclosures support your understanding of available capacity, constraints and opportunities on: a) high-voltage networks? b) low-voltage networks?	Not applicable to ENA.
Q3. How are you making use of existing disclosures to support more efficient outcomes?	Not applicable to ENA.
Q4. Would changes to the type of data, format, regularity or granularity of distributor disclosures better support decision-making? Please provide detail.	ENA notes that Commission changes to IDs to broaden the scope of the network visibility data provided have only recently come into effect, and further disclosures via Code requirements have not yet taken effect at all. It would be prudent to allow this broader suite of network visibility data to be made available to interested parties, for some reasonable period of time, before assessing whether further changes are needed.
Q5. What other disclosures of network information would further inform your choices and decisions?	Not applicable to ENA.
Q6. What are distributors' perspectives on the value of collating and publishing	ENA suggests that, if there is sufficient value to EDBs internally in collating and publishing network capacity

Questions	Comments
network capacity information for their own businesses?	information, they would be (and presumably are) already doing so.
Q7. What are distributors' perspectives on how well interested parties are using the data they already publish?	ENA has no comment to make.
Q8. What are your perspectives on recent developments on access to smart meter data?	ENA is concerned that, while progress is being made, EDBs still find accessing smart meter data on reasonable commercial terms challenging in many cases. Greater transparency from MEPs on the costs of services (e.g. standard offerings, rate cards, etc) would go some way to alleviating uncertainty around this.
Q9. Is the pace of distributor progress on developing the capability needed to support work on improving network visibility appropriate? If not, what are your expectations regarding timeframes?	While this question is perhaps not targeted at ENA/EDBs themselves, ENA observes that some EDBs have already deployed network visibility tools (e.g. capacity maps, DG hosting maps, etc) and we are aware of others who are either actively developing or investigating similar tools. Accompanying these individual efforts, ENA has a project under the auspices of the Future Networks Forum to provide network visibility recommendations to the sector, both on questions of implementation and standardisation. The outcomes from this EA issues paper will be a very useful input into that FNF project.
Q10. What are the barriers and costs to distributors in developing the capability needed to support work on improving network visibility faster?	As ENA understands it, costs and barriers are highly dependent upon the individual EDBs' context, in terms of their current network data capabilities, overall network capacity, volume of connections activity etc. We note that some key considerations are: • Access to smart meter data – but only necessary for LV network visibility, and the benefits of visibility of this network layer perhaps significantly less than for higher voltage layers (MV and HV), due to value of connections being made there. • Access to data for MV and HV networks – can vary across networks based on historic needs cases, but costs to develop this capability solely for network visibility purposes difficult to justify on their own. • Data processing/sanitation – time and effort required to take 'raw' network visibility data, used only for internal purposes, and process such that appropriate (and useful) to an external audience is significant. Once processes are established costs should be minimised but note that these are ongoing costs for as long as network visibility tool exists. • Access and costs for data held by retailers – different retailers have different systems and different capabilities with regards to the data they hold either directly or via MEPs. EDBs

Questions	Comments
	often find they get poor quality data or data in non-standard formats that requires a lot of manipulation to make it useable. E.g. not all retailers can provide the EIEP3 files EDBs have recently been requesting to assist with their implementation of Task Force 2ABC requirements. There may be ways the EA could assist EDBs with getting access to data by either mandating that retailers provide information in standard data formats and/or by making a minor Code amendment to Part 10 to allow EDBs to obtain data directly from MEPs, without needing to go via the retailers. • We also note that the EA receives regular reporting data from retailers. Is there perhaps also a way that the EA could consider sanitising and combining that reporting to provide relevant data to EDBs?
Q11. Do you agree that distributors having a better understanding of network capacity/constraints and publishing this information in an easily accessible way is in the long-term interest of consumers?	All things being equal, ENA agrees that greater transparency by EDBs of network conditions, capacity, etc is desirable. Of course, in practice the provision of this information (procuring and deploying network monitoring devices, obtaining access to smart meter data, cleansing and processing data, developing and deploying tools to make it accessible and understandable, etc) is potentially a significant undertaking, with corresponding drains on EDB human, system and financial resources. These impacts ultimately flow through into customer bills, and at a time when affordability is a key challenge for the electricity sector as a whole, these costs should be considered against the benefits offered. The most important aspect of this assessment is, in ENA's view, recognising that different EDBs are operating in different contexts, and not applying a single, inflexible overriding obligation on the entire sector, that does not take into account these different contexts.
Q12. Do you consider that there is a case for further regulatory intervention to further improve progress and the quality (e.g. timeliness, granularity, format standardisation) of disclosures that improve network visibility?	The EDB sector already has a project underway to consider and make recommendations to the sector on all these characteristics of network visibility. We encourage the EA to work closely with ENA on that project, to ensure that the voluntary steps the sector is taking in this area are meeting the Authority – and more importantly, access-seekers – expectations. We therefore do not consider that further regulatory intervention is necessary at this time to achieve the outcomes the Authority is seeking.

Questions	Comments
Q13. Do you consider that measures are needed to improve awareness of and encourage use of network visibility disclosures by interested parties?	ENA accepts that more could be done by EDBs, and potentially regulators (the Authority and the Commission) to make network visibility disclosures more available and accessible to interested parties. We do not consider that a regulated approach is needed in this regard, but we would be very willing to work with the Authority and Commission to see how greater and more accessible visibility could be provided, using these existing disclosures.
Q14. If further work is required to support the development and use of network visibility, which approach do you prefer: a) developing industry guidance or standards. b) introducing a regulatory backstop that would codify the industry guidance or standards. c) developing regulatory standards and timeframes for improving network visibility. d) something else.	ENA prefers option a), with option b) clearly available to the Authority if needed (e.g. if industry progress is too slow, or deployment of network visibility tools too sporadic. ENA notes that there will be EDBs where, for reasons expanded on in our comments under 'diverse needs and contexts' above, the time, costs and effort to deploy a network visibility tool cannot, quite reasonably, be justified. In that case it is important that the Authority allow flexibility to not mandate a one-size-fits-all solution on the entire sector, and option a) provides for this.
Q15. Do you support an approach that focuses on high-voltage networks first, or do you have another preference?	ENA considers that a focus on the MV and HV network layers is an appropriate starting point for network visibility development. A further refinement of this could be to focus on the suite of data required from EDBs via Commission IDs and Code requirements, as this would be a solid 'no regrets' set of data that EDBs will be obligated to disclose regardless. The LV network layer is significantly more complex in terms of access to data, and the more dynamic and interactive nature of the network and connected loads, etc. Conversely the value of connections made to the LV network are typically (on a per-connection basis) low. This suggests that a focus on the simpler, more universally monitored higher-voltage network layers makes a lot of sense.
Q16. What other aspects of international developments relating to network visibility should we be looking at for lessons that could be considered in the New Zealand context?	ENA has no comment to make.
Q17. Do you consider that metering equipment providers should be required to publish schedules of available data	Yes, ENA strongly supports a requirement for MEPs to publish schedules of available data and prices. MEPs will still be able to recover their costs to serve, while EDBs will have much improved confidence about the

Questions	Comments
and prices to improve transparency and reduce transaction costs?	reasonableness of those arrangements they might enter into, when weighed against the benefits that might arise and other business objectives.
Q18. Do you consider that elements of Part 12A of the Code relating to default distributor agreements should be reinforced or extended to ensure consistent access to both consumption data and other types of data e.g. power quality from smart meters or other devices (such as inverters)?	ENA presumes that, if the Authority were to proceed with the suggestion in question 17 above, EDBs would be more likely to proceed with direct agreements with MEPs for smart meter data, rather than using the more limited access arrangements in Part 12A of the Code (i.e. the DDAs). ENA considers that this would be a more straightforward and therefore preferential arrangement and so would caution against amendments to Part 12A. Also, we are unsure how power quality data from other devices (e.g. inverters) could be captured via an amendment to Part 12A, as only EDBs and Traders are party to the DDA(s), and we're not aware that Traders have ongoing rights of access to power quality data arising from inverters, that could then be provided to EDBs. Generally, our preference is to avoid amending the DDAs without good cause, as this generates a lot of work for industry participants.

Appendix B: ENA Members

Electricity Networks Aotearoa makes this submission along with the support of its members, listed below.

- Alpine Energy
- Aurora Energy
- Buller Electricity
- Centralines
- Counties Energy
- Electra
- EA Networks
- Firstlight Network
- Horizon Energy Distribution
- MainPower NZ
- Marlborough Lines
- Nelson Electricity
- Network Tasman
- Network Waitaki
- Northpower
- Orion New Zealand
- Powerco
- PowerNet (which manages The Power Company, Electricity Invercargill, OtagoNet and Lakeland Network)
- Scanpower
- The Lines Company
- Top Energy
- Unison Networks
- Vector
- Waipa Networks
- WEL Networks
- Wellington Electricity Lines
- Westpower

Appendix C: Commerce Commission existing analysis

We want to draw the Authority's attention to existing work the Commission has undertaken in relation to network visibility. More detail on three key papers is provided below.

[Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Draft-decision-Reasons-paper-17-August-2023.pdf]

- Section 'D3 – Network constraints' includes rationale for disclosure choices and summarises/cites feedback from EDBs and other stakeholders (which is fully referenced in the footnotes)
- Data limitations are also discussed, with the Commission particularly acknowledging "the challenges EDBs face with obtaining the LV network data required to reporting meaningful constraint information."[1] Instead the Commission proposed EDBs reporting on the journey towards improved LV visibility as a step on the journey towards improvements in this area: "We may consider adding more prescriptive requirements for LV network constraint reporting in the future as the sector overcomes challenges."[2]
- Reading from the draft (this one) to the final decision (see next section) would also help the Authority understand the rationale for the evidence-based choices and judgements ultimately made by the Commission
- Heatmaps, network constraint maps and capacity maps are mentioned several times with the Commission clearly indicating that they "have proposed other amendments [they] consider stakeholders would find useful, and important data that can be used to inform a future constraints map."[3] They also note that they:

"are not proposing to add a requirement for EDBs to produce a constraints map. For constraints on EDBs' MV networks, [they] consider the proposed amendments to Schedule 12b(i) will provide stakeholders with clear constraint information in an accessible and easily understood format. However, we recognise maps are a useful tool to help stakeholders more easily understand the location and significance of current and forecast network constraints. To support an interested stakeholder to create a national constraints map in the future, we propose for EDBs to disclose geospatial data about their networks at the zone substation level."[4]

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[1] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0023/325544/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Draft-decision-Reasons-paper-17-August-2023.pdf, page 51, paragraph 3.49
[2] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0023/325544/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Draft-decision-Reasons-paper-17-August-2023.pdf, page 52, paragraph 3.56
[3] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0023/325544/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Draft-decision-Reasons-paper-17-August-2023.pdf, page 47, paragraph 3.39
[4] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0023/325544/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Draft-decision-Reasons-paper-17-August-2023.pdf, pages 50-51, paragraphs 3.46-3.47

- The Commission goes on to recognise the value of capacity maps, stating that whilst their priority is data disclosure for now, they "consider a digital map of constraints at a national level will be more useful to stakeholders in the long term, compared to EDBs publishing localised constraint maps that will likely lack consistency and comparability."[5]

Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Final-decision-Reasons-paper-29-February-2024.pdf

- Highlights that the intent of changes is "improve comparability across EDBs and provide clearer constraint information for stakeholders in a simpler form" and re-emphasises mindfulness of regulatory burden. [6]
- Re-iterated the challenges of LV network data visibility, noting that the Commission "may consider adding more quantitative requirements for LV network constraint reporting in the future."[7]
- Acknowledged the potential value of maps and that the EDBs provision of data can "support any interested stakeholder to create a national constraints map in the future."[8] This highlights that the responsibility for maps doesn't necessarily have to sit with the EDBs. Any interested party could create a map using existing disclosure datafiles along with the GIS files, if they wanted to.
- The Commission also discussed the file formats for compatibility and accessibility, declining to prescribe specific formats at this early stage in development "as this could lead to cost implications to EDBs and standards that we set now could change in the future."[9]
- The Commission also highlighted that it was their intention that constraint disclosures in AMPs would assist EDBs and "providers of non-network solutions to identify opportunities and practices (including EDBs' request for proposals) to address those constraints, which could be met through demand response or DER."[10]

Visibility-of-Low-Voltage-Networks-across-Electricity-Distribution-Businesses-Summary-report-Disclosure-year-2024-13-February-2025.pdf

- Summarises existing data sources and challenges

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[5] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0023/325544/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Draft-decision-Reasons-paper-17-August-2023.pdf, page 51, paragraphs 3.49
[6] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0034/344869/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Final-decision-Reasons-paper-29-February-2024.pdf, page 28, paragraph 2.42
[7] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0034/344869/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Final-decision-Reasons-paper-29-February-2024.pdf, page 30, paragraph 2.53.2
[8] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0034/344869/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Final-decision-Reasons-paper-29-February-2024.pdf, page 33, paragraph 2.66
[9] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0034/344869/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Final-decision-Reasons-paper-29-February-2024.pdf, page 34, paragraph 2.68.3
[10] Commerce Commission, https://www.comcom.govt.nz/assets/pdf_file/0034/344869/Targeted-Information-Disclosure-Review-2024-Electricity-Distribution-Businesses-Final-decision-Reasons-paper-29-February-2024.pdf, page 39, paragraph 2.84

- Acknowledges existing development plans disclosed by EDBs
- Concludes with a set of observations and recommendations, including:
    - A summary chart showing maturity of LV data modelling and collection
    - Sets an expectation that EDBs will improve and demonstrate their advancement over time
    - Encourages collaboration and knowledge sharing
    - "that in future disclosures EDBs discuss in greater detail the progress made in establishing data agreements with retailers and MEPs. This information provides useful context for other EDBs when establishing their own agreements. It also helps regulators such as the Commission and the Electricity Authority understand common challenges and establish the need for any intervention."[11]
    - That EDBs also disclose and discuss benefits of improved data visibility, along with future development plans

[11] Commerce Commission, Visibility-of-Low-Voltage-Networks-across-Electricity-Distribution-Businesses-Summary-report-Disclosure-year-2024-13-February-2025.pdf, page 15, paragraph 52