Date:

14 March 2023

Name of submitter:

Electricity Networks Association

Industry/area of interest:

Utilities/infrastructure

Contact details:

Graeme Peters, Chief Executive

Address:

Level 5, Legal House

101 Lambton Quay

WELLINGTON 6011

Telephone:

64 4 471 1335

Email:

gpeters@electricity.org.nz

Updating the regulatory settings for distribution networks

Submission to the Electricity Authority

March 2023

From the Electricity Networks Association

Contents

1. Introduction

The Electricity Networks Association (ENA) appreciates the opportunity to make a submission on the Electricity Authority's (Authority) issues paper on Updating the Regulatory Settings for Distribution Networks.

ENA submits it is time to review the regulatory arrangements to ensure they are conducive to the efficient connection and utilisation of new technologies to secure, a reliable and cost-effective electricity supply. In particular, ENA believes it is vital to identify and prioritise workstreams that are critical to enabling a vibrant, low-carbon energy future. The efficient exchange and use of meter data (including power quality data) should be at the top of this priority list.

The ENA represents the 27 electricity distribution businesses (EDBs) in New Zealand (see Appendix A) which provide local and regional electricity networks. EDBs employ 10,000 people, deliver energy to more than two million homes and business and have spent or invested $8 billion in the last five years.

EDBs are helping New Zealand to become carbon neutral.

ENA recognises the ambitious emission and renewable energy aspirations of the government and the paramount role that EDBs will play in helping to achieve these. There is no doubt that flexibility services and, distributed energy resources (DER) more broadly, will deliver benefits to consumers and be an important component of New Zealand's transition to a carbon-neutral economy.

2. Executive Summary

Data will be the beating heart of New Zealand's electrified future

The exchange of data between all players in New Zealand's electricity supply and demand chain will underpin the efficient electrification of the economy. The Authority has proposed common-sense changes to the data exchange template to remove some of the barriers to the exchange and use of data between EDBs and retailers. ENA supports these changes.

The data needs of flexibility providers are not known by EDBs. Flexibility service providers are best placed to outline their data requirements. ENA notes that EDBs may not have access to the data that flexibility service providers seek.

Flexibility services are just one part of New Zealand's electrification toolkit.

EDB's primary goals are to provide, reliable, efficient and affordable electricity distribution services that deliver long-term benefits to the customers and communities they serve. Non-network solutions (NNS) and flexibility services will be contributors to New Zealand's electrification, however, their existence and operations are not ends in themselves.

The role of EDBs is not to create markets for and to underwrite the financial viability of, providers of flexibility services or non-network solutions. EDBs have proven willing to seek out and adopt flexibility and non-network solutions where they are the most efficient way to deliver their services for the long-term benefit of consumers. The choice by an EDB to adopt a network-based solution should not and cannot be seen as a sub-optimal solution if it maximises the long-term benefit to consumers.

Part 6 is ripe for reform

The ENA welcomes the Authority's intention to reform Part 6 of the Code. Part 6 is long overdue for a significant review and update. ENA is disappointed that the distributed generation pricing principles are outside the scope of the review. Pricing will be a key determinant of how, when and where distributed generation is incorporated into New Zealand's electricity ecosystem. It should not be siloed from the broader regulatory settings set out in Part 6.

Regulators need a joined-up approach to low voltage network oversight.

Industry regulators are increasingly focused on the operation and performance of LV networks. ENA welcomes the increased prominence of the LV networks in the minds of regulators. However, there needs to be a joined-up approach between the Authority and the Commerce Commission to avoid conflicting regulatory obligations. EDBs don't want to find themselves in a situation where planning processes and resources aimed at addressing LV visibility/congestion/power quality issues are diverted to address competing or conflicting regulatory requirements.

In the sections below the ENA responds to the questions posed by the Authority in its issues paper.

3. Equal access to data and information

Q1. Do you see value in commissioning two separate reviews to look into the merit and practicalities of implementing the recommendations of the UK's Energy Data Taskforce around unlocking the value of customer actions and assets and delivering interoperability in a New Zealand setting?

No, we do not see value in pursuing recommendations arising from a working group deliberating in an entirely separate jurisdiction . If the Authority considers that the objectives being pursued by the UK's Energy Data Taskforce are consistent with its own objectives for the New Zealand electricity market, then it should establish an appropriate task group or similar and work to develop recommendations that work in the context of the New Zealand electricity market.

We do see merit in the Authority commissioning a study to understand the value of DER at various levels of the EDB networks (i.e., sub-transmission/MV/LV). Enabling DER at the lower voltage levels of the distribution network is more costly and complex than at the higher voltage levels. So an assessment of the relative values of DER at those levels could assist EDBs in targeting the most beneficial elements first.

Q2. Does this capture the key data needs for distributors to make informed business decisions that will unlock the potential of distributed energy resources (DER) for the long-term benefit of consumers? If not, what data is missing and what would it be used for?

Broadly we agree that the key data needs for distributors are captured in this section. We suggest that meter status data (e.g. last gasp, first breath), be separated out from the general power quality data and considered in its own category of operational data.

We also note that power quality data can also be used by distributors to improve their LV connectivity/phase connectivity information, thereby allowing more accurate hosting capacity assessments for connecting distributed generation to the LV networks. Lastly, we are interested in the evidence behind the assertion in para 4.58 that "…as DER operation is currently minimal, visibility and observability of DER is high, therefore demand is easy to predict and forecast". While DER operation may be minimal, we do not agree that visibility and observability of DER is high. As the issues paper later acknowledges, EDBs have limited visibility of the location and characteristics of much of the non-exporting DER connected to the LV networks.

Q3. Do you agree with the prioritisation of the key data needs for distributors? If not, why not and how would you suggest the priority is changed?

We agree with the prioritisation of key data needs for distributors, noting that we do not agree with the characterisation of visibility of non-exporting DER given in para 4.58.

We also suggest that meter status data (e.g. last gasp, first breath), be separated out from the general power quality data and considered in its own category of operational data. In this case, we consider that operational data should have a higher priority than power quality data.

Q4. Does this capture the key data needs for flexibility traders to make informed business decisions that will unlock the potential of DER for the long-term benefit of consumers? If not, what is missing and what would the data be used for?

We have no comment on the merits of key data needs assigned to flexibility traders in the issues paper. But we note that none of these items of data has value without first being collated and combined with the HV and LV network topographic and asset data that EDBs hold. There is little sense in assigning priority to the data needs of flexibility traders ahead of the corresponding data needs for EDBs. If the EDB has no access to this data, then it will not be possible to make it available to third parties (e.g. flexibility traders) in any useful sense.

We also do not understand the statement in para 4.65(a) that "This enables flexibility traders to identify the areas of a network that will need upgrading before others and offer solutions accordingly". We do not see how flexibility traders will be in a position to identify areas of the LV networks that need upgrading before others – monitoring network capacity and congestion and planning for enhancing network capacity, or procuring non-network solutions, is a core role of the EDB. Even if flexibility traders could be equipped with the information and expertise necessary to make these judgements, we do not see value in having two separate entities perform this function.

Q5. Do you agree with the prioritisation of the key data needs for flexibility traders? If not, why not?

Except for our comment above regarding the relative timings of key data needs of flexibility traders and EDBs, ENA has no further comments on this question.

Q6. Do you agree that the Authority should amend the Data Template to address the above issues to improve its workability? If not, why not?

ENA agrees that the Authority should amend the Data Template to incorporate the ENA/ERANZ variation. We would be interested to understand from the Authority how such an amendment to the Data Template in the Code can be introduced into the existing DDAs that EDBs and retailers have already agreed to.

Further to this, we note the Authority's comment in paragraph 4.85 that "Staff will consult…alongside forthcoming consultation on proposed changes to the DDA". ENA would welcome a discussion with the Authority regarding its plans for the DDA at the earliest opportunity.

We also wish to forcefully point out that, more fundament to the issues identified in para 4.79 and the accompanying footnote 84, is that consumption data cannot be combined with basic network topographic data under the provisions of the existing Data Template. This was an obvious critical flaw in the original drafting of the Data Template and was highlighted by ENA, individual EDBs and ERANZ to the Authority on multiple occasions prior to the Data Template amendments being made to the Code. Unfortunately, these concerns were not acted upon.

This amendment to the Data Template allows the Authority to address a fundamental flaw in the DDA, an opportunity that should not be wasted.

Q7. Are there other changes to the Data Template that would improve it and assist it to be a useful mechanism for open access to data?

The Authority should give careful consideration to the question of whether or not the Data Template, even once amended, is a suitable mechanism for the long-term provision of metering data to EDBs (and potentially other parties). This should involve further targeted engagement with EDBs and MEPs.

If the Data Template is envisaged to be the data exchange framework for the long-term, then serious consideration should be given to amendments that make the exchange of data as frictionless as possible (e.g. the standardisation and use of online tools/portals for data exchange).

There's also an open question about how EDBs will be able to influence the design and specification of smart meter capabilities in future. At the moment, with the relationship between the EDB and MEP passing through the retailer, EDB influence over this is relatively weak. If the Data Template is to be the enduring mechanism for data exchange, thought should be given to how EDBs can have a more direct influence over the future smart metering system capabilities.

Q8. Do you agree that this is an issue? If not, why not?

Notwithstanding that our members advise that they are progressing constructive discussions with retailers and MEPs regarding access to consumption data, we recommend a more enduring, efficient and sustainable approach is to amend the Code to enable EDBs to work directly with MEPs for access to consumption data.

Q9. Should the Authority amend the Code to clarify that MEPs can contract directly and provide both ICP data to distributors (and flexibility traders) for permitted purposes? If not, why not?

We agree that the Authority should amend the Code so that EDBs can contract directly with MEPs. As retailers are formed, merged, folded, and as consumers churn between these retailers, managing the pool of ICPs associated with each retailer will impose significant additional complexity on the access to and management of consumption data. Conversely, MEPs, or rather the meters and metering

systems they own and operate, have a more enduring and stable relationship with an individual ICP. It therefore makes sense that EDBs work directly with MEPs for access to and ongoing provision of consumption data, for permitted purposes.

Q10. Should the DDA Data Template be updated to include Power Quality Data? If not, why not?

Given that the DDA Data Template is now available to the Authority, it should be used to provide for the provision of PQD to EDBs, as this is a priority for EDBs.

However, as ENA noted in our response to question 7 above, the Authority should give serious consideration to whether the Data Template is a suitable enduring mechanism for the provision of smart metering data to EDBs and others.

Q11. Do you think that the transaction costs associated with negotiating access to MEPs is a problem that the Authority should prioritise? If no, why not? If yes, do you think there is merit in developing a template to develop a default template to help reduce transaction costs?

ENA has no direct visibility of the exact transaction costs faced by EDBs when negotiating with MEPs. However, some members have indicated to ENA that the prospective transaction costs are a significant barrier to progressing their negotiations with MEPs for smart meter data access.

ENA recommends that the Authority consider developing a default template to help reduce transaction costs or consider other mechanisms to ensure that EDBs face no more than the incremental costs incurred by MEPs for the provision of smart meter data.

Q12. Do you agree that MEP pricing for ICP Data (including Power Quality Data) and related data services is not unreasonable at this stage? If not, why not?

ENA is not in a position to comment on the reasonableness of MEP pricing.

Q13. Do you agree that MEP pricing for the provision of ICP Data to distributors (and other parties) could be more transparent? If not, why not?

MEP pricing for the provision of ICP data for distributors should be more transparent. Having 'pay-as-you-go' pricing for smart meter data will significantly simplify and ease the process for accessing this data for EDBs. As it stands, EDBs negotiating with individual retailers and/or MEPs (whose position is governed by agreements with retailers with differing views on data sharing) face significant uncertainty as to the reasonableness or otherwise of the prices they are being quoted for this access, leading to extended negotiations and frustration on the part of the EDB.

Q14. To support the transparency of pricing, standardisation, and equal access to data, do you think that the Authority should consider further implementing IPAG's Input Services recommendation that MEPs publish standard 'pay-as-you-go' terms open to all parties? If yes, why and what do you think this could cover? If not, why not?

As per our response to Q13, yes, we think transparent 'pay-as-you-go' pricing would improve access to smart meter data for EDBs.

Q15. Do you agree that distributors' visibility of the location, size, and functionality of DER needs to be improved within the next 3–7 years to support network planning? If not, why not?

Yes. Improving EDB visibility of DER on their LV networks is a pressing issue that needs to be addressed in the near future. The rapid uptake of electric vehicles, particularly in New Zealand's larger metropolitan centres, will soon start affecting capacity of some areas of the LV networks.

Introducing processes whereby the location and capacity of residential EV charging units and clustered public charge points (e.g. parking areas/buildings) should be an absolute priority for the Authority, and perhaps government more generally. This is a critical piece of information to enable EDBs to accommodate the uptake of electric vehicles as effectively and cost-efficiently as possible.

Q16. Do you have any views on the type and size of DER that needs more visibility?

As noted in our response to Q17, dedicated EV charging units installed in residential premises and clustered public charge point locations are the top priority for improved visibility for EDBs and the wider electricity sector. After these, domestic-scale batteries are the next highest priority.

Q17. The Authority acknowledges that definitions of 'real-time' vary, please explain what real-time data means to you.

For EDBs, real-time means no more than a 5-minute lag between the reading being taken by the meter and the measurement being reported or available to the EDB.

Q18. Do you agree that access to 'real-time' consumption and Power Quality Data won't be needed for at least five years?

ENA disagrees that access to 'real-time' consumption and power quality data won't be needed for at least five years. This data will be essential to enable real-time management of the network as DER penetration increases, especially in relation to constraint management and emergencies. There are also significant customer service and network management benefits that can be derived by EDBs from real-time consumption and power quality data, though building the business processes to make

optimal use of these will take some time. Therefore the sooner these types of smart meter data are available to EDBs, the sooner these customer service benefits can begin to flow.

Q19. Do you agree that flexibility traders' access to ICP data must be improved so they have the same level of access as distributors (and retailers), with whom they might be competing to provide contestable services? If not, why not?

Provided that the flexibility trader has established a relationship with the customer at the ICP in question, and is therefore acting as their agent, ENA agrees that they should have the same level of access to that ICP's data as the relevant retailer and EDB.

However, if the proposal is that flexibility traders should have access to any ICP data they wish, irrespective of whether they have a relationship with customers at those ICPs, then we don't agree. If that were to be the case, then flexibility traders would have access to significant amounts of detailed customer information, far in excess of what either retailers or EDBs can access. This would introduce significant risks in how this data is managed.

Q20. Do you think the Authority should prioritise modifying the Data Template, so that flexibility traders can use it, or should the Authority prioritise amending the Code to clarify that MEPs must provide ICP data directly to flexibility traders and distributors for a set of permitted purposes without the need for retailer permission? If neither, please explain why.

It is unclear how the Data Template could be modified so that flexibility traders could use it, given that the flexibility traders are not participants under the Code, nor are they party to the distribution agreements in place between retailers and EDBs.

The Authority should prioritise amending the Code to allow MEPs to provide ICP data directly to EDBs and flexibility traders.

Q21. Do you agree that flexibility traders need access to granular current and likely future Congestion Data on distribution networks within the next 1–3 years?

Flexibility traders are best placed to speak to their needs regarding access to congestion data. ENA does wish to point out that EDBs are increasingly looking to third parties, such as flexibility traders to support them in areas where their networks are or will soon be facing congestion and constraints. However, given the position the sector is in, it does not seem necessary, within the next 1-3 years, for flexibility traders to have the information to proactively approach EDBs with solutions to network congestion that EDBs may or may not be seeking.

Q22. Are there any other issues preventing distributors from providing granular current and likely future congestion data?

There are a host of asset information, business process, customer interaction and business capability challenges that EDBs will need to address and overcome to provide accurate and meaningful network congestion information to third parties, particularly at the lower levels of the distribution networks. EDBs are already beginning to tackle these challenges as part of enacting their network transformation roadmaps and, other than resolving issues related to EDB access to ICP data, there is no further changes required by EDBs to industry arrangements to enable this.

Q23. Do you agree that visibility of the location, size, and functionality of larger DER needs to be improved within the next 3–7 years to help understand the drivers of network congestion, what DER is 'controllable', and what services could be offered to owners of DER? If not, why not?

ENA agrees that visibility of larger DER needs to be improved within the next 3–7 years, ideally even sooner.. EDBs require improved visibility of these types of DER – particularly dedicated EV charging units – to enable them to mitigate the effects of congestion on the LV networks as efficiently as possible. In addition, flexibility traders will need to have some sense of the quantity and disposition of DER that could be recruited to help them build a service that will be of value to their customers (e.g. EDBs). Absent of improved visibility of larger DER, opportunities for efficient and effective solutions to network congestion issues may be overlooked or lost.

The other critical piece of information EDBs require is the name of the party with the contractual right to manage that DER. The EDB will then need to enter into an operational protocol with that party to ensure the actions of that DER stay within the physical and power quality limits of the network.

Q24. Do you have any views on the type and size of DER that flexibility needs to have improved visibility?

Flexibility traders are best placed to speak to their needs regarding visibility of DER.

As with our response to question 23, it will be critical that EDBs have visibility of the party with the contractual right to manage that DER (if not the consumer/owner), so that the EDB can enter into an operational protocol with that party.

Q25. Do you think that the Authority, instead of a DER registry, should consider amending the registry data fields and / or requirements to improve DER visibility?

The Authority has the expertise and judgement on which approach is better. For simplicity, ENA's preference would be for the existing registry to be expanded to capture improved DER information on a per-ICP basis (as is currently the case for distributed generation), but we accept there may be

challenges to doing this rather than developing a new registry specifically for DER. It will also be the case that more than one DER will be installed at individual ICPs – for example a consumer may own a smart EV charger, a home battery and some solar panels. This will need to be accounted for in the design.

Q26. Do you agree that the Authority should prioritise work on addressing the other issues outlined in this chapter?

[Note: In the appendix of the issues paper, this question is written as '…other issues outlined in this paper'. We presume the correct wording is that which appears in the body of the issues paper, which refers to '…this chapter', which is what is reproduced above.]

The Authority does not need to prioritise any of the other issues outlined in this chapter.

Q27. Do you agree that flexibility trader access to real-time congestion and ICP data won't be needed for at least five years?

Flexibility traders are best placed to speak to their needs regarding access to real-time congestion and ICP data.

ENA does wish to iterate that there is no value in flexibility traders having access to these types of data in advance of EDBs, whose own data will need to be compiled with this new data in order for themselves and third parties (such as flexibility traders) to derive value from it.

Q28. Do you agree that model privacy disclosure terms are appropriate?

ENA agrees that the Authority's proposal to develop model privacy disclosure terms for ICP data is appropriate.

Q29. Do you agree that model privacy disclosure terms would facilitate data access?

To the extent that model privacy disclosure terms make retailers and MEPs more comfortable providing access to ICP data to EDBs and third parties, ENA agrees these would facilitate data access.

Q30. Do you see any practical issues with this proposal?

A practical issue is the relationship the consumer has with the retailer, that does not exist with the MEP.

If retailers have different privacy terms, but the MEP is providing data directly to EDB/flexibility traders on different terms, there may be a mismatch between the privacy the customer expects under its

contract with the retailer, and the level of privacy the customer is actually getting due to regulated information flows. This will need to be worked through between the Authority and sector in the design of model privacy disclosure terms.

Q31. Should the Authority create model terms for distributors and MEPs as well given the range of data being collected through smart meters? If not, why not?

Given that the model terms that would apply to EDBs and MEPs are unlikely to be substantially different to those that apply to retailers, it would be little additional effort, and helpful, if these model terms were expanded in this way.

Q32. Would the industry find it helpful for the Authority to conduct workshops on privacy preserving/minimisation techniques?

Yes, it would be helpful for the industry if the Authority facilitates workshops on privacy preserving/minimisation techniques.

4. Market settings for equal access

[Note: The question numbers in the issues paper are different in the body of the document versus the appendix of all questions collated at the back. This response uses the question numbers from the body of the issues paper, rather than the appendix, which appears to be missing a few questions. The body of the issues paper duplicates question numbers 31 and 32, but the text of the questions is different in sections 4 and 5.]

Q31. What are your views on the three options presented above, to deal with Issue 1 (that distributors might prefer network investments to NNS)? What alternative option/s would you favour, if any?

ENA does not support option 1, as we already see evidence of EDBs sharing information and methods, for using and procuring NNS. The sector has sufficient capability, interest and incentives to develop more structured education and guidance opportunities as and when they are needed.

Option 2 is supported, as external funding for adoption of NNS (either via trials or actual deployments) will help to de-risk some of this activity for EDBs. This in turn will lead to greater exploration and adoption by EDBs of these new techniques and arrangements, and provides an avenue for sharing learnings.

We are ambivalent on option 3, whether or not EDBs are required to demonstrate that they have explored NNS. There is evidence of EDBs of all types exploring the opportunities around NNS and this will become increasingly common. EDBs are well aware of the expectations placed upon them to use NNS when it is appropriate to do so, so there is no lack of awareness on the part of EDBs. If such a requirement is imposed on EDBs, it should be kept relatively simple to comply with to keep the burden imposed to a minimum. We do note that the Commerce Commission already requires EDBs approach to NNS to be presented in EDB Asset Management Plans, and so we caution the Authority against inadvertently duplicating regulatory monitoring that is happening elsewhere.

It's important to point out that the flexibility provider market is still in a relatively early stage. Consequently, there may not always be suitable flexibility provider support for a particular network capacity constraint, and the transactional costs of procuring third party support are still relatively high, in comparison to the avoided capital cost of using a NNS. As such, there will always be situations where it is more effective and cost-efficient for EDBs to self-supply NNS.[1]

[1] See CEG report *The relative efficiency of self supply vs arm's length supply of flexibility services* commissioned by Vector: https://blob-static.vector.co.nz/blob/vector/media/vector-2022/vector-and-ceg-attachment-1-to-cross-submission-on-im-review-process-26-issues-paper-and-draft-framework-paper-3-august-2022-cleaned.pdf

Q32. Do you agree with the tentatively preferred intervention to deal with Issue 2 (Option 3: encourage standing offers) and the collection and monitoring of information proposed under Option 4? If not, what alternative option/s would you favour, if any?

ENA points out that a ToU tariff is a standing offer – it shows explicitly how much value a flexibility trader can gain for a consumer by shifting their load from peak to off-peak across the year.

Option 2 (MTR) presented in the paper is not a viable option to address the issue that the Authority has identified. ENA supports Ara Ake's MTR trial and believes that the development of MTR into the electricity market will deliver benefits to consumers and EDBs. However MTR is not, and was not conceived as, a form of NNS. We think the Authority has mischaracterised MTR by including it in this paper as an option to address the issue of EDBs favouring 'in-house' NNS. The Authority has also incorrectly described the Kāinga Ora peer to peer trial, and again, we do not think it is appropriate for this to appear in this paper.

EDBs will promote and enable flexibility where it supports the efficient delivery of the lines function service to their consumers. Costs incurred by EDBs to reward flexibility where it isn't actually required or cost effective will ultimately fall to the bulk of EDB consumers who will receive no immediate benefit.

Option 4 appears to presuppose that competitive procurement of NNS (i.e. from third parties) will always be desirable/optimal when compared to self-supplied NNS. This is taken as a given in the issues paper but, as highlighted in the CEG report linked in footnote 1, we do not agree that this will be true in all circumstances.

Q33. Do you think there are circumstances in which the Authority should extend the arm's length rules? If not, why not?

The Authority should not extend arm's length rules. The Commerce Commission already has comprehensive rules related to cost allocation and related party transactions.

EDBs primary obligations are to deliver a safe, reliable and efficient network for the supply of electricity to their customers. If these objectives are best achieved via the self-supply of NNS by EDBs then that option should be available to them. The issues paper worryingly makes an assumption that this cannot be the case, and therefore any self-supply of NNS by EDBs is undesirable.

In addition to the Commerce Commission rules highlighted above, New Zealand has a comprehensive set of laws and regulations to prohibit anti-competitive practices, as well as a well-resourced and competent regulator to enforce them. If flexibility traders, or any other parties, feel that EDBs have behaved in a way that transgresses these laws, then there are mechanisms available to them for remedy and recompense. We see no compelling reason why the Authority should seek to pre-emptively act to preclude EDB self-supply of NNS on the un-evidenced assumption that it is in all cases contrary to the interests of consumers.

Q34. Do you agree with the Authority that Option 1 should be implemented, and that Option 2 could be considered in the event of allegations of, or instances of anti-competitive harm in contestable markets (Issue 3)? If not, what alternative option/s would you favour, if any?

Option 1 should not be implemented. ENA would accept option 2 being considered only in the event of proven instances of anti-competitive harm. As we noted in our response to Q33, New Zealand has an existing set of competition laws that third parties can utilise if they feel those laws have been transgressed. There is no compelling reason why the Authority should pre-empt any such legal processes based purely on allegations of such practices or harms.

5. Capability and Capacity

Q35. What do you think of the Authority's option of using the education option proposed elsewhere in this paper, to include some guidance on how distributors should collaborate in future?

ENA agrees that there is concern about and alertness to capacity and capability in the distribution sector in coming years. It's clear that meeting 2050 climate goals will require significant investment in distribution networks. The resources needed are more than financial – EDBs and their suppliers will require access to more people and skills to build or upgrade networks and adapt their businesses to new data- and customer-driven technologies, all while maintaining business as usual, a safe and reliable power supply.

ENA agrees with the fundamental points laid out in the Authority's consultation paper and has nothing more to contribute. EDBs are aware of the need to increase their capacity and capability, now and in future. And they are aware that they have an ageing workforce, face domestic and international competition for labour, and that they need to develop new skill sets in areas such as data and flexibility.

However important for the future, capacity and capability is not relevant to this particular and highly important consultation on regulatory settings. The Authority has no regulatory tools that would improve the supply of labour and skills to distributors.

Similarly, ENA members are aware of the importance of collaboration and cooperation. Working together has been a consistent theme among EDBs in recent years. For example, collaboration is one of three key priorities written by members into their industry association's new strategy.

The sector abounds with collaboration, and not just through the Electricity Networks Association and the Electricity Engineers' Association, both of which comprise collaborations in general and specific areas. Other collaborations include the South Island Distribution Group, the Northern Energy Group, and the 'Big Six' Distributor Group. Members also collaborate with other energy entities through vehicles such as the Energy CEOs Group, the Energy Sector Commitment Campaign, the BCG report Steering Group, flexforum and the Business New Zealand Energy Council.

With such a clear understanding on the importance of collaboration, and many examples that it exists, it is unnecessary for the Authority to attempt to encourage it.

In summary, ENA does not agree that the Authority should expend resources to create guidance on how distributors should collaborate.

Q36. Do you think it would be helpful for the Authority to encourage the use of joint ventures between distributors to increase their integration of DER and their procurement of NNS projects? And should this be combined with the first option?

Similarly, ENA members are well aware about the opportunity of joint ventures to share their resources and, in future, increase their integration of DER and NNS projects.

The sector has a long history of making arrangements which are directly or obliquely joint ventures or, more broadly, involve working together. These include storm and emergency response, shared services, common competency framework, joint technical standards, metering, cyber-security, and procurement. When and as the opportunity arises, these collaborations will spread to DER and NNS.

ENA therefore does not agree that the Authority's role is to encourage particular business models, such as the use of joint ventures, between distributors to increase their integration of DER and NNS projects.

6. Operating agreements for flexibility services

The Authority has concluded that there are no large issues with operating agreements for flexibility services for it to address at this point. ENA agrees that there is no issue to address now. The Authority would be best served by focusing its resources on areas of higher impact and value such as the reform of Part 6 and addressing the data issues identified elsewhere in the consultation.

Flexibility services are in their infancy. While EDBs are actively seeking out ways to incorporate their use in the development and operation of their networks, these opportunities and the flexibility services that fulfil them are not homogenous. The bespoke nature of the flexibility services provided means that there is little benefit from committing resources to the development of pro-forma operating agreements for flexibility services.

ENA also agrees with the view expressed by solarZero that "at this early stage we also see a need for innovation that should not be constrained by early-stage standardisation".

Q37. Do you agree with the proposed approach to monitor progress between Transpower and distributors in developing standard offer forms for procuring NNS, and monitor whether issues associated with operating agreements for flexibility services are developing, and prioritise resource to progressing the other chapters? If not, why not?

ENA agrees that there is no need for action on the regulation of operating agreements for flexibility services. The Authority's resources are best deployed to issues that deliver value to consumers. ENA notes that there is no standard flexibility services definition nor a standard type of flexibility service.

Q38. Do you have any views on the best way the Authority can monitor whether issues associated with operating agreements for flexibility services are developing?

The Authority should take a reactive approach to monitoring the development of flexibility services operating agreements. It should respond to issues brought to its attention by flexibility services providers and EDBs, rather than expend scarce resources on proactively monitoring an issue the industry agrees does not exist.

Q39. Do you have any suggestions for how the Authority can support industry-led work on providing guidance on best practice and templates for operating agreements?

The Authority should work with industry and the Commerce Commission to establish a clear and codified definition of flexibility services. The Authority should not involve itself in the contractual and procurement practices of EDBs and flexibility service providers.

7. DER Standards

Q40. What are your thoughts on the proposed scope for the Part 6 review? What, if anything, would you include or exclude, and why?

ENA agrees that Part 6 of the Code is overdue for a significant review and update. The segregation of the review of the Part 6 pricing principles into a separate workstream with unclear timelines and conducted by a different division within the Authority risks creating unnecessary compartmentalisation and disjointedness.

Pricing, in particular the incremental cost rule, is a key determinant of what, where and how DER and DG are incorporated into the New Zealand electricity grid. The review of Part 6 pricing principles should be conducted in conjunction with the Part 6 issues listed in the issues paper.

Additionally, the Code lacks a prescribed method to notify and disconnect unauthorised distributed generators. The current clause in the Code and any impact of non-compliance with it, does not reflect the associated health and safety risks.

Q41. In order, what are the three most important issues that should be addressed as part of a Part 6 review, and why?

In order of priority, the key issues ENA see are:

1. **Part 6 application process, including queue management and capacity reservation** – The current process is not well suited to Part 2 applications. Additionally, the volume of Part 1 applications has significantly increased since the process was established.
2. **The incremental cost rule** – The pricing and cost recovery for DG connection are intrinsically linked and should be reviewed in conjunction with the Part 6 application process. The incremental cost rule gives preferential status to DG connectors over other connection types (i.e. load customers including households) and consumers.
3. **Part 6 prescribed maximum fees** – The complexity of applications, particularly Part 2, means EDB costs significantly exceed the maximum prescribed fees, resulting in an inefficient cross-subsidy between existing consumers and connecting DG.

7.1. Expanding Part 6 coverage

Q42. What are your thoughts on amending Part 6 to explicitly include DER, and what do you think are the key issues to be considered?

The inclusion of DER into the Code is an important step in ensuring the Code remains relevant for the evolving electricity industry. The absence of a cohesive approach to DER within the whole Code, not

just Part 6, creates uncertainty and imbalance of oversight and regulation of two components that will likely shape the electricity industry in New Zealand over the next decade.

Not only should DER be explicitly defined and referenced in the Code, but the Code's coverage should be expanded to cover flexibility service providers to ensure that they have the same rights and obligations as other industry participants.

7.2. Part 6 DG application processes

2a) Increase the Part 1 application process size threshold

Q43. What are your thoughts on increasing the size threshold for Part 1 DG applications, including the benefits and drawbacks?

ENA supports the increase in the threshold as the Part 1 (particularly Part 1a) process simplifies the process for standard DG connections that are unlikely to materially affect network operations.

Q44. If the threshold were to change, what do you think the new threshold should be and why?

A 15kW threshold would be appropriate as it represents a natural break point from both a network management and DG installation perspective.

2b) Adjust the Part 1A (streamlined) processing time

Q45: What are your thoughts on adjusting the ten-business day timeframe in Part 1A?

The existing 10 business days timeframe is broadly appropriate.

2c) No change to Part 1 (comprehensive) and Part 2 approval timeframes

Q46. What are your thoughts on maintaining the current approval timeframes in Part 1 (comprehensive) and Part 2?

The current Part 2 timeframes are appropriate. There is sufficient scope for the EDB to seek extensions. This flexibility can be improved by increasing the allowed extension timeframes for larger projects (>=1MW).

The existing Part 1 timeframes are also appropriate. The volume of these applications is low, as the vast majority of applicants of this size choose to utilise the Part 1a process.

Q47. If you seek a change to approval timeframes, what evidence can you give to support this?

ENA does not seek a change in the approval timeframes. Greater flexibility should be built into the extension provisions to allow EDBs and applicants to work collaboratively to deliver the best possible outcomes for both parties. ENA notes that applications for large-scale DG connections may require a Concept Assessment report from Transpower, which can take up to 45 business days.

2d) Add a new application process for large-scale DG to Part 6

Q48. What are your thoughts on adding a new DG application process for large-scale DG to Part 6? Please provide examples in support of why you think change is or is not necessary.

The scope and scale of large DG/DER projects (>1MW) makes the assessment of applications a time- and resource-intensive task.

While the current process allows for EDB to seek extensions, these are time limited. Rather than introduce a separate application process, the Authority should provide greater flexibility within the existing process for large projects.

Q49. If you think a new application process should be added, where should the threshold be and why?

ENA views the 1MW threshold as appropriate for any new application process.

2e) Review the priority of applications clause in Part 6

Q50. What are your thoughts on reviewing the priority of applications clause in Part 6?

ENA supports a comprehensive review of the application priority, queuing and capacity reservation components of Part 6. The recently finalised Transpower connection management framework provides a useful case study on which the Authority could model a more modern application prioritisation process. This alignment with the Transpower model should extend to application fees. The alignment between transmission and distribution connections fees for large DG connections is necessary to avoid incentives for inefficient network connections driven by application fee differentials.

7.3. Power Quality Standards

Q51. Should the AS/NZS 4777.2:2020 Standard be mandated for inverters in New Zealand? If so, how should this be accomplished?

As a general principle, New Zealand should look to adopt modern appliance and electro-technical standards as they become available, all else being equal. There is no compelling reason to treat inverters differently, and we see significant benefits to EDBs, and ultimately their customers, by being able to access the more sophisticated functions of inverters compliant with AS/NZS 4777.2:2020.

7.4. Part 6 prescribed maximum fees

Q52. What are your thoughts on the Authority reviewing the prescribed maximum fees in Part 6?

The prescribed maximum fees contained in Part 6 of the Code are out of date and do not represent the cost of assessing DG connections. As a result, these costs are cross-subsidised by other customers, including vulnerable customers. ENA notes that Transpower's application fees start at $50,000 and increase in line with connection size up to $400,000.

ENA recommends that the maximum application fees for Part 1A and Part 1 be adjust to reflect the increase in the NZ All Group Consumer Price Index (CPI), since the fees where last adjusted in 2014 (see Table 1 below).

The ENA recommends that the Authority adopt the Transpower approach to application fees for Part 2 applications by setting a maximum per MW fee for projects greater than or equal to 1MW. For Part 2 applications below 1MW, the maximum application and testing fees should be updated for CPI increases.

Embedding fixed fees into the Code is unwieldy and requires frequent amendments to ensure that they remain relevant. ENA recommends the Authority include an annual adjustment mechanism in the Code to adjust the maximum prescribed fees by CPI annually.

The Code should also provide the option for EDBs to net the revised Part 2 application fee off the applicant's total connection costs upon the completion of the connection.

Table 1: Revised DG connection fees

Description of fee	Current Fee	Updated for CPI
	$ (exclusive of GST)	
Part 1 of Schedule 6.1 application		
Application fee under clause 2(2)(c)	200	245
Fee for observation of testing and inspection under clause 7(5)	60	75
Part 1A of Schedule 6.1 application		
Application fee under clause 9B(2)(c)	100	120
Fee for inspection under clause 9C(3)	60	75
Deficiency fee under clause 9E(4)	80	95
Part 2 of Schedule 6.1 application		
Application fee for **distributed generation** with **nameplate capacity** of more than 10 kW but less than 100 kW under clause 11(2)(c)	500	605
Application fee for **distributed generation** with **nameplate capacity** of 100 kW or more in total but less than 1 **MW** under clause 11(2)(c)	1,000	1215
Application fee for **distributed generation** with **nameplate capacity** of 1 **MW** or more under clause 11(2)(c)	5,000	per MW of nameplate capacity
Fee for observation of testing and inspection of **distributed generation** with nameplate capacity of more than 10 kW but less than 100 kW under clause 22(5)	120	145
Fee for observation of testing and inspection of **distributed generation** with **nameplate capacity** of 100 kW or more under clause 22(5)	1,200	1455

8. Contact

The ENA's contact person for this submission is Keith Hutchinson (eith@electricity.org.nz or 04 555 0074).

9. Appendix

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

Alpine Energy

Aurora Energy

Buller Electricity

Centralines

Counties Energy

Eastland Network

Electra

EA Networks

Horizon Energy Distribution

Mainpower NZ

Marlborough Lines

Nelson Electricity

Network Tasman

Network Waitaki

Northpower

Orion New Zealand

Powerco

PowerNet

Scanpower

The Lines Company

Top Energy

Unison Networks

Vector

Waipa Networks

WEL Networks

Wellington Electricity Lines

Westpower