

Code amendment omnibus three

Decision paper

6 August 2024

Executive summary

The number of distributed generation installations are growing as New Zealand's economy electrifies and consumer-based energy resources are more widely adopted. This will increasingly put pressure on distributors who must facilitate distributed generation connections to the network.

To better support the growth of new distributed generation (DG)¹, the Electricity Authority Te Mana Hiko (Authority) proposed two discrete changes to the Electricity Industry Participation Code 2010 (Code) in our 'Code amendment omnibus three' consultation paper in May 2024.² These were:

- 1) increase the prescribed maximum fees (fees) for distributed generation (DG) applications so they are adjusted for inflation (Part 6 of the Code)
- 2) expand the Electricity registry to include more detail on the distributed generation installed at an Installation Control Point (ICP) (Part 11 of the Code).

The Authority received 13 submissions in response to the consultation paper.³ All submitters expressed overall support for the proposals, with almost all changes suggested minor.

Increase distributed generation processing fees for inflation

The first proposal will ensure distributors are better able to recoup their costs to process distributed generation (DG) applications. This would benefit consumers as currently the fees are not always sufficient to cover distributor costs, which means a cross-subsidy can occur from consumers to distributed generators. The proposal would reduce this cross-subsidy.

Submitters supported the proposal, but most wanted a more significant investigation of fees than proposed. As outlined in the consultation paper, this is an interim measure to address immediate challenges ahead of a detailed review. This will occur during Stage Two of the Authority's Network Connections Project, starting in late 2024.

We have decided to implement the proposal with one amendment. In response to submitter feedback, we have used an industry-specific inflation figure rather than a general inflation figure. This has slightly increased the fees from those proposed in the consultation paper.

Expand the Electricity registry to include more distributed generation information

The second proposal was to expand several fields in the Electricity registry (registry) to provide more details on distributed generation installed at an installation control point (ICP).

This will enable distributors to more effectively roll-out distributed generation in a timely manner. This should encourage more consumers to take advantage of distributed generation, as there are likely to be fewer barriers to investment with increased information visibility.

The Authority expects increased DG visibility will also improve distributors' ability to identify where and how DG can help address network congestion, and to work with flexibility traders on this. These additions to the registry will increase visibility of DG and better enable

¹ Distributed generation is generating plant that is connected to a distribution network, or to a consumer installation connected to a distribution network. See Code clause 1.1 'Interpretation' for full definition: [https://www.ea.govt.nz/documents/3485/Code - Part 1 - Preliminary Provisions - 1 MARCH 2024 - CRP 2024.pdf](https://www.ea.govt.nz/documents/3485/Code_-_Part_1_-_Preliminary_Provisions_-_1_MARCH_2024_-_CRP_2024.pdf).

² <https://www.ea.govt.nz/projects/all/code-amendment-omnibus/consultation/code-amendment-omnibus-3/>

³ Thirteen submissions on the proposed registry improvements and 10 submissions on the adjustment to fees.

flexibility in the electricity system. Ultimately, this should increase the affordability and reliability of consumers' electricity supply by lowering demand peaks.

Better visibility will also help make other industry participants, such as retailers, aware of options to increase returns from their DG. This will benefit consumers as DG can be used to deliver greater value and cost savings, and help flexibility traders, including retailers and others, identify new business opportunities and service options for DG owners.

The amendments will establish a two-level structure for DG information in the register. This provides for a summary of DG at each ICP and further details on the types and capacity of items that comprise generating units.⁴

Following submitters' feedback, we have decided to proceed with the proposal with minor amendments to the Code drafting consulted on.

The minor Code amendments:

- separate the requirements to provide information to enhance clarity
- clarify that distributed generation includes items capable of synchronising to the distributor's network
- extend the transition period for distributors to be required to enter information in the new registry fields to approximately 12 months from the date this decision paper is published
- clarify that a distributor does not need to update information for DG existing before 1 August 2025 unless they choose to.

These changes respond to submissions. The changes do not alter the intent of the original proposals.

This amendment, focused on DG, is stage one of a data-related project under the Authority's *Delivering key distribution sector reform work programme*⁵ of October 2023. Other stages to progress later in 2024 and beyond include a:

- stage two proposal to expand the registry further to include distributed energy resource (DER) information, covering both DG and controllable load data, and expanding visibility to third parties (eg, flexibility traders and others)
- stage three proposal to support a flexibility market by providing more dynamic information.

There are also links between this amendment and other projects in the Authority's *Delivering key distribution sector reform work programme*. This amendment is particularly related to the Authority's work to improve visibility and coordination between flexibility traders and distributors and its draft guidance for distributor involvement in the flexibility services market. These initiatives are intended to enhance coordination and information symmetry between flexibility traders and distributors to support the development of flexibility markets.

Also relevant is our Network Connections Project, which involves making changes to 'Connection of distributed generation' in Part 6 of the Code to ensure the provisions are fit for purpose in a more electrified economy.

⁴ Generating units means all equipment functioning together as a single entity to produce electricity.

⁵ Electricity Authority, *Delivering key distribution sector reform – Work programme*, 16 October 2023, 13-14, https://www.ea.govt.nz/documents/3929/Work_programme_Oct_231406907.13.pdf.

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1. Purpose

- 1.1. The Electricity Authority Te Mana Hiko (Authority) has decided to amend several areas of the Electricity Industry Participation Code 2010 (Code). This paper details these decisions and provides the Authority's reasons.

Code amendment omnibus three

- 1.2. On 7 May 2024, we published 'Code amendment omnibus three: Consultation paper' (the consultation paper) to consult on two proposals to amend the Code. This paper sets out the Authority's decisions on these amendments and gives reasons for each decision.
- 1.3. The consultation paper is available on our website at:
<https://www.ea.govt.nz/projects/all/code-amendment-omnibus/>

Table 1: List of amendments proceeding

	Topic	Effective date	Page
1	Amend Schedule 6.5 to include a one-off inflation adjustment to prescribed maximum fees	1 November 2024	8
2	Amend Schedule 11.1 of the Code to expand the information about distributed generation (DG) ⁶ in the Electricity registry	1 August 2025	11

2. Submissions on Code amendment omnibus three

- 2.1. We received submissions on the consultation paper from the 13 parties listed in in Table 2 below. Submissions are available on the Authority's website at:
<https://www.ea.govt.nz/projects/all/code-amendment-omnibus/consultation/code-amendment-omnibus-3/>
- 2.2. Issues raised by submitters are discussed in the section for the relevant proposal.

Table 2: List of submitters

Submitter	Role	Proposals addressed
Contact Energy	Retailer	2
Digital Stock	Software development	2
Energy Networks Aotearoa	Representative body for distributors	1, 2
Horizon Networks	Distributor	1, 2
Lightyears Solar	Solar power development	1, 2
Northpower	Distributor	1, 2

⁶ Distributed generation is generating plant that is connected to a distribution network, or to a consumer installation connected to a distribution network.

Orion	Distributor	1, 2
Powerco	Distributor	1, 2
Transpower	Grid owner / system operator	2
Unison and Centralines	Distributors	1, 2
Vector	Distributor	1, 2
WEL Networks	Distributor	1, 2
Wellington Electricity	Distributor	1, 2

Feedback on the omnibus process

- 2.3. Overall feedback on the omnibus process was positive. One submitter suggested the omnibus title could usefully indicate the relevant policy programme the proposal came under.
- 2.4. Another submitter considered some issues addressed in the current and recent omnibus proposals were less straightforward than the Authority assumed and warranted a 'deeper dive' than the process allows for.
- 2.5. The submitter suggested the Authority could ask, for each item addressed in an omnibus process, whether submitters think the issue was relatively technical and/or non-controversial.
- 2.6. The Authority will consider these suggestions for future omnibus processes.

3. The amendments promote our statutory objectives and are consistent with regulatory requirements

- 3.1. The Authority's main statutory objective is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.
- 3.2. After considering all submissions on the Code amendment proposals, the Authority considers the final Code amendments will deliver long-term benefits to consumers consistent with the Authority's main objective as noted below, and in each section of the Authority's previous consultation paper.

The amendments are consistent with regulatory requirements

- 3.3. The Code amendments are consistent with the requirements of section 32(1) of the Act. The amendments are also consistent with the Authority's Code amendment principles in that there is a clear case for regulation, and the costs and benefits of the proposals have been summarised (in the consultation paper).

4. How the amended Code wording is displayed in this decision paper

4.1. Code amendments in this decision paper are displayed as:

- (a) added text or formatting is underlined
- (b) deleted text is ~~striketrough~~
- (c) additional added text or formatting compared to the consultation paper are red underlined
- (d) additional deleted text compared to the consultation paper is ~~red striketrough~~.

5. Amend Schedule 6.5 to include a one-off inflation adjustment to prescribed maximum fees

The Authority's proposal

- 5.1. The Authority proposed a one-off inflation adjustment to the prescribed maximum fees (fees) that distributors charge distributed generators. These fees allow distributors to recoup their costs to process applications to connect DG.

The Authority has decided to implement an amended form of the proposal

- 5.2. The Authority has decided to implement the proposal with one amendment. In response to submitter feedback, we have used an industry-specific inflation figure rather than a general inflation figure. This has slightly increased the fees from those proposed in the consultation paper. The Code amendment will come into force on **1 November 2024**.

Submissions and the Authority's response

Submitter views on the fees proposal

- 5.3. There were 10 submissions on the proposal. All submitters were supportive, but most wanted a more thorough consideration of fees than the one-off inflation adjustment proposed. This included, for example, annual inflation adjustments, consideration of different fee methodologies and comparisons to Transpower fees.
- 5.4. Horizon Networks proposed the Authority apply the 2007 inflation adjustment to all fees, not just Part 1 and Part 2 fees. They noted the Part 1A fees were set relative to Part 1 fees in 2015, not actual costs. The Part 1 fees had not been adjusted for inflation at that time.
- 5.5. Wellington Electricity proposed the Authority use an industry-specific Labour Cost index (LCI) to calculate the inflation adjustment, rather than the general LCI proposed.⁷ This would recognise that the electricity industry has experienced different labour cost changes compared to other parts of the economy.

Authority's response

- 5.6. The Authority has decided to implement the proposal largely as proposed. This ensures distributors can charge fees closer to their actual costs and reduce cross-subsidisation. As this is only a change in fee levels, there is little administrative burden in changing fees now.
- 5.7. The proposed amendment is an interim measure. As indicated in our consultation paper, Stage Two of the Authority's Network Connections Project will consider fees

⁷ The LCI measures changes in wages and salaries. The Authority has used the LCI as distributors report staff time takes up a significant proportion of the costs to process applications. The Authority has used the Stats NZ Infoshare tool (<https://infoshare.stats.govt.nz/>) to determine the change in LCI from when the industry specific LCI starts (2009Q2) to the present day, selecting the "Private Sector and Industry Group (ANZSIC06) (Base: June 2009 qtr (=1000) (Qrtly-Mar/Jun/Sep/Dec), Salary and Ordinary Time Wage Rates, Electricity, Gas, Water and Waste Services" dataset. Part 1 and 2 fees adjusted using the formula "fee x (Q1 2024 index / Q2 2009 index)", and Part 1A fees "fee x (Q1 2024 index / Q2 2015 index)".

in detail and is likely to propose wider changes to the connection and application processes. This work is scheduled to begin in late 2024.⁸

- 5.8. The proposal to apply the 2007 inflation adjustment to all fees would have a minor effect on Part 1A fees, given the fees are small in absolute terms. It would also require the Authority to reconsult, given it is a deviation from what was proposed in the consultation paper. Given this, and that the Authority is reviewing fees in late 2024 and this could result in significant change, the Authority has decided not to adopt this proposal.
- 5.9. We have adopted the Wellington Electricity proposal to use an industry-specific Labour Cost index (LCI) to calculate the inflation adjustment, rather than the general LCI proposed. This has slightly increased the fees above those proposed in the consultation paper.⁹

The amendment will promote the efficient operation of the electricity industry

- 5.10. The Code amendment is consistent with the Authority's statutory objectives, and sections 32(1)(c) and 32(1)(e) of the Act, because it would contribute to the efficient operation of the electricity industry. It would reduce the incidence or extent of the cross-subsidy, from consumers to distributed generators, that occurs when fees are insufficient to recoup a distributor's costs to process a DG application.

⁸ The Network Connections Project will consider, for example, when fees apply and do not apply, alternative fee structures (eg, 'reasonable and actual' rather than capped fees), annual fee adjustments, the implications of Transpower's fee approach, and whether connection fees should be able to be offset from application fees.

⁹ Except for the *Application fee for distributed generation with nameplate capacity of more than 10 kW but less than 100 kW under clause 11(2)(c)* which has dropped slightly as the figure in the consultation paper was incorrect. This should have been \$730 and not \$780 as stated. All fees are rounded to the nearest \$10.

The final Code amendment

5.11. The Code amendment approved by the Authority:

Schedule 6.5

Prescribed maximum fees

...

2. A **distributor** may require the payment of fees for any of the following activities prescribed under Part 6 of this Code to the maximum fee specified in the column opposite that activity:

Description of fee	\$ (exclusive of GST)
Part 1 of Schedule 6.1 application	
Application fee under clause 2(2)(c)	200 <u>290-310</u>
Fee for observation of testing and inspection under clause 7(5)	60 <u>90-90</u>
Part 1A of Schedule 6.1 application	
Application fee under clause 9B(2)(c)	100 <u>130-140</u>
Fee for inspection under clause 9C(3)	60 <u>80-80</u>
Deficiency fee under clause 9E(4)	80 <u>100-110</u>
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 <u>780-770</u>
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 <u>1,460-1,540</u>
Application fee for distributed generation with nameplate capacity of 1 MW or more under clause 11(2)(c)	5,000 <u>7,290-7,690</u>
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 <u>170-180</u>
Fee for observation of testing and inspection of distributed generation with nameplate capacity of 100 kW or more under clause 22(5)	1,200 <u>1,750-1,850</u>

6. We will amend Schedule 11.1 to expand information about distributed generation in the registry

The Authority's proposal

- 6.1. The number of distributed generation (DG) installations are growing, and the Authority expects this trend to continue with more electrification and wider adoption of consumer-based energy resources.
- 6.2. This creates a more flexible electricity system, supporting more affordable and reliable electricity for consumers by smoothing periods of high demand and avoiding investment in network infrastructure.
- 6.3. However, limited visibility of DG means challenges for distributors that must manage its impact on the network. This reduces the benefits to consumers from greater uptake of DG.
- 6.4. There are gaps in the electricity sector's visibility of DG, and therefore understanding of current capacity or constraints regarding DG on the low voltage network. The Authority expects increased DG visibility to improve distributors' ability to identify where and how DG can help address network congestion and work with flexibility traders on this.
- 6.5. Better visibility will also allow other industry participants, such as retailers, to facilitate these improvements through their connections to DG owners, by making them aware of options to increase returns from their DG. This will also benefit consumers through DG use delivering greater value and cost savings, and flexibility traders, including retailers and others, identifying new business opportunities and service options for DG owners.
- 6.6. To increase DG visibility, the Authority proposed to expand several fields in the Electricity registry to provide more detail on DG installed at an ICP. This will establish a two-level structure for DG-related information.
- 6.7. This structure will provide summary information of the DG at each ICP at level one, and further detail on the types and capacity of each of the items at level two. This will increase visibility of DG and help enable more flexibility in the system.
- 6.8. The Code amendments make more granular DG information available on the registry, in terms of its type, configuration, and capacity to inject electricity into the network. However, this is initially only to those industry participants with full registry access or granted registry access, under Part 11 of the Code.
- 6.9. The visibility issue for other distributed energy resources (DER) includes DER location and characteristics, such as capacity and controllability.¹⁰ The Authority is working on visibility of DER intended in stages two and three of our wider project under the *Delivering key distribution sector reform work programme*,¹¹ later in 2024 and beyond. This work will comprise:
 - (a) A stage two proposal to expand the registry further to contain DER information, covering both DG and controllable load data. This includes considering a wider

¹⁰ Electricity Authority, Delivering key distribution sector reform – Work programme, 16 October 2023, 13-14, https://www.ea.govt.nz/documents/3929/Work_programme_Oct_231406907.13.pdf.

¹¹ Electricity Authority, Delivering key distribution sector reform – Work programme, 13-14.

distribution of this information through the public registry data access provision (the registry Application Programming Interface and 'Your meter' website¹²) in stage two of the *Delivering key distribution sector reform work programme*.

- (b) A stage three proposal to support a flexibility market by providing more dynamic information.

This proposal also links to other projects related to distribution reform

6.10. This DG-related proposal also links to two other projects in the Authority's *Delivering key distribution sector reform work programme*:

- (a) improving visibility and coordination between flexibility traders and distributors
- (b) the Network Connections Project.

Improving visibility and coordination between flexibility traders and distributors

6.11. The flexibility market is evolving with growth of DG and DER. However, the current lack of visibility and coordination between flexibility traders' activities and distributors' network management responsibilities poses a challenge for distributors to maintain network reliability. Our work to improve visibility and coordination between flexibility traders and distributor' considers options to improve the regulatory framework to address this.

6.12. Increasing visibility of available DG and DER that flexibility traders may control is part of the solution to support this work. Increased granularity of data in the registry will improve visibility to support enhanced coordination.

Network Connections Project

6.13. The Authority is also proposing changes to Part 6 'Connection of distributed generation' of the Code. Part 6 sets the rules that distributors and distributed generators must follow to connect to networks and to continue operating DG.

6.14. Submitters raised several issues that more closely align with the scope of our Part 6 work rather than this proposal. A related issue that will be addressed in our Network Connection Project is the proposal to require updated registry information to be provided to distributors

The Authority has decided to implement the proposal with no change to its policy intent, but with revised Code drafting

6.15. The Authority has decided to amend the Code as proposed above, with minor changes to the initial drafting to:

- (a) separate the requirements to provide information to enhance clarity
- (b) clarify that distributed generation includes items capable of synchronising to the distributor's network
- (c) extend the transition period for distributors to be required to enter information in the new registry fields to 1 August 2025 - approximately 12 months from the date this decision paper is published

¹² Information on APIs is available here: <https://emi.developer.azure-api.net/> . The 'Your meter' webpage is here: <https://www.ea.govt.nz/your-power/your-meter/address/>

- (d) clarify that a distributor does not need to update information for DG existing before 1 August 2025 unless they choose to do so.
- 6.16. The minor changes from the initial drafting are in response to submissions, and in one case, to correct an error. The changes do not alter the intent of the proposals consulted on, and the Authority considers many of these as incidental.
- 6.17. The Code amendment will come into force on **1 August 2025**.

Submissions and the Authority's response

- 6.18. All 13 submissions expressed general support, several strongly, for expanding DG-related information on the registry, with the two-level information structure also well supported. Submitters generally considered this would increase DG visibility, improving network and flexibility management. Some submitters did note some implementation issues, particularly related to timing.
- 6.19. One submitter (Powerco), while supporting the proposal overall, expressed concerns regarding implementation due to the complexity of changes to the registry and impact on its systems. It suggested stages one (DG) and two (DER) be combined for implementation later in 2025 to avoid multiple system changes.
- 6.20. The Authority proposes to go ahead with a staged approach of implementing DG updates in stage one, given broad submitter support. However, we have extended the period before which distributors will be required to enter information in the new registry fields. We also note the requirements do not apply retrospectively.
- 6.21. While also generally supportive of the proposal, WEL Networks indicated it was not convinced the proposals in this first stage of the project (DG), would deliver the benefits the Authority assumes. The Authority acknowledges the full benefits will not be achieved until the project's other stages are realised. However, the Authority is comfortable that these changes will be beneficial given submitters' overall support.

Submitters' views – the six-month transition period is too short

- 6.22. Several submitters did not agree the Authority's proposed six-month transition period for distributors being required to enter information in the new registry fields was adequate.
- 6.23. Wellington Electricity, for example, considered six months was insufficient time to amend internal processes and IT functionality. It noted its billing systems would require time to make bespoke changes, as the proposed changes were not general systems changes that other networks could then apply.
- 6.24. Of the submitters seeking a longer transition period, most, including Electricity Networks Aotearoa (ENA), representing distributors, preferred a 12-month period.

Authority response

- 6.25. In line with submitters' feedback, the Authority considers it important to give distributors sufficient time to change their processes to align with the Code's new requirements. We have therefore extended the transition period.
- 6.26. The Authority had originally proposed distributors be required to enter information in the new registry fields from 1 April 2025 – a six-month transition period from when a decision on the proposal was initially anticipated. The Authority has now decided the

date for distributors to be required to enter information in the new registry fields will be 1 August 2025. This provides an approximately 12-month transition period from the date this decision paper is published.

Submitters' views – treatment of historical data and dates for inputting new data

- 6.27. The ENA stated the Authority, in setting out its plan for implementing the proposed Code change, should also set out its approach to the treatment of historical data (ie, relevant data already in the registry before 1 April 2025).
- 6.28. Digital Stock believed the Authority should consider the possibility of distributors choosing to migrate their existing internal DG records. It noted these records may not contain all the required information fields, but it would still be beneficial to have this partial additional data in the registry. This is because it would be more detailed than the baseline migration that will be done by the registry.
- 6.29. Digital Stock considered this could be enabled by allowing pre-1 April 2025 ICPs to have additional partial data inputted. For example, this additional data could include submitting records for items of generation plant with a fuel type and nameplate capacity, but not submitting inverter details or battery capacity until a physical change is made to the DG on the ICP, or a distributor wishes to correct the information.
- 6.30. It considered this would allow distributors to migrate their existing internal DG records without having to input any extra information.
- 6.31. Orion also queried whether the Authority had any concerns should distributors wish to voluntarily update data for DG connected to ICPs before 1 April 2025, if it is available on their internal systems.

Authority response

- 6.32. The Authority recognises including historical DG-related data in the registry from before 1 August 2025 (the date the Code amendment comes into force), where this exists, would be beneficial to visibility and network and flexibility management.
- 6.33. However, we have limited the requirement for distributors to input historical data for DG existing before 1 August 2025. This is so this is only required where, after 1 August 2025, the distributor observes the testing of, or inspects, the ICP, or an application is made to connect a new DG item.
- 6.34. This requirement minimises compliance obligations on distributors. We also consider the most significant growth in DG connections will be in the future. We also note that over time most existing ICPs with existing DG are likely to have new DG connected or be visited by the distributor and this data will eventually be populated in the registry.
- 6.35. However, where a distributor itself chooses to update such historical DG-related data for an ICP in the registry, we do not want the Code or the registry functionality to inadvertently hamper this. Consequently, we have added a new clause 11 to Schedule 11.1 to make it clear that distributors may voluntarily update historical DG-related data for an ICP, even if that data does not meet the requirements for new DG data under the Code amendment.

- 6.36. Additionally, while reviewing the submissions, we have noted the proposed Code drafting contained an error. The way the Code drafting was proposed, there would be no requirement to input data for new DG installations on any of the 2.3 million ICPs currently existing. The intention is for the exception to be for DG existing prior to distributors being required to enter new DG data in the new registry fields (from 1 August 2025). We have corrected this drafting error.

Submitter view – gap in information provision for applications received before 1 April 2025 and connected later

- 6.37. Horizon Networks considered a gap in our proposal needed to be addressed by a transitional provision. It noted that under our proposed Code wording, populating the new fields was not required for DG that existed before 1 April 2025, unless the distributor had observed testing or there has been an application to connect DG at the ICP under Part 6 of the Code (Connection of distributed generation) after 1 April 2025.
- 6.38. However, Horizon stated if an application was received before 1 April 2025, but connected after 1 April 2025, arguably there was no obligation to populate any information in the registry.

Authority response

- 6.39. We have considered the gap Horizon raised is created by the Code drafting for clause 10. A distributor is not required to comply with the new Code requirements before 1 August 2025. Consequently, a distributor is not required to collect the new information if an application is made, or new DG connected, prior to that date.
- 6.40. However, the distributor may choose to collect the necessary data to voluntarily update the registry after 1 August 2025. The Code amendment makes it clear distributors can voluntarily input information for historical connections.
- 6.41. If an application to connect DG is received before 1 August 2025, but the DG is connected after that date, the distributor must enter the new data in the registry. However, we acknowledge the distributor may not have collected the data.
- 6.42. In this case, the distributor will need to ensure they collect data from applicants at time of application or as part of the connection process. We note distributors will have approximately 12 months' notice before being required to update the new registry fields. Consequently, we consider distributors will be able to collect the data, especially if the applicant's intended connection date is after 1 August 2025.
- 6.43. Additionally, we expect the number of DG installations where the application and connection dates span the period between the Code amendment's approval and 1 August 2025 will be relatively low. For the above reasons, the Authority does not consider any changes to its proposal are necessary.

Submitters' view – challenges with distributed generators holding information but distributors being responsible for updates, confidentiality, and inappropriate registry access

- 6.44. ENA, Horizon, and WEL Networks made points regarding the fact distributed generators, not distributors, were the parties that held the DG information that

distributors needed to update. This posed challenges for distributors and could put distributors in breach of Part 11.

- 6.45. ENA considered the Authority should accompany the proposed Code changes with provision giving distributors greater powers to require distributed generators to supply accurate information regarding connections in a timely manner.
- 6.46. Horizon considered failure by the generator to provide information to distributors under Part 6 should not put distributors in breach of Part 11 of the Code.
- 6.47. WEL Networks also considered distributors were likely to continue to face challenges sourcing DER information to populate the registry. This was because those connecting are not required to engage with their distributor unless a connection change is required.
- 6.48. Transpower identified some potential consequential operational policy changes to Schedule 6.1 (Process for obtaining approval). It considered these may be needed to support the objectives of the Authority's proposed amendment.
- 6.49. Transpower noted the DG application process currently provides that some information provision, including the additional detail the Authority proposes, is only discretionary to provide (refer schedule 6.1 Part 1 clause 2(3) and Part 2 clause 11(3)). Additionally, in schedule 6.1 Part 3, the information in the DG application is confidential (clause 25 (1)) and once the information is used for the connection, it must be destroyed (clause 25 (3)).
- 6.50. Transpower also noted the *Registry access policy*¹³ created under Code clause 11.28 states users of the registry may not use registry information for "inappropriate access". This is described as "...for gaining a commercial advantage over another participant if the consumer has not initiated contact; for marketing, cold calling, direct marketing, or any other form of participant-initiated contact with potential customers."
- 6.51. Transpower also referenced the recently introduced Customer and Product Data Bill as having relevance to how the benefits articulated from DER data in the registry are realised. It notes the Bill will require businesses that hold designated customer data (data holders) to provide that data to the customer and, with the customer's authorisation, to accredited third parties.

Authority response

- 6.52. The Authority is currently separately progressing its Network Connections Project in which it will propose changes to Part 6. These will likely include a requirement for distributed generators that are participants to provide the necessary registry information to distributors as part of the DG application process and the information is available to registry users.
- 6.53. The Authority will include the issue of notifying DG disconnections, including inverter removal, also raised by two submitters, under our Network Connections Project.
- 6.54. The information required by the Code amendment in this decision paper is technical information about the DG being installed and is generally already being provided by

¹³ Electricity Authority, *Registry Access Policy*, Version 1.7, 18 April 2019, https://www.ea.govt.nz/documents/169/Registry_access_policy.pdf

applicants under the current processes. If an applicant currently refuses to supply this information, it will be difficult for the distributor to adequately assess and approve the proposed DG installation.

- 6.55. The Authority will review the Registry access policy as part of stage two of its project to expand the registry further to include DER later this year. This will also include considering expanding visibility to third parties (eg, flexibility traders and others) as part of stages two and three of its project.
- 6.56. However, for stage one, the Authority expects greater visibility of DG in the registry to facilitate both distributors and retailers working more with flexibility traders. This is not for commercial advantage, but to support network management and electricity supply resilience by taking advantage of flexibility options. We also note the additional information, although being supplied by the customer, is technical information about the DG.
- 6.57. For these reasons, the Authority does not consider any changes to its current proposal are necessary.

Submitters' view – distributors' ability to set maximum export limits for ICPs will expire in September 2026

- 6.58. Several submitters supported adding an entry field in the registry to record whether an ICP is subject to an export limit and by how much. The Authority's proposal requires that if the distributor has determined a maximum export capacity for the ICP, that information must be provided to the registry manager. However, the ENA and Vector have pointed out the current provisions under Part 6, Schedule 6.1, clause 1D(2) (relating to applications under Part 1A) allowing distributors to set export limits will expire on 1 September 2026.
- 6.59. The ENA and Vector noted maximum export limits are important in facilitating use of dynamic operating envelopes and other mechanisms to maximise efficient use of distribution networks. Both submitters considered the 'sunset' date relating to export limits should therefore be removed or extended.

Authority response

- 6.60. The proposed new information field for maximum export limits is only for recording that a limit has been set under the current Code provisions. It does not confer the distributor with any additional rights to apply export limits. However, the Authority acknowledges the importance of distributors' ability to set export limits and for that information to be provided to the registry manager.
- 6.61. In stage two of its Network Connections Project, the Authority will consider the 2026 'sunset' provisions as part of the small (10kW or less) DG application processes.
- 6.62. For the above reasons, the Authority does not consider any changes to its proposal are currently necessary, but we will incorporate this feedback into the next stage of the work.

Submitter view – retailers should be more accountable to maintain export limits

- 6.63. Wellington Electricity considered there should be more accountability on the retailer to maintain export limits as this is directly related to the default distributor agreement.

Authority response

- 6.64. The Authority considers this is a contractual issue between retailers and distributors under the default distributor agreement and therefore out of scope of this proposal. However, it will consider this as part of its ongoing Code amendment work programme if it becomes apparent that it is a widespread issue.

Submitters' view – proposing additional clauses or changes to the Authority's Code drafting

Information should identify all DG that synchronises to the network

- 6.65. Orion and Vector considered it should be clear in clause 7(1AA) that information is required on any synchronous generation, such as liquid fuel (eg, diesel) generators, that can inject electricity into the distributor's network.
- 6.66. Orion preferred different drafting of clause 7(1AA) to refer to DG "that are capable of synchronising to the distributor's network" rather than the Authority's drafting of "that inject electricity into the distributor's network".
- 6.67. Orion indicated this is because if an installer puts a zero-export limit on a solar inverter, then technically no solar application is currently required. Orion noted it has already had two applicants challenge it on this.

Authority response

- 6.68. The Authority accepts it would be useful for the requirements to clearly include any synchronous generation. It also acknowledges the issue that DG with a zero-export limit indicated may not be captured under the current drafting.
- 6.69. The Authority has therefore revised its drafting in line with the submitters' suggestions. It does not consider this alters the policy intent of the original drafting where any connected DG that is **capable** of exporting is captured by these provisions, regardless of whether the DG is actually exporting.

Clarify the drafting of clause 10 regarding when distributors must update data for existing and new ICPs

- 6.70. ENA, Orion and Vector noted drafting clarity issues around when a distributor is required to update the DG information at an ICP.
- 6.71. ENA noted the proposed drafting of clause 7(10)(a) required distributors to populate the registry if they observed testing, or there is an application to connect DG at ICPs that existed prior to 1 April 2025. It considered it was unclear if this requirement applied to ICPs where an application or inspection occurred prior to 1 April 2025.
- 6.72. Orion submitted that the current clause 7(10) drafting appeared contradictory. It understood the Authority's intention was for distributors to populate the new information for:
- (a) only new DG and additional DG at new or existing ICPs respectively after 1 April 2025
 - (b) DG at an ICP if the distributor witnesses and records information from testing or inspection after 1 April 2025.

Authority response

- 6.73. The Authority acknowledges the drafting of clause 7(10) as consulted on could be interpreted to mean distributors need to populate the new information for DG existing prior to 1 April 2025, before that date, if they:
- (a) observe the testing of or inspect DG existing prior to 1 April 2025, or
 - (b) there is an application for new DG under Part 6 of the Code.
- 6.74. It is not the Authority's intention that distributors need to populate the new information before a reasonable transition period (now approximately 12 months) under the two scenarios detailed in clause 7(10).
- 6.75. A transition period is needed between the Authority's decision and distributors being required to enter information in the new registry fields (from 1 August 2025). This is to allow the registry manager time to develop the new registry fields, and distributors time to update their data systems interacting with the registry and collect the required information if they currently do not.
- 6.76. We have therefore revised our drafting of clause 7(10) to clarify the above. We do not consider this alters the policy intent of the original drafting.

Authority's expectation on the accuracy of registry information

- 6.77. The Authority expects the registry to be the 'single source of truth' for the industry's technical data about an ICP. This data needs to be easily accessible to participants that have registry access. As such, distributors should make efforts to update the registry to include data about distributed generation connected before 1 August 2025.
- 6.78. Clause 7(10) does not make it mandatory to provide information under subclause 7(1)(o) unless one of the two scenarios detailed in the clause occur. However, the Authority encourages distributors to update the registry with the data that is otherwise required under clause 7(1)(o) where it is available to them, either in digital form or paper based, as soon as practicable.
- 6.79. The Authority will be monitoring the registry data, including the extent to which information is provided voluntarily, and will consider whether further Code amendments may be necessary.

Clause 7(1)(o) drafting creates ambiguity and uncertainty through combining obligations

- 6.80. ENA and Horizon considered clause 7(1)(o) drafting was unclear due to combining more than one obligation in single paragraphs. These submitters considered these obligations should be separated to improve clarity.
- 6.81. Horizon noted clause 7(1)(o)(i) could mean:
- (a) The distributor needs to populate the maximum amount of electricity that can be injected. This is the sum of:
 - (i) maximum amount of electricity each generating unit can inject; and
 - (ii) the nameplate capacity; or

- (b) The distributor needs to populate the maximum amount of electricity that can be injected. This is the sum of each generating unit. The distributor also needs to populate the nameplate capacity.
- 6.82. The correct interpretation of clause 7(1)(o)(i) is 6.81(b) above.
- 6.83. Both submitters also noted clause 7(1)(o)(ii) contained both an obligation to populate the number of 'items', and a second obligation to populate the 'fuel type'.
- 6.84. Horizon considered it was unclear what an 'item' and 'generating unit' in clause 7(1)(o)(iii) was. Both submitters noted the Code would be clearer if the relationship between these terms was clarified. This was through a hierarchy in the Code indicating that a generating unit comprises of one or more 'items'.
- 6.85. Horizon pointed out this would mean distributors would need to populate the number of generating units, and within each generating unit populate the items within the unit. It noted this is consistent with how metering information is handled on the registry where an ICP can have one or more metering installations, and each metering installation has one or more meters.

Authority response

- 6.86. The Authority considers the clarity of requirements for clause 7(1)(o) could be improved through further separating the obligations in existing sub-clauses (i) and (ii). We have therefore revised our drafting. We have also added more examples of items that may comprise a generating unit for clarity.
- 6.87. Further, we have expanded the examples in clause 7(1AA) to be clearer about synchronous generation and added photovoltaic arrays as another example. We have also added a new subclause (1AB) to clarify the hierarchy between a generating unit and the items it may include. We do not consider any of these changes alter the policy intent of the proposals.
- 6.88. 'Generating unit' is already defined in the Code. We do not consider it necessary to separately define 'item' further given the explanatory detail provided in the drafting.

Distributor determined maximum export capacity should be included in summary level data

- 6.89. Vector noted if the distributor has determined a maximum export capacity for the ICP, as required to be populated in current clause 7(1)(q), this would relate to the export limit for the whole ICP and not an individual DG device ('item'). Vector therefore suggested this value should be included as one of the pieces of information found in the summary level data, not separately following the item-level data.

Authority response

- 6.90. The Authority acknowledges the submitter's view that distributor determined maximum export capacity relates to the ICP as a whole. However, the structure of the Code drafting for clause 7(1)(o) is only for an ICP with distributed generation already connected.
- 6.91. The intent of including the maximum export capacity is twofold:
- (a) to notify the capacity limit for DG already connected; or

- (b) to advise of an export limit for ICPs that do not currently have DG connected or installed, so the customer is aware and does not over invest in DG that cannot export and earn revenue from the excess generation.
- 6.92. For these reasons, the Authority does not consider any changes to its proposal are currently necessary.

Submitters' view – the Authority needs to release technical details of the proposal as soon as possible

- 6.93. Several submitters were concerned the Authority should release technical details of the proposal as early as possible to help ensure smooth implementation. This included the registry field structure and data file formats, and when fields are available to test.
- 6.94. One submitter (Digital Stock) noted it was unclear from the consultation paper whether the Authority intended the new structure to continue to be placed in the network event on the ICP in the registry; or in a new event type. Its preference was for the new DG structure to exist as an additional event type to align with the approach taken for metering data.

Authority response

- 6.95. The Authority recognises the need to promptly provide technical details to distributors following the proposal's approval. We will be working with the registry manager to determine these details and provide information as soon as possible.
- 6.96. As noted in the consultation paper, this will require the Authority to update the *Electricity Authority registry functional specification* document,¹⁴ which sets out what and how information must be entered into the registry. We will also update the Authority's document, *How to enter distributed generation capacity data in the registry - user guide*, which will explain the correct approach to entering the new information.¹⁵

Submitters' views – costs to distributors of the proposal are not fully recognised

- 6.97. Wellington Electricity and Powerco raised concerns that the proposal did not adequately recognise distributor costs flowing from the changes. Wellington Electricity noted any future work concerning DER visibility and change required for distributors will most likely incur greater costs. It stated distributors need an efficient method of charging for these costs, ensuring energy safety, and providing accurate data to the registry.

Authority response

- 6.98. The Authority acknowledged in its consultation paper there are some costs to distributors to implement these proposals. Distributors will need to change their systems to store and export/interface these new attributes to the registry, in a new two-level format.

¹⁴ Electricity Authority, *Electricity Authority Registry - Functional Specification*, Version 22.40, 19 January 2024, <https://www.electricityregistry.co.nz/files/FunctionalSpecification.zip>.

¹⁵ Electricity Authority, *How to enter distributed generation capacity in the registry – User guide*, 1 December 2023, https://www.ea.govt.nz/documents/4116/Registry_DER_User_guide.pdf.

- 6.99. However, we also noted that the registry is mostly updated via automated event files extracted from participants' systems. Further we noted distributors are generally already collecting the required information through applications to connect DG.
- 6.100. General feedback from submitters has not led the Authority to believe costs to implement this stage one DG-related proposal are significant or outweigh benefits. However, we expect costs of stage two of the project associated with moving to increase visibility of DER will incur more significant costs, and this will be a consideration of our future project work.

Submitters' views – progress on stages two (DER) and three (dynamic market information) of the project is important

- 6.101. Several submitters expressed support for the Authority progressing stages two and three of the broader project including:
- (a) Stage two - expand the registry further to include DER, covering both DG and controllable load data, and expanding visibility to third parties (eg, flexibility traders and others)
 - (b) Stage three – proposal to support a flexibility market by providing more dynamic information.
- 6.102. WEL Networks, for example, considered '... a set-and-forget number in the Registry remains a poor substitute compared to the more enduring solution (e.g. distributors providing up to date dynamic information at the time a connection application is made and updated on an ongoing basis)'.
- 6.103. Several submitters also noted the importance of moving to attain better DER (controllable load) visibility, particularly regarding electric vehicles and vehicle-to-grid connections.

Authority response

- 6.104. The Authority is progressing stages two and three of the project later in 2024 and beyond, in consultation with stakeholders.

The amendment will promote the efficient operation of the electricity industry

- 6.105. The Code amendment is consistent with the Authority's statutory objectives, and sections 32(1)(a), (b), (c) and (e) of the Act. This is because we expect expanding registry fields relating to connected DG to promote:
- (a) competition in the electricity industry by increasing the likelihood and scope for flexibility traders to offer flexibility services, through distributors and other industry participants' better DG visibility
 - (b) the reliable supply of electricity to consumers through better enabling flexibility traders to offer flexibility options to distributors to mitigate network congestion
 - (c) the efficient operation of the electricity industry by increasing the level of visibility of DG on the low voltage network to industry participants
 - (d) performance of the Authority's functions by undertaking market-facilitation measures by providing information.

The final Code amendment

6.106. The Code amendment approved by the Authority:

Schedule 11.1

Creation and management of ICPs, ICP identifiers and NSPs

Provision of ICP information to the registry manager

...

7 Distributors to provide ICP information to registry manager

(1) A **distributor** must, for each **ICP** on the **distributor's network**, provide the following information to the **registry manager**:

...

(o) if the **ICP** connects the **distributor's network** to **distributed generation**,—

- (i) the maximum amount of electricity that can be injected into the **distributor's network** from **distributed generation** connected to the **ICP**, which is the sum of the maximum amount of **electricity** each **generating unit** connected to the **ICP** can inject into the **distributor's network**, in kW; ~~and the nameplate capacity of the distributed generation;~~ and
- (ii) ~~the number of individual items comprising each generating unit connected to the ICP (including, as separate items, any batteries and inverters which form part of a generating unit); and the generation fuel type of the distributed generation; generating units;~~ and
- (iii) ~~for each generating unit, the number of individual items comprising the each generating unit connected to the ICP (including, as separate items, any photovoltaic arrays, batteries, and inverters and vehicle-to-grid installations which form part of a generating unit); and the generation fuel type of the distributed generation;~~
- (~~iii~~ iv) for each individual item ~~within that comprises~~ a **generating unit** connected to the **ICP**:
 - A. the generation fuel type or item type; and
 - B. the maximum export rate, or nameplate capacity, in kW; and
 - C. if the item is an inverter or vehicle-to-grid installation, the accredited performance standard, including its release date, to which the item complies; and
 - D. if the item is a battery or vehicle-to-grid installation, the maximum charge rate in kW; and
 - E. if the item is a battery, the maximum storage capacity in kWh; and

...

(q) if the **distributor** has determined a maximum export capacity for the **ICP**, the maximum export capacity in kW.

...

(1AA) To avoid doubt, for the purposes of this clause, **distributed generation** includes photovoltaic arrays, batteries, inverters, and vehicle-to-grid installations that are capable of synchronising to inject electricity into the distributor's network.

(1AB) To avoid doubt, for the purposes of this clause, a **generating unit** includes one or more items, such as those listed in subclause (1AA), that work together to produce electricity.

...

(10) A **distributor** is not required to provide information under subclause (1)(o) for ~~an ICP in existence~~ **distributed generation** connected prior to 1 August ~~April~~ 2025, unless after that date:

- (a) the **distributor** collects information as part of observation ~~es the~~ of testing ~~of,~~ or inspections, at the ICP under clauses 7, 9C, or 22 of Schedule 6.1 ~~of the Code;~~ or
- (b) an application is made to connect ~~additional new~~ **distributed generation** at the ICP under Part 6 ~~of the Code.~~

(11) A **distributor** may provide information under subclause (1)(o) for **distributed generation** connected to an ICP prior to 1 August 2025 if it chooses to do so.

...

11 Correction of errors in the registry

...

(2) Subject to subclause 7(10), ~~if~~ there is an error in the information provided under subclause (1), the **participant** must ~~change~~ correct the information in the **registry** as soon as practicable after becoming aware of the error.