

# Code amendment omnibus three: May 2024

Consultation paper

7 May 2024

## Executive summary

The Electricity Authority Te Mana Hiko (Authority) is committed to ensuring regulation keeps up with the transformation underway across the electricity sector. We use the omnibus as a vehicle to consult on multiple discrete proposals to amend the Electricity Industry Participation Code 2010 (Code). The intent is to move quicker on amendments and alleviate consultation overload by reducing the number of different consultation papers we publish.

This omnibus focuses on proposed Code amendments that support the ongoing investment in and uptake of distribution generation for the benefit of all consumers. The Code changes seek to increase the visibility of critical information and ensure the cost reflects the work necessary to enable DG in a timely and efficient manner.

**Section 1** of this consultation paper contains guidance on how to make a submission.

### Inflation adjustment for prescribed maximum fees

**Section 2** proposes an increase to the prescribed maximum fees (fees) distributors can charge to cover the cost of processing distributed generation (DG) applications under Part 6 of the Code. The maximum fees have not been updated since implementation (most were implemented in 2007 with some new fee types added in 2015).

We anticipate an increase in the number of DG installations in the future, with more electrification and wider adoption of consumer-based energy resources. This is likely to put pressure on distributors who are tasked with facilitating DG connections to the network. Increasing the maximum prescribed fee level will ensure distributors can adequately resource themselves to enable efficient and timely installations of DG, which ensures consumers can get the most benefit from these DG installations.

Stakeholders have told the Authority the fees are not always sufficient to cover distributor costs. The Authority's Network Connections Project will review fees shortly but will need time to consider all the fee types in Part 6. In the interim, the Authority proposes a one-off increase to the fees in line with inflation, which can be implemented more readily.

We consider the proposal would improve efficiency and ensure a fairer distribution of the costs to process DG applications. Currently, if there is a cost shortfall, distributors may recoup this from other network users, which effectively creates a cross-subsidisation from other network users to DG applicants.

The fees are the maximum fees that can be charged. The Authority expects distributors will only charge fees that are commensurate with their costs, up to fee limits.

### Expanding distributed generation information in the registry

**Section 3** proposes to expand several fields in the Electricity registry (registry) to provide more detail on distributed generation (DG)<sup>1</sup> installed at an installation control point (ICP). This represents:

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<sup>1</sup> 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>.

- a continuation of minor registry changes to the permitted data in the DG fields made in 2023, which included better representation of batteries<sup>2</sup>
- stage one of a data-related project under the *Delivering key distribution sector reform work programme*<sup>3</sup> of October 2023, involving amendments and additions to registry data fields to better capture distributed energy resource (DER) information.

We are proposing to make amendments to Schedule 11.1 of the Code 'Provision of ICP information to the registry manager'.

The objective of these Code amendments is to establish a two-level structure for DG-related information (providing for a summary of DG at each ICP and further detail on the types and capacity of items that comprise generating units<sup>4</sup>). This will increase visibility of DG and enable flexibility.

The proposed Code amendments will make more granular DG information available on the registry, but initially only to those industry participants with full registry access, or are granted registry access, under Part 11 of the Code.

There are significant gaps in the electricity sector's visibility, and therefore understanding, of current capacity or constraints regarding DER on the low voltage network. This includes DER location and characteristics (for example, capacity and controllability).<sup>5</sup>

Increased visibility will improve distributors' ability to identify where and how DER can help address network congestion and work with flexibility traders on this. This, in turn, will benefit consumers through DER use delivering greater value and cost savings, and flexibility traders identifying new business opportunities and service options for DER owners.

With more consumers now investing in DG installations, we consider increased visibility of information will enable distributors to more effectively roll-out distributed generation in a timely manner. Increased transparency will support investment decisions and ultimately empowers consumers to take advantage of DG.

We consider the most effective way to help address this problem is by a staged approach to increasing visibility. This allows quick gains while also allowing more time for consideration of broader, more complex, DER-related registry and flexibility market-related work later.

This proposal is stage one focus on DG. We have future stages planned as part of a wider project, including:

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

We signal this future work as it may influence how you respond to the current stage one DG-related proposal.

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<sup>2</sup> "Registry enhancements," Improvements to the national registry of connection data, Electricity Authority, accessed March 14, 2024, <https://www.ea.govt.nz/projects/all/registry-enhancements/>.

<sup>3</sup> "Updating regulatory settings for distribution networks", Electricity Authority, accessed March 12, 2024, <https://www.ea.govt.nz/projects/all/updates-regulatory-settings-for-distribution-networks/>.

<sup>4</sup> Generating units means all equipment functioning together as a single entity to produce electricity. See Code clause 1.1 'Interpretation' [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)

<sup>5</sup> 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](https://www.ea.govt.nz/documents/3929/Work_programme_Oct_231406907.13.pdf).

## **Submissions**

We welcome feedback on any or all sections of the omnibus by 5pm Tuesday 4 June 2024. We will consider all submissions before making our final decisions. We also welcome feedback on the format of the omnibus consultation and possible improvements for the future.

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# 1. Background

## What this consultation is about

- 1.1. The purpose of this paper is to consult with interested parties on the Authority's proposals to:
  - (a) amend Schedule 6.5 to inflation adjust the prescribed maximum fees
  - (b) amend Schedule 11.1 to expand the information about distributed generation contained in the Electricity registry.
- 1.2. These proposals are being presented in omnibus form to streamline the number and frequency of consultations on Code amendment proposals.<sup>6</sup> We regularly use omnibus consultations to consolidate discrete Code amendment proposals when appropriate.
- 1.3. Each proposal is set out in a separate section of this paper, along with a regulatory statement for each proposal which includes a statement of the objectives of the proposed amendment, an evaluation of the costs and benefits of the proposed amendment, and an evaluation of alternative means of achieving the objectives of the proposed amendment.<sup>7</sup> The draft wording of each proposed Code amendment is included in appendices A and B.

## How to make a submission

- 1.4. The Authority's preference is to receive submissions in electronic format (Microsoft Word) in the format shown in Appendix C. Submissions in electronic form should be emailed to [policyconsult@ea.govt.nz](mailto:policyconsult@ea.govt.nz) with "Omnibus three consultation" in the subject line.
- 1.5. If you cannot send your submission electronically, please contact the Authority ([info@ea.govt.nz](mailto:info@ea.govt.nz) or 04 460 8860) to discuss alternative arrangements.
- 1.6. Please note the Authority intends to publish all submissions it receives. If you consider that the Authority should not publish any part of your submission, please:
  - (a) indicate which part should not be published,
  - (b) explain why you consider we should not publish that part, and
  - (c) provide a version of your submission that the Authority can publish (if we agree not to publish your full submission).
- 1.7. If you indicate part of your submission should not be published, the Authority will discuss this with you before deciding whether to not publish that part of your submission.
- 1.8. However, please note that all submissions received by the Authority, including any parts that the Authority does not publish, can be requested under the Official Information Act 1982. This means the Authority would be required to release material not published unless good reason existed under the Official Information Act to withhold it. The Authority would normally consult with you before releasing any material that you said should not be published.

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<sup>6</sup> <https://www.ea.govt.nz/projects/all/code-amendment-omnibus/>.

<sup>7</sup> As required under section 39 of the Act.

## **When to make a submission**

- 1.9. Please deliver your submission by 5pm on Tuesday 4 June 2024
- 1.10. Authority staff will acknowledge receipt of all submissions electronically. Please contact the Authority [info@ea.govt.nz](mailto:info@ea.govt.nz) or 04 460 8860 if you do not receive electronic acknowledgement of your submission within two business days.

## **Feedback on the omnibus format**

Q1.1. Do you have any comments on the omnibus format or suggestions to improve the omnibus format?

Please explain your answer.

## 2. Inflation adjustment for prescribed maximum fees

### The existing arrangements – prescribed maximum fees

- 2.1. Prescribed maximum fees (fees) enable distributors to recover the cost of processing distributed generation (DG) applications. The maximum fees are set out in Part 6 of the Electricity Industry Participation Code 2010 (the Code).<sup>8</sup>
- 2.2. The maximum fees were implemented to provide for consistency of fees across networks, and to prevent distributors from discouraging the connection of DG with excessive application costs.

### Problem definition

- 2.3. Through consultation<sup>9</sup>, stakeholders have told the Authority that the current maximum fees are not always sufficient to cover distributor costs. We understand this can lead to situations where the contribution paid by distributed generators may not always cover the full cost to process their applications. As such, other network users may occasionally cross-subsidise this cost through higher distribution costs across the network.
- 2.4. The fees were originally set out in the Electricity Governance (Connection of Distributed Generation) Regulations 2007.<sup>10</sup> The fee maximums were transferred to the Code, unchanged, in 2010. Maximum fees for Part 1A (simplified) DG applications were introduced in 2015. The fees for all DG applications have not changed since their introduction.

### Proposal

- 2.5. Distributors have submitted to the Authority that the cost to process DG applications has increased over time, but the maximum fees they can charge have not. To address this, the Authority proposes a one-off increase to the maximum fees amounts in line with labour cost inflation.
- 2.6. Labour cost inflation has been selected as a measure for the proposed increase because of the significant amount of time that has passed since the maximum fees were first introduced into the Code. In that time, it appears that inflationary pressure has contributed to increased costs (particularly labour costs) for distributors.
- 2.7. The proposed adjustment would more fairly apportion the costs that distributors face to process DG applications. While the proposed adjustment would also reduce any cross-subsidy that may occur, it is unlikely to fully resolve this.
- 2.8. In particular, larger capacity applications require more distributor resources than previously. These applications have increased in capacity, number and complexity over time. They can compete for hosting capacity which is becoming increasingly scarce. The need for network studies is now more common, as is the need for network upgrades.
- 2.9. The Authority will consider the costs of assessing applications by reviewing the maximum fees distributor can charge as part of its Network Connections Project. This project is part of the Authority's work distribution network regulatory reform. Changes to larger capacity

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<sup>8</sup> Schedule 6.5 *Prescribed maximum fees*.

<sup>9</sup> [https://www.ea.govt.nz/documents/3493/Summary\\_of\\_Submissions\\_on\\_distribution\\_settings\\_issues\\_paper.pdf](https://www.ea.govt.nz/documents/3493/Summary_of_Submissions_on_distribution_settings_issues_paper.pdf)

<sup>10</sup> <https://www.legislation.govt.nz/regulation/public/2007/0219/latest/whole.html>



applications fees will be considered first through this project, so further changes to fee may be proposed in 2024. However, as the project will take longer to consider all of the fees in Part 6, this proposal has been put forward as an interim action.

- 2.10. The Authority has used the Labour Cost Index<sup>11</sup> (LCI) to determine the proposed adjustment to the maximum fees. This represents about a 45% increase for the maximum fees set in 2007 and a 25% increase for Part 1A maximum fees.<sup>12</sup>
- 2.11. The new fee maximums should not discourage investment in DG. The installation cost for a typical residential installation would increase by a fraction of a percent, and then only if the increase to the maximum came into play.<sup>13</sup> As large-scale DG can cost many tens or hundreds of thousands of dollars to install, if not more, again the impact on DG uptake should be negligible.
- 2.12. The calculation would not necessarily increase the maximum fees in a way that evenly corresponds to the actual increase in processing costs, given the increased complexity involved and other factors.
- 2.13. However, the Authority considers that the proposed *interim* adjustment would bring the maximum fees more into line with the costs incurred by distributors in most instances. The maximum fees, after increase, remain lower than the fees charged by Transpower for grid connections.<sup>14</sup>
- 2.14. The fees are the *maximum* fees that can be charged. The Authority expects that distributors will charge fees that are commensurate with their costs only, up to fee limits.
- 2.15. The proposed Code amendment is attached as Appendix A. A 3-month transition period would apply before the updated fees come into effect.

Q2.1. Do you support the Authority's proposal to inflation adjust the fees in Schedule 6.5?

Please explain your answers.

## Regulatory statement

### Objectives of the proposed amendment

- 2.16. The objective of the proposed amendment is to ensure that the maximum fees prescribed in the Code are closer to the likely highest actual costs incurred by distributors in processing DG applications.

### Evaluation of the cost and benefit of the proposed amendment

- 2.17. The primary benefit is a more efficient allocation of the processing costs to connect DG to networks.

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<sup>11</sup> The LCI measures changes in wages and salaries. The Authority has used the LCI as distributors tell us that staff time takes up a significant proportion of the costs to process applications. The Authority has used the Stats NZ Infoshare tool to determine the change in LCI from when the fees were introduced to the present day, selecting the "All Sectors Combined, All Salary and Wage Rates (Base: June 2017 qtr (=1000)) (Qrtly-Mar/Jun/Sep/Dec)" dataset. Part 1 and 2 fees adjusted using the formula "fee x (Q3 2007 index / Q1 2024 index)", and Part 1A fees "fee x (Q2 2015 index / Q1 2024 index)"

<sup>12</sup> Rounding to the nearest \$10 has been applied.

<sup>13</sup> Assuming a DG purchase and install cost of \$10,000, using the Part 1A application process.

<sup>14</sup> <https://www.transpower.co.nz/connect-grid/our-connection-process>

- 2.18. The actual cost to process DG applications remains unchanged. Distributors would face minor costs to update their systems and documentation. Distributed generators would face additional cost for DG applications in some instances. However, distributed generators would not pay more than the total cost to process their applications. The cost for the Authority to amend Schedule 6.5 of the Code is minor.

### Evaluation of alternative means of achieving the objectives of the proposed amendment

Alternative options	Reasons not favoured
Thoroughly review fees and amend accordingly	The Authority intends to undertake work, which will build on the short term proposal in this omnibus paper through the Network Connections Project. However, an alternative option is to not progress this immediate proposal and to instead adjust the maximum prescribed fees during the wider review. This option is not favoured because of the further delay to addressing this issue and the risk of exacerbating existing cross-subsidisation.

### Assessment of the proposed Code amendment against section 32(1) of the Act

- 2.19. The Authority's main objective under section 15(1) of the Act is to promote competition in, reliable supply by, and efficient operation of, the electricity industry for the long-term benefit of consumers. The Authority's additional objective under section 15(2) of the Act is to protect the interests of domestic and small business consumers in relation to their supply of electricity. The additional objective only applies to the Authority's activities in relation to dealings between participants and these consumers.
- 2.20. Section 32(1) of the Act says that the Code may contain any provisions that are consistent with the Authority's objectives and are necessary or desirable to promote any or all of the matters listed in section 32(1).
- 2.21. The Authority considers that the proposal will improve efficiency by ensuring a fairer distribution of the costs to process DG applications, based on its understanding of increases in costs. We understand from consultation that, currently, distributed generators benefit from DG connections but do not always pay the full cost to process their application.
- 2.22. Distributors have submitted to the Authority that they must make up the cost shortfall through charges to other network users, that do not directly benefit from the DG connection, or through operational means (eg, less investment in innovation). The proposal aims to reduce the cost shortfall and provide greater benefit to consumers.

### Assessment against Code amendment principles

- 2.23. The proposed Code amendment is consistent with the Authority's statutory objectives, and with section 32(1) of the Act and the Code amendment principles as required by the Authority's Consultation Charter

Q2.2. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010

Q2.3. Do you agree with the analysis presented in this Regulatory Statement? If not, why not?

### 3. Expanding distributed generation fields in the registry

#### The existing arrangements - registry holds limited distributed generation information

- 3.1. Based on our previous consultation in late-2022 on updating distribution regulatory settings<sup>15</sup>, stakeholders generally agree that more transparency of distributed generation (DG) and controllable load (together known as distributed energy resources (DER))<sup>16</sup> is needed. This will provide various benefits to the electricity sector.
- 3.2. Importantly, it will mean distributors can better manage their networks and flexibility traders are better placed to offer service options to their customers and consequently offer more flexibility solutions to distributors.
- 3.3. The Electricity registry (registry) currently holds relatively limited DG-related information. Schedule 11.1, clause 7(1)(o) of the Code currently requires a distributor to, for each ICP on the distributor's network, provide the following information to the registry manager (enter in the registry):  
*'(o) if the ICP connects the distributor's network to distributed generation,—  
(i) the nameplate capacity of the distributed generation; and  
(ii) the generation fuel type of the distributed generation.'*
- 3.4. This means distributors must currently record in the registry the type and maximum export capacity of the DG present.<sup>17</sup>
- 3.5. Changes the Authority made in 2023 added extra allowable selections in the registry drop-down list for the DG fields. This was so that the existence of batteries was explicitly identified at an ICP, either in combination with solar or wind generation, or stand-alone.

#### Problem definition – there is low visibility of DER on the low voltage network

- 3.6. The Authority has identified significant gaps in visibility, and therefore understanding, of current capacity or constraints regarding DER on the low voltage network. This includes DER location and characteristics (for example, capacity and controllability).
- 3.7. Distributors' feedback to the Authority's 2023 consultation on updating the regulatory settings for distribution networks<sup>18</sup> also indicated concern at the lack of visibility of DER on their networks. This, in turn, means distributors are also hampered in using DER-based solutions which may be able to be provided, for example, by flexibility traders.
- 3.8. The information currently required in the registry is insufficiently detailed to provide good visibility of the location, size, and functionality of all DER (both DG and controllable load) installed behind customers' meters. Enriching the DER information in the registry would:

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<sup>15</sup> "Updating regulatory settings for distribution networks," Electricity Authority, accessed March 14, 2024, <https://www.ea.govt.nz/projects/all/updates-regulatory-settings-for-distribution-networks/>.

<sup>16</sup> Devices used to generate, store, or manage energy, that form a part of the local distribution system primarily serving homes and businesses. These can include both renewable distributed generation and controllable load such as solar panels, batteries, electric vehicles, and electric heating/cooling.

<sup>17</sup> An Authority guidance document informs users on how to currently enter distributed generation capacity data in the registry. 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](https://www.ea.govt.nz/documents/4116/Registry_DER_User_guide.pdf).

<sup>18</sup> Electricity Authority, "Updating regulatory settings for distribution networks."

- (a) support distributors to better plan and manage their networks, and flexibility traders to provide targeted solutions<sup>19</sup> – this should help avoid or defer costly network upgrades, saving consumers money
  - (b) through greater visibility of DER potential, allow flexibility providers to deliver greater cost savings for consumers and identify new business opportunities
  - (c) encourage more of the DER ‘value stack’<sup>20</sup> to be realised and encourage new flexibility providers into the market.
- 3.9. Some distributors have also noted that they have determined a maximum export capacity for ICPs, either over their whole network or for parts of their network. This limit can be set for several reasons, including ensuring there is enough capacity available for any consumer to install distributed generation, without congesting the network.
- 3.10. The distributor may publish these limits, but potential generators may not be aware of them and may therefore overinvest in distributed generation where export capacity will be constrained. It could therefore be beneficial for this information to also be more visible.

### **We favour a staged approach to address the low DER visibility problem**

- 3.11. The Authority has considered this problem and believes a multi-stage solution to increasing the visibility of DER in the registry, first addressing DG, is a practical way forward.
- 3.12. A staged approach to registry upgrades allows us to progress the comparatively straight forward DG-related work more quickly, addressing that concern, while allowing appropriate time for the more complex DER-related work that includes controllable load. We therefore propose proceeding in the following stages.

### **Stage 1 – increasing visibility of distributed generation information on the registry**

- 3.13. Stage one would involve expanding the registry to include more detail on the items that comprise generating units installed at ICPs. This would include numbers of items, fuel/item type, capacity, and distributors’ export injection limit (if applied), as detailed under ‘Current proposal’ below.
- 3.14. This would increase visibility for those industry participants with full authorised access to the registry initially. The expansion would record additional information that we understand distributors already receive as part of a DG application, to be accessible in the registry.
- 3.15. Pending consultation feedback, we would expect the registry changes for stage one on DG to come into effect in late 2024.
- 3.16. However, as the sector ‘ramps up’ to deliver electrification and decarbonisation, a broader problem is that for efficient network management participants need good visibility of DER, both generation and controllable load. Currently, the Code only requires information on DG to be entered into the registry; not information on non-exporting DER (controllable load).

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<sup>19</sup> Distributors will better understand the impact of DER on network congestion and power quality and be better able to manage/respond to these issues. Also, distributors will be more able to predict future demands on their networks, and flexibility providers to identify and offer targeted DER solutions.

<sup>20</sup>The term ‘value stacking’ describes the situation where DER provides multiple services, thereby creating multiple revenue/value streams for the DER (eg, helping network management, lowering consumer costs, and providing other useful consumer-related services). Typically this improves the economics of investing in the DER.

## Signalling stage 2 – expanding the registry fields to include all DER

- 3.17. The current situation means there is incomplete visibility of some DER, such as non-exporting electric vehicle (EV) chargers, some of which may be controllable, for example by flexibility traders.
- 3.18. This hampers both the distributors' visibility of network congestion and the true 'after diversity maximum demand'.<sup>21</sup> This also prevents flexibility traders accessing the necessary information (eg, via distributors) to offer a broader range of non-network solutions.
- 3.19. For future stage two, the Authority intends to investigate expanding the registry to capture DER controllable load. At that stage we would also consider extending access to the information to third parties outside those with full registry access, or that have been granted registry access under Part 11 of the Code.
- 3.20. We would expect to consult on stage two later in 2024, with resulting registry updates implemented in mid-2025, pending consultation feedback.

## Signalling Stage 3 – DER information to support a flexibility market

- 3.21. Future stage three would consider how DER information can be enriched and used to support a flexibility market, for example, by providing more dynamic DER information.

## Current proposal – Stage 1 - expanding distributed generation fields in the registry

- 3.22. For the current proposal, we propose to amend Schedule 11.1, clause 7(1)(o) of the Code to implement stage one outlined above. to expand the DG information required in the registry. Our proposal is to create a two-level (summary and disaggregated detail) structure, more like that currently used for metering records (in Schedule 11.4, Table 1).
- 3.23. However, to minimise impact on distributors, the requirement for more detail would not apply to ICPs existing before 1 April 2025, where distributed generation exists at the ICP. This is except where the distributor observes the testing of, or inspects, the ICP, or an application is made to connect a new a new individual item comprising a generating unit at the ICP (see proposed new clause 7(10) in Appendix A).
- 3.24. The proposed structure for the new fields would be as follows for each ICP:

### Level 1 – DG summary

- (i) Total connected DG in kW at an ICP – the sum of the maximum amount of electricity each generating unit connected to the ICP can inject into the network, in kW. This excludes any items where that item's export energy is connected through another item, (for example, this excludes a battery or solar array connected to an inverter, as illustrated in Figure one on page 9).

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<sup>21</sup> This is how distributors assess the aggregated load on sections of lines. Each ICP may have a theoretical maximum demand of (usually) 15kVA, but a group of ICPs never have all their load switched on simultaneously. This is called diversity, and the number value is the after diversity maximum demand - usually around 5kVA per ICP.

- (ii) A count of the individual items comprising generating units<sup>22</sup> connected (for example, each single inverter, battery, or solar array). For each item a separate record would be required in level 2 below.

### **Level 2 – DG item detail**

For each individual item comprising a generating unit connected:

- (i) The DG fuel type or item type, as applicable (single fuel type/item stipulated - eg solar, wind, battery, vehicle-to-grid (V2G) EV)<sup>23</sup>.
- (ii) The maximum export rate (including for batteries) in kW, irrespective of inverter charge/discharge rate, or the nameplate capacity, as applicable to the type of item.

#### ***For inverters or V2G installations***

- (iii) The accredited performance standard to which each inverter complies, including the standard's date (eg, AS/NZS4777:2020) (allowing 'No inverter' as an entry if there is no inverter installed).

#### ***For batteries or V2G installations***

- (iv) The maximum charge rate in kW.

#### ***For batteries***

- (v) The maximum storage capacity in kWh.

- 3.25. Figure 1 on page 15 will help in interpreting the proposal. For clarity, the diagram only contains a sample of configurations of generating unit and is not an exhaustive list.
- 3.26. The Authority also proposes to amend clause 7(1) by adding a new subclause for distributors to enter a maximum export limit for the ICP. If applicable, this will mean a consumer (or agent like a flexibility trader), will be aware of the limit set by the distributor for the ICP, before the consumer finalises purchase of the distributed generation.
- 3.27. The proposed Code amendment to facilitate the above is attached as Appendix A.
- 3.28. The changes to the registry will also require an update to the registry functional specification,<sup>24</sup> which sets out what and how information must be entered into the registry. The functional specification forms part of the terms and conditions that apply to participants that are granted access to the registry.<sup>25</sup>
- 3.29. The Authority specifies these terms and conditions under clause 11.28(1A) of the Code and may amend these under clause 11.28(2A). This is following consultation with participants that already have access (clause 11.28(3)).

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<sup>22</sup> Generating units means all equipment functioning together as a single entity to produce electricity. See Code clause 1.1 'Interpretation' <https://www.ea.govt.nz/documents/3485/Code - Part 1 - Preliminary Provisions - 1 MARCH 2024 - CRP 2024.pdf>

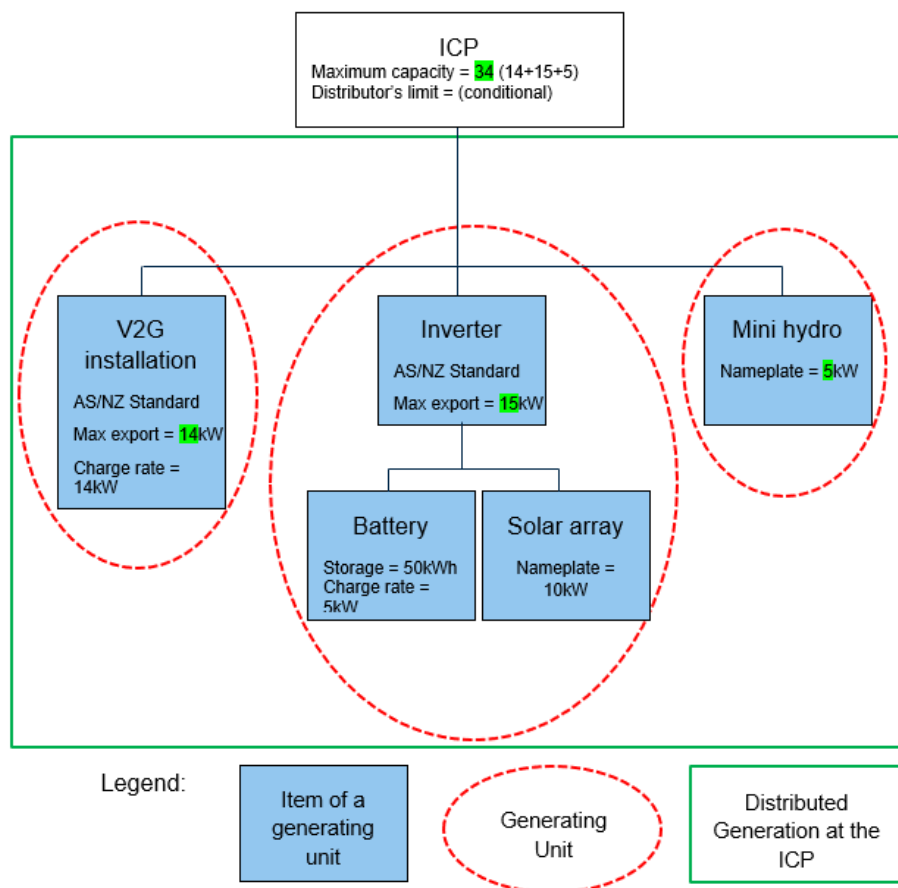
<sup>23</sup> Electric vehicles that can supply electricity to distribution networks.

<sup>24</sup> Electricity Authority, *Electricity Authority Registry - Functional Specification*, Version 22.40, 19 January 2024, <https://www.electricityregistry.co.nz/files/FunctionalSpecification.zip>.

<sup>25</sup> Under the Authority's Registry Access Policy's terms and conditions under which access is granted (paragraph 4.2(a)(i)), registry users must comply with the requirements of the code and registry functional specification. Electricity Authority, *Registry Access Policy*, Version 1.7, 18 April 2019, 8, [https://www.ea.govt.nz/documents/169/Registry\\_access\\_policy.pdf](https://www.ea.govt.nz/documents/169/Registry_access_policy.pdf)

3.30. We would also update the Authority’s user guide to entering DG data in the registry, to explain the correct approach to entering the above information.<sup>26</sup>

**Figure 1: Representation of DG items comprising generating units at an ICP**



Q3.1. Do you support the Authority’s proposal to expand the DG fields in the registry using a two-level structure as described above?

Please explain your answer.

**Transition plan – a six-month period from approval until new information is required**

- 3.31. If the proposed Code amendment is made following consultation, we propose a six-month transition period. That would allow six months from the proposal’s expected approval until its requirements come into effect for new ICPs from 1 April 2025 (ie, distributors needing to enter new data into the newly created registry fields). This would also give time for distributors to update their data systems that interact with the registry.
- 3.32. Over the transition period, the registry manager would develop the new registry fields and migrate existing information (which is in the current fields in the registry) into the new fields. That information would be tagged to indicate that it was from prior to the change and is incomplete.

<sup>26</sup> Electricity Authority, “How to enter distributed generation – User guide.”

- 3.33. The Authority would advise details of the way the existing information would be transitioned and tagged when the proposed functional specification and software update was released at the start of the transition period.
- 3.34. Distributors would not be required to correct this existing information. However, when there are physical changes to DG at an ICP, such as adding a battery, or increasing the capacity of the solar array, the distributor would be required to ensure all the DG information is accurate.

Q3.2. Do you agree with the transition plan and a six-month transition period?

Please explain your answer.

## Regulatory statement

### Objectives of the proposed amendment

- 3.35. The objective of the proposed amendment is to increase the visibility of DG on the low voltage network, to facilitate flexible use of that DG on the network. The proposal is designed to increase the level of detail regarding the type, capacity, and functionality of DG installed at ICP level on the registry, to provide more accessible visibility.

### Evaluation of the costs and benefits of the proposed amendment

#### Benefits

- 3.36. The primary benefit of the proposal is to facilitate more use of DG by distributors for network management, thereby easing congestion and potentially lowering infrastructure costs through less need for upgrades. Any necessary upgrades should also be able to be better targeted.
- 3.37. We expect this to ultimately benefit consumers by supporting reliable electricity supply and reducing costs and providing more options and opportunities to gain value from their DG. This is because we expect more accessible, detailed, DG information to support strengthened network management, more activity by flexibility traders, and more service options and products for consumers.
- 3.38. While the extra detail we are proposing is already likely to be available to distributors through existing applications for DG connection, it may not be available in the readily accessible form provided by visibility in the registry. The inaccessibility of this information may place a barrier to distributors considering non-network DG-related solutions. These solutions will be potentially more easily implemented and lower cost than traditional network solutions.
- 3.39. This visibility will also enable distributors to more easily work with flexibility traders to consider flexibility solutions connected to the DG. With better access to DG type, capability, and capacity at ICPs, distributors will be better placed to engage with flexibility traders on exactly how any DG they control can support non-network solutions. Better visibility will also allow other interested industry participants (for example retailers) to potentially facilitate these processes, for example through their connections to DG owners by making them aware of options to increase returns from their DG.
- 3.40. We expect other benefits to also include more options for DG owners to gain greater value from their investments through more activity and options being offered by flexibility traders.



- 3.41. The proposal should also contribute to encouraging electrification and decarbonisation. We would expect this to occur, for example, through more options being available to allow DG owners to control the way their DG connects and interacts with the distribution network. This should encourage more DG uptake generally.
- 3.42. The proposal also has a benefit in providing more detailed information to the Authority and other government agencies to support monitoring of emerging DG type and capacity. We expect this to inform regulatory policy around flexibility and decarbonisation. We also expect better DG visibility to enhance retailers' ability to develop products taking advantage of growing DG connections, again providing more options to consumers.

## **Costs**

- 3.43. The primary cost of implementing this proposal relates to distributors needing to update their data systems to input the new data. The registry is mostly updated via automated event files extracted from participants' systems. There should be little additional cost relating to the few distributors that may manually update the registry. We understand that distributors are already collecting the required information through applications to connect DG.
- 3.44. Distributors will need to change their systems to (a) store, and (b) export/interface these new attributes to the registry, in a new two-level format. While the format using two levels of information itself is not particularly complicated, and is already used by metering equipment providers, it would be the first time distributors have used this format.
- 3.45. We also envisage there will need to be a testing phase as distributors 'bed' in the new formats, and associated IT related coordination and project management, among other activities.
- 3.46. From the Authority's perspective, we consider these two-level attribute fields can be relatively easily added to the registry. This change also aligns with that which would be needed to reflect DER controllable load in the registry in stage two, which will follow the same two-level (summary and further detail) structure. However, the Authority will incur some 'up-front' costs to make this structural registry change.
- 3.47. The registry manager has estimated the cost to the Authority of making the necessary changes for both stage one (DG) and stage two (DER controllable load), to be approximately \$170,000. In providing this estimate, the registry manager indicated that implementing stage one only would not yield significant savings, as it would necessitate establishing the same registry references and relationships (ie, the two-level summary and further detail structure). We consider that the proposal benefits described above outweigh this cost.

## **Privacy – we do not consider disclosure of the information raises significant privacy issues**

- 3.48. Technical information about items comprising generating units is currently collected by distributors in applications made to distributors for connection under Part 6 of the Code. The totals for DG connections are already collected and disclosed through Part 11 and Schedule 11.1 of the Code. This proposal is to update the information disclosed through Part 11 and Schedule 11.1 of the Code to include a more granular breakdown of the individual items that make up the generating unit.
- 3.49. We acknowledge that disclosure of this extra information on the registry may involve potential privacy concerns or considerations for some distributed generation owners. The additional registry fields would result in more technical information about the DG present at people's properties being available to other industry participants through the registry. The

registry is accessible to industry participants with approved access and is subject to the registry terms of use.

- 3.50. The purpose of our proposed Code amendment is to ensure that DG connected to the low voltage network is visible, so that the electricity sector can plan for and accommodate the impact of increased DG connections across the network. The additional information is about the number of items comprising generating units connected to the distribution network, their storage capacity, nameplate capacity, and the potential and maximum export injection of each item.
- 3.51. We consider that the disclosure of the additional information to the registry is unlikely to cause harm to individuals. This is because the disclosure is only to particular industry participants. Further, at most, it may disclose whether a property has battery storage or EV charging capability and this kind of information may also be visible to anyone passing by a property where such capabilities exist.
- 3.52. Any additional obligations regarding privacy compliance would be minimal for distributors given the information is (as far as we are aware) already held by distributors. The disclosure to the registry manager, if the amendment proceeds, would be required by the Code. Those industry participants accessing the information through the registry would need to ensure that the collection, storage, and use of the information is consistent with the participant's Privacy Act 2020 obligations.
- 3.53. We do not consider that this proposal raises significant new privacy issues or increases the privacy risk to consumers. Our view on the privacy issues is based on our understanding that distributors already have the information, it is mostly technical in nature, and disclosure to particular industry participants is consistent with the purpose the information is being provided to the registry. Further, it should also ultimately be of long-term benefit for consumers. However, we would be interested to receive your feedback on any consumer privacy-related issues you see in this proposal.

### Evaluation of alternative means of achieving the objectives of the proposed amendment

Alternative options	Reasons not favoured
More comprehensive expansion of the registry now to incorporate a broader range of DER, including both DG and controllable load.	This would require more extensive consultation, delaying the benefits of the proposed change focused on DG. Expanding the registry to include DER would likely place more significant obligations on participants, raise consumer privacy issues needing consideration, and require investigation of the registry's functionality. This would require a more comprehensive policy process that the Authority plans to undertake separately.
Consider establishing a DER register separate to the registry now. This could initially include DG and DER-related fields, with a view to provide later ability to handle dynamic DER information to support a flexibility market.	This approach would raise the same issues noted above but to an even greater extent. This is because establishing a separate DER register departs markedly from current use of the registry. Most distributors that responded to the Authority's 2023 consultation on updating regulatory settings for distribution networks preferred updating the registry to establishing a separate register <sup>27</sup> . A key reason for this was that distributors had established links with the registry. The Authority will

<sup>27</sup> Electricity Authority, *Updating the Regulatory Settings for Distribution Networks - Summary of submissions on the December 2022 issues paper*, 3 August 2023, 12, [https://www.ea.govt.nz/documents/3493/Summary\\_of\\_Submissions\\_on\\_distribution\\_settings\\_issues\\_paper.pdf](https://www.ea.govt.nz/documents/3493/Summary_of_Submissions_on_distribution_settings_issues_paper.pdf).

Alternative options	Reasons not favoured
	therefore need to conduct rigorous policy analysis and consultation in assessing the benefit of establishing a separate DER register.
Request the information to be provided to the Authority for monitoring purposes according to section 46 of the Electricity Industry Act 2010	The Authority is seeking the information regarding this proposal to increase the visibility of the DG type and capacity on the low voltage network. Using the section 46 provision would impose additional costs on the Authority and participants by requiring information to be exchanged through a separate new mechanism. Further, it would not provide a mechanism for the information to be included in the registry alongside the other DG-related information. Additional costs would also be imposed on distributors and the Authority to facilitate issuing of, and response to, the section 46 notice each time the information is requested.
Request the information to be provided to the Authority according to Part 2 of the Electricity Industry Participation Code 2010	Part 2 would allow the Authority to issue a notice to distributors to provide certain information regularly. However, as above, using this provision would impose additional costs on the Authority and participants by requiring information to be exchanged through a separate new mechanism. It would also not provide a mechanism for the information to be included in the registry alongside other DG-related information.
Requesting the information to be provided on a voluntary basis, without Code change	This option would introduce similar additional costs on the Authority but without requiring distributors to take any action. It also does not provide a mechanism for the information to be included in the registry alongside the other DG-related information.

### Assessment of the proposed Code amendment against section 32(1) of the Act

- 3.54. The Authority considers that the proposed amendment is consistent with section 32(1) of the Act because expanding registry fields relating to DG will 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) protecting the interests of domestic and small business consumers regarding the supply of electricity to those consumers by enabling better network management, thereby enhancing dealings of industry participants with these groups.

### Assessment of the proposed Code amendment against Code amendment principles

- 3.55. The Authority is satisfied the proposed Code amendment is consistent with the Code amendment principles. In particular, the proposed Code amendment:
- (a) is lawful and consistent with the Authority's statutory objectives
  - (b) provides an efficiency gain in the electricity industry for the long-term benefit of consumers
  - (c) addresses a problem created by the existing Code requiring an amendment.

Q3.3. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.

Q3.4. Do you agree with the analysis presented in this Regulatory Statement? If not, why not?

## Appendix A Proposed Code amendment: Inflation adjustment for prescribed maximum fees

### 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)
<b>Part 1 of Schedule 6.1 application</b>	
Application fee under clause 2(2)(c)	<del>200</del> <u>290</u>
Fee for observation of testing and inspection under clause 7(5)	<del>60</del> <u>90</u>
<b>Part 1A of Schedule 6.1 application</b>	
Application fee under clause 9B(2)(c)	<del>100</del> <u>130</u>
Fee for inspection under clause 9C(3)	<del>60</del> <u>80</u>
Deficiency fee under clause 9E(4)	<del>80</del> <u>100</u>
<b>Part 2 of Schedule 6.1 application</b>	
Application fee for <b>distributed generation</b> with <b>nameplate capacity</b> of more than 10 kW but less than 100 kW under clause 11(2)(c)	<del>500</del> <u>780</u>
Application fee for <b>distributed generation</b> with <b>nameplate capacity</b> of 100 kW or more in total but less than 1 MW under clause 11(2)(c)	<del>1,000</del> <u>1,460</u>
Application fee for <b>distributed generation</b> with <b>nameplate capacity</b> of 1 MW or more under clause 11(2)(c)	<del>5,000</del> <u>7,290</u>
Fee for observation of testing and inspection of <b>distributed generation</b> with <b>nameplate capacity</b> of more than 10 kW but less than 100 kW under clause 22(5)	<del>120</del> <u>170</u>
Fee for observation of testing and inspection of <b>distributed generation</b> with <b>nameplate capacity</b> of 100 kW or more under clause 22(5)	<del>1,200</del> <u>1,750</u>

Q2.4. Do you have any comments on the drafting of the proposed amendment?

## Appendix B Proposed Code amendment: Expanding distributed generation fields in the registry

### Schedule 11.1 cl 11.7

#### 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) (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;
- (iii) for each individual item 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, batteries, inverters, and vehicle-to-grid installations that inject **electricity** into the **distributor's network**.

...

(10) A **distributor** is not required to provide information under subclause (1)(o) for an **ICP** in existence prior to 1 April 2025, unless:

- (a) the **distributor** observes the testing of, or inspects, the **ICP** under clauses 7, 9C, or 22 of Schedule 6.1 of the Code; or
- (b) an application is made to connect new **distributed generation** at the **ICP** under Part 6 of the Code.

...

## 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.

Q3.5. Do you have any comments on the drafting of the proposed amendment?

## Appendix C Format for submissions

<b>Submitter/Organisation</b>	
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### Feedback on the omnibus format

Questions	Comments
<p>Q1.1. Do you have any comments on the omnibus format or suggestions to improve the omnibus format?</p>	

### Inflation adjustment for prescribed maximum fees

Questions	Comments
<p>Q2.1. Do you support the Authority's proposal to inflation adjust the fees in Schedule 6.5?</p> <p>Please explain your answer.</p>	
<p>Q2.2. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010</p> <p>Please explain your answer.</p>	
<p>Q2.3. Do you agree with the analysis presented in this Regulatory Statement? If not, why not?</p> <p>Please explain your answer.</p>	



Q2.4. Do you have any comments on the drafting of the proposed amendment?

### Expanding distributed generation fields in the registry

Questions	Comments
<p>Q3.1. Do you support the Authority's proposal to expand the DG fields in the registry using a two-level structure as described above.</p> <p>Please explain your answer.</p>	
<p>Q2.2. Do you agree with the transition plan and a six-month transition period?</p> <p>Please explain your answer.</p>	
<p>Q2.3. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010</p> <p>Please explain your answer.</p>	
<p>Q2.4. Do you agree with the analysis presented in this Regulatory Statement? If not, why not?</p> <p>Please explain your answer.</p>	
<p>Q2.5. Do you have any comments on the drafting of the proposed amendment?</p>	