

# Improving visibility of generation investment

Decision paper

10 December 2024

## Executive summary

### Purpose of this paper

The purpose of this decision paper is to inform industry of the Electricity Authority Te Mana Hiko's (Authority) decision to issue two information gathering notices under clause 2.16(1) of the Electricity Industry Participation Code 2010 (Code), to collect information about the pipeline of new generation and load developments.

### New Zealand's electricity system is changing

New Zealand's electricity system is changing. As more New Zealanders switch to electricity for their energy needs and as the uptake of digital services increases, more investment in generation is required to meet the increase in electricity demand.

The share of intermittent (solar and wind) generation is also increasing to meet demand growth and to replace more carbon intensive, end-of-life thermal (coal and gas) generation. New technologies and participants are entering New Zealand's electricity system, offering consumers more choices around the energy that they access.

We need to be confident that the electricity system is meeting the challenge—that we'll get enough new generation quickly enough to meet rising demand. The Authority is taking steps to ensure we can meet this challenge. This includes by providing greater transparency about the performance of the electricity system to strengthen competition and confidence. That means both having enough energy (having enough 'fuel' over the course of a year or multiple years) and enough capacity (having enough generation to meet demand at peak times).

### Improved visibility of generation investment supports security of supply and competition

The Authority has a programme of work underway to support increased investment in generation, including several proposals put forward by the Energy Competition Task Force (Task Force). To make sure we have a strong foundation for that work, we need to have better information about the supply and demand outlook to support investment.

In response to the fuel shortage and price spikes in August 2024, the Authority and the Commerce Commission jointly established the Task Force, in part to get the right settings in place to enable new generators to enter and compete in the market, to encourage more and faster investment in new generation. This puts more energy into the system, strengthens resilience against future shortages and puts downward pressure on prices.

To make sure the market for new generation is competitive and efficient, we need to make sure information about proposed projects is transparent. Currently, information available is limited, not robust, and not centralised—which means it doesn't meet the needs of current and prospective participants, regulators, and other stakeholders to form a complete view of the pipeline.

This is why the Authority is increasing the amount and type of information available, including information on the size, location, and stage of new projects.

## **We've already increased the information and insights we publish based on publicly available information**

The Authority currently publishes a [dashboard](#) of the generation investment pipeline and a [list of generation investments](#) that have been publicly announced. These are interim measures to improve the visibility of the generation pipeline.

The information we've released shows that there are 162 generation projects in the pipeline, ranging from 1MW to 1000MW and are predominantly wind and solar, but also geothermal, hydro and battery. They are geographically spread, but mostly in the North Island to match demand. There are also five battery energy storage systems from 100MW to 300MW, with the first 100MW battery (Meridian, Ruakākā) expected to be commissioned in the coming months.

## **We have decided to collect and publish additional information on new generation investment and load**

We consulted in August and September 2024 on a proposal to issue two information gathering notices to make sure the Authority and the wider electricity system have access to good information about how the electricity system will meet the demands of New Zealanders into the future. Submitters were generally supportive of the proposal.

Comprehensive, reliable, and regular information about the pipeline of generation and load projects supports better outcomes for New Zealanders:

- Better and more informed investment decisions will deliver the right projects to meet demand in an efficient way.
- A greater understanding of security of supply—whether sufficient generation is coming to market to meet demand—will help the Authority and participants respond to make sure we keep the lights on for New Zealanders.
- More transparent information about all the projects in the pipeline will promote competition and assist independent developers to bring their projects to market.

All of these outcomes mean that consumers will pay less for electricity in the long-term and will have the ability to make informed choices about the electricity they use.

In addition to the benefits to the wider market, this information will also support the Authority's monitoring and regulatory functions.

This includes monitoring competition within the market for new generation, as well as whether developers are following through with their planned projects and what barriers they face in bringing more generation online. We will be monitoring the level of investment commitments and that they are being delivered in a timely way.

## **We have made some changes from the consultation**

We've made changes to the proposal to make the obligations on Transpower and developers clearer, to improve workability and make it easier to implement. These changes include:

- Separating the project stage information categories to enable developers to more easily provide the dates they met each stage
- Adding information categories related to the expected commissioning date and the reasons for delays

- Adding information categories so developers can more easily indicate what they consider to be confidential and why
- Clarifying the data format for how information should be provided, along with other wording changes to clarify the Authority's expectations for the information being provided
- Adding information categories related to the stage projects are at in Transpower's Connection Management Framework, the type of load for load projects, and expanding on categories related to location to make the request clearer.

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## 1. Purpose

- 1.1. The purpose of this paper is to inform industry and stakeholders about the Electricity Authority Te Mana Hiko's (Authority) decision to issue two information gathering notices under clause 2.16(1) of the Electricity Industry Participation Code 2010 (Code) (2.16 notices) to improve visibility of generation investment.
- 1.2. This paper:
  - (a) summarises feedback received on the *Improving visibility of generation investment: clause 2.16 notices* consultation paper (consultation paper)
  - (b) highlights where the final 2.16 notices diverge from the proposed amendments in the consultation paper
  - (c) sets out the final 2.16 notices to improve collection and publication of information about planned generation investment
  - (d) outlines next steps in the Authority's work on generation investment, including other work the Authority is undertaking to ensure the market for generation is competitive.

## 2. Objectives and outcomes

- 2.1. 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.<sup>1</sup>
- 2.2. The Authority's statutory functions include:
  - (a) to undertake market-facilitation measures (for example, providing education, guidelines, information, and model arrangements), and to monitor the operation and effectiveness of market facilitation measures
  - (b) to undertake industry and market monitoring, and carry out and make publicly available reviews, studies, and inquiries into any matter relating to the electricity industry.
- 2.3. Monitoring expectations of supply and demand and providing information to the industry on the outcomes of that monitoring, falls under these statutory functions and contributes to our main statutory objective.
- 2.4. The Authority's vision is for consumers to have choices in accessing the energy they need now, and in the future, to ensure they and New Zealand prosper.
- 2.5. Comprehensive, reliable, and regular information about the pipeline of generation and load projects supports these choices. More informed investment decisions will deliver projects in an efficient way and improve security of supply. More transparent information about the projects in the pipeline will promote competition, ultimately putting downward pressure on prices and increasing consumer choice.
- 2.6. This work also reflects the focus in the recent Government Policy Statement (GPS) on the need for significant investment to meet rising demand. Specifically, the GPS states that the Authority has a key role in "ensuring that all information relevant to the

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<sup>1</sup> Electricity Industry Act 2010 – section 15(1)

supply and demand outlook (including risks) is up to date, comprehensive, collated and presented in an integrated manner readily accessible to all stakeholders.”<sup>2</sup> Information about the pipeline of new generation—and load—is a key part of that.

### 3. Context for the Authority’s decisions

- 3.1. The Authority is acting to ensure New Zealand’s electricity market attracts the new investment necessary to meet demand in terms of both energy and capacity at peak times. We are also improving our understanding of any constraints to that investment. As part of that we need good, reliable and timely information about the status of these projects and anything that is impeding their progress.
- 3.2. A lack of comprehensive, reliable, and regular information about planned investment creates uncertainty for prospective developers. Uncertainty increases the risk premium that is added to project costs, which may deter investment and lead to higher average prices for consumers. This lack of information also makes it harder for the Authority and others to assess security of supply and the need for potential regulatory interventions.
- 3.3. We are continuously improving the information available about the pipeline of new generation. In 2022 and 2023, we published Generation Investment Surveys, which assessed the amount of new generation in the pipeline against projected demand.
- 3.4. In 2024, we augmented this information by publishing a [list of projects](#) based on publicly available information, as well as a [dashboard](#) showing how those projects compare to the existing generation stack. We have since updated the dashboard to introduce additional information. We will continue to improve both the content and how we present the data to make it easier to understand and engage with.
- 3.5. However, in order to produce comprehensive, reliable, and regular information, the Authority is changing the method by which we collect information. These changes will provide participants, regulators, and other stakeholders with a more complete view of the investment pipeline.
- 3.6. The Authority’s work on this project is informed by a recommendation from the Authority’s Market Development Advisory Group,<sup>3</sup> a recommendation from the Authority’s 2023 Generation Investment Survey<sup>4</sup> and a Code amendment request from Transpower<sup>5</sup> to improve the transparency of information about generation investment.

#### The Authority released a consultation paper seeking industry views

- 3.7. In August, we released a consultation paper, *Improving visibility of generation investment*, to seek feedback on a proposal to issue two notices under clause 2.16 of

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<sup>2</sup> Government Policy Statement to the Electricity Authority under section 17 of the Electricity Industry Act 2010, section 22(a), <https://www.beehive.govt.nz/sites/default/files/2024-10/Government%20Policy%20Statement%20on%20Electricity%20-%20October%202024.pdf>

<sup>3</sup> See page 99, Price discovery in a renewables-based electricity system: Final recommendations paper, [https://www.ea.govt.nz/documents/4335/Appendix\\_A2\\_-\\_Final\\_recommendations\\_report.pdf](https://www.ea.govt.nz/documents/4335/Appendix_A2_-_Final_recommendations_report.pdf)

<sup>4</sup> See point 5 on slide 3, 2023 Generation Investment Survey [https://www.ea.govt.nz/documents/4414/Generation\\_Investment\\_Survey\\_-\\_2023\\_update.pdf](https://www.ea.govt.nz/documents/4414/Generation_Investment_Survey_-_2023_update.pdf)

<sup>5</sup> CAR 158 – Transparency of generation connection enquiries, received 16 March 2022. See the Code amendment register at <https://www.ea.govt.nz/code-and-compliance/code/amendments/>

the Code (2.16 notices) to enhance the information the Authority collects and to enable us to improve our generation investment dashboard.

- 3.8. The first 2.16 notice, relating to the **list of developments**, was to Transpower and covered generation and load developments on transmission networks. Other work is already in progress to review Part 6 of the Code, which covers generation and load projects on distribution networks.
- 3.9. The second 2.16 notice related to the **cost of new generation developments**. We considered this to be important information to improve our monitoring of competition, by using this data to calculate the levelised cost of energy (LCOE). The 2.16 notice as consulted on was to developers at the point that they connect to the network.
- 3.10. Submissions on the consultation paper were generally supportive of the Authority's work to improve the transparency of information about planned new generation, as well as the proposal to issue two 2.16 notices to improve information collection.

### **The Authority has decided to progress the two notices, with some changes**

- 3.11. The Authority has decided to progress the two 2.16 notices, with some changes, following consultation to make the proposals more workable for Transpower, developers, and generators.
- 3.12. The changes the Authority has made following consultation are set out in the next part of this paper, and in more detail through redlined versions of each notice in Appendix B and Appendix D.
- 3.13. The Authority will also continue to expand the information available about planned generation in other areas, including in distribution networks, as part of our broader focus of ensuring we get the settings right to enable investment in enough generation to meet New Zealand's growing demand.

## **4. Most submitters expressed support for the proposals**

- 4.1. Authority sought feedback on proposals to issue two 2.16 notices. This section summarises the proposals the Authority sought feedback on, the views of submitters, and the Authority's response to submitters, including changes to the 2.16 notices from the consultation paper.
- 4.2. The Authority received seven submissions on the consultation paper, from parties listed in Table 1. Submissions are available on the Authority's website.<sup>6</sup>

**Table 1: submissions on consultation paper**

<b>Submitters</b>
BusinessNZ Energy Council
Genesis Energy
Meridian Energy

<sup>6</sup> <https://www.ea.govt.nz/projects/all/improving-visibility-of-generation-investment/consultation/improving-visibility-of-generation-investment/>



Major Electricity Users' Group
Nova Energy
Sustainable Energy Research Group, University of Canterbury
Transpower NZ Ltd

4.3. Most submitters expressed support for the proposed 2.16 notices. The Authority has endeavoured to accurately summarise views expressed in the submissions. However, the summaries are not exhaustive and necessarily compress the information provided in submissions. The individual submissions should be read to obtain a full account of submitters' views.

## Submissions on the provision of information to the Authority

### Authority's proposal

- 4.4. In our consultation, the Authority proposed monthly collection of information about grid-connected projects as it will enable Transpower to provide information from a 'rolling' set of information, rather than being required to seek out information from participants on a regular basis.
- 4.5. The Authority proposed that Transpower would pass on the expectation to update Transpower frequently when developments progress or there are significant changes. The alternative option provided in consultation was emphasising a stronger expectation on Transpower to proactively seek information from developers on a regular basis about any project changes.

### Submitters' feedback

**Table 3: Summary of submissions on the provision of information to the Authority**

Question	Agree/ support	Somewhat agree/ support	Disagree/ do not support	No response
Q1. Do you agree with the Authority's proposal to require monthly provision of information to the Authority, to enable a 'rolling' set of information?	3	1	0	3
Q2. Do you agree with the Authority's initial assessment that developers will be required to regularly update Transpower when significant information changes for their projects, or should Transpower be required to	4	0	1	2

regularly ask for information from developers?				
Q3. Do you have any comments on the proposal to require developers (via Transpower) to provide increased information on their generation and load projects?				

- 4.6. The majority of submitters supported the Authority’s proposal of the monthly provision of information, with the intent that it would best enable regular updates. One submitter raised that less frequent updates (every second month, or quarterly) may be sufficient, particularly to reduce the burden on industry providing information to Transpower.
- 4.7. Transpower raised that the monthly provision of information should be on a ‘best endeavours’ basis should there be any issues providing the information in a given month.
- 4.8. Submitters were more engaged on questions 2 and 3 related to whether the obligation would sit with developers to update Transpower when projects changed or whether Transpower should be obligated to regularly request information from project developers.
- 4.9. Most submitters generally supported the proposal to make developers responsible for updating Transpower when there are significant changes to projects.
- 4.10. Submitters said this would support greater flexibility for developers to provide updates frequently while a project is progressing and would not require developers to engage as frequently while a project is paused, on hold or is not progressing as quickly. Submitters also suggested this would minimise the overall regulatory burden, particularly for Transpower.
- 4.11. However, several submitters raised concerns about how the Authority would be able to require developers to provide these updates to Transpower, and the consequences if a developer does not provide sufficient updates. Submitters:
- (a) were concerned that it was unclear how the obligation would be applied, particularly if the developer was not registered as a participant, given the obligation in the notice is for Transpower to collect and provide information
  - (b) raised a suggestion that Transpower should consider regularly checking in with developers proactively to ensure no significant progress is missed
  - (c) said the Authority and Transpower will need to clearly set out expectations and obligations for developers, to increase clarity about how the obligation would apply

### Authority’s decision/changes

- 4.12. The Authority has decided to keep the monthly information provision requirement. This will enable regular publication of information by the Authority and supports participants and other stakeholders having access to up-to-date information.

- 4.13. The Authority cannot collect information directly from non-participants, so the only option available is to compel Transpower to collect the information from developers. The Authority expects Transpower to manage the enquiry process such that developers must give information to Transpower. Having a legal obligation on Transpower to collect this information will support its case for asking for it from developers.
- 4.14. Transpower must then consider how best to meet its monthly information provision obligations. This might include asking developers for monthly updates where appropriate, where a developer is not proactively providing information.
- 4.15. Transpower considers that it will be in developers' interests to continue to regularly update Transpower, as this will help ensure progress through the connection queue. This incentive may be sufficient to ensure developers provide the information to Transpower, which in turn means Transpower can comply with its obligations. The Authority will review the notices in the next two years to establish whether developers are providing the information to Transpower.
- 4.16. With regards to concerns about the Authority's standing to require Transpower to collect information on its behalf, the Authority considers that:
- (a) Clause 2.16 of the Code states that the Authority may "specify information that participants must **collect, collate, and/or provide** regularly or in response to events." As such, the Code enables the Authority to request Transpower to collect information from other entities. Clause 2.20(1)(a) also provides that the Authority may require participants to collect information. Clause 2.20(2)(b) also makes it clear that the participants may be required to collect information from another entity.
  - (b) Developers are incentivised to provide information to Transpower in order to progress or maintain their place in the connection queue. The information the Authority is requesting from developers (via Transpower) is, for the most part, information that developers are already providing to Transpower. Additional information included in the 2.16 notice is also information that supports the connection process and is reasonable to expect developers to provide.
  - (c) This decision paper is intended to make clear that the Authority expects Transpower to communicate the information requirements set out in this notice as part of its engagement with developers and/or as part of its Connections Management Framework.
  - (d) Transpower is also expected to be proactive in collecting information from developers who are not providing updates to Transpower over a prolonged period of time if their projects are still progressing. Transpower would not have an obligation to proactively contact developers if a project has clearly paused or been cancelled.
- 4.17. It is correct that the Authority will not be able to pursue compliance action against non-participant developers. However, the Authority expects that willingness to provide information, and providing accurate information, will be key to progressing or maintaining a place in Transpower's connection queue. Transpower shared this view in its submission.

- 4.18. The Authority shares Transpower’s view that Transpower is not responsible for the failure of parties to provide it with information, subject to it making all reasonable efforts to request information from developers.
- 4.19. This is additionally clarified by clause 2.20(2)(b) of the Code, where participants are not required to provide information to the Authority where it is not reasonably possible for a participant to obtain the information, including because the person that holds the information may lawfully refuse to provide the information to the participant.

## Submissions on the proposed cost information notice

### Authority’s proposal

- 4.20. The second proposed 2.16 notice in our consultation would be issued to generators, at the point of commissioning new generation, to request information on the cost of new developments.
- 4.21. This proposal was designed to support the Authority’s monitoring of the LCOE for new generation against forward prices, which supports our analysis of competition in the wholesale market.
- 4.22. We sought feedback specifically on:
- (a) the proposal to collect cost information
  - (b) the best time to collect cost information.

### Submitters’ feedback

**Table 4: Summary of submissions on the proposed cost information notice**

Question	Agree/ support	Somewhat agree/ support	Disagree/ do not support	No response
Q4. Do you have any comments on the proposal to require generators to provide cost information through a clause 2.16 notice? Do you have any comments on the specific information proposed to be collected in the clause 2.16 notices?	3	2	1	1
Q5. Do you agree that the appropriate time to collect cost information is when new generation is commissioned, or whether it should be earlier in the development process?	4	1	1	1

- 4.23. Submitters were cautiously supportive of the proposal to collect cost information about new projects. Submitters were more supportive of the proposal to collect cost

information at or around the time that new generation connects, to ensure the developer is registered as a participant.

- 4.24. Submitters generally agreed that collecting information about cost when new generation is commissioned is appropriate, because;
- (a) it ensures the information will be collected at the time it is most accurate; being based on actual expenditure rather than projections
  - (b) it means information only has to be provided once, rather than regularly updating price expectations for limited benefit
  - (c) it will only apply to developers once they have registered as participants, which may not be the case for all independent generators during the development phase.
- 4.25. Two submitters proposed requiring preliminary cost information at an earlier stage, with updates either throughout the project, or at final investment decision (FID) and at commissioning. They noted that this could be valuable to track how project costs change over time.
- 4.26. Submitters did raise concerns about the way the Authority would handle, process and release the information collected. These concerns were split into two key themes:
- (a) confidentiality and aggregation
  - (b) standardisation and calculation assumptions

#### **Confidentiality and aggregation of cost information**

- 4.27. All submitters who commented agreed ensuring information is genuinely kept confidential and is aggregated in such a way to avoid any individual party's cost information being able to be inferred is vital. This is particularly the case for generating technologies where only a small number of projects may achieve commissioning, even over a period of years.
- 4.28. Submitters raised concerns that data collected from a relatively small number of connections per year (in the region of 5-10) will not be able to be aggregated in a way that both anonymises respondents and remains useful for the Authority's monitoring function or for the market.

#### **Standardisation and calculation assumptions in determining LCOE**

- 4.29. Submitters shared a view that standardising cost information when released—and ensuring any assumptions around how it will be calculated are transparent—will be both challenging and important for ensuring market participants can have confidence in the information published.
- 4.30. Even small changes to capacity factor, finance costs, operating and maintenance costs, and expected lifetime of the plant can significantly shift LCOE or long-run marginal cost (LRMC) calculations.
- 4.31. Submitters again shared the view that if the Authority proceeds with the notice, it should include more comprehensive information about:
- (a) which inputs should be included and excluded in the cost information submitted

- (b) how the Authority will treat the information and the assumptions it will use to ensure information is standardised and high value.
- 4.32. In particular, submitters raised several questions around specific inputs that could be included or excluded from cost assessments depending on the wording in the notice. For example:
- (a) costs from delays or unexpected weather events
  - (b) costs from commissioning issues, such as the steam hammer event at Tauhara
  - (c) exploratory costs from other projects that did not go ahead, that effectively form part of the cost of getting a project to completion
  - (d) costs that may be faced by project managers or contractors that are not faced directly by the generator or developer
  - (e) calculation of costs on a nominal or real basis.
- 4.33. Some of the risks raised by submitters of inaccurate or unclear LCOE information being published include:
- (a) overstating LCOE may create expectations of consumers or purchasers paying more for energy, and may increase forward prices and overstimulate investment in generation. Equally, understating LCOE may disincentivise investment.
  - (b) a lack of clarity around the value that different types of generation provide. For example, intermittent generation typically receives a lower price for generation than highly flexible generation such as hydro or thermal.

### Authority's decision/changes

- 4.34. The Authority has decided to retain the proposal to only collect cost information once, at the time that the generating station is commissioned. This is because:
- (a) final, or near final, cost information will ensure that LCOE information produced by the Authority is as accurate as possible
  - (b) collecting information once will reduce the burden on developers to produce frequent assessments of costs
  - (c) if needed, the Authority can request further information about initial assessments of cost, or further details from participants, through other means including requests under section 46 of the Electricity Industry Act 2010 (Act).
- 4.35. The Authority recognises the concerns of submitters around the confidentiality of information provided about the cost of projects. The Authority also recognises the possible negative impacts if LCOE calculations are presented in a way that provides inaccurate information to the market.
- 4.36. The Authority has included an indication of how we will treat specific information identified as confidential, such as cost information, as part of the final 2.16 notices, attached to this decision paper as Appendices A-D.
- 4.37. The Authority considers that risks from publishing aggregated and anonymised LCOE data are minimal, as:

- (a) There are existing LCOE estimates being published, including from some developers about individual projects. The risk of inaccuracy will be reduced with additional information from an official source.
  - (b) The Authority will provide appropriate caveats and methodology information about how we calculate any LCOE estimates, which will give participants the opportunity to consider how they treat the information.
- 4.38. The Authority will not publish any of the information collected in this notice directly. The Authority will use the construction cost information provided as an input to assess, monitor and publish LCOE.
- 4.39. The Authority’s calculations of LCOE will incorporate information provided by developers, as well as from other sources in New Zealand such as MBIE’s generation stack information, publicly available data from developers and information from comparable jurisdictions. This will mean that participants cannot identify any commercially sensitive information. An assessment of the cost of capital will also be included along with the information about the methodology the Authority has used.

## Submissions on aggregation of some information

### Authority’s proposal

- 4.40. In the Authority’s consultation paper, we proposed to aggregate some information provided about project status (consenting, construction, land agreements, contracts for supply, and financing) to ensure sensitive information is not published.
- 4.41. We proposed aggregating this into three stages (committed, actively pursued, and other), based on the how far the project had progressed in each of the categories above.

### Submitters’ feedback

**Table 5: Summary of submissions on the aggregation of information collected**

Question	Agree	Somewhat agree	Disagree	No response
Q6. Do you agree with the Authority’s proposal to aggregate some information provided by Transpower to assess the status or stage of projects, and do you have any comments on the breakdown of the proposed stages?	5	1	0	1

- 4.42. Submitters supported the proposals to aggregate information about details such as consents and land acquisition. The reasoning given included that it supports the protection of confidential details, and that it enables a more useful and standardised indicator for a project’s progression.
- 4.43. Some submitters raised concerns around ensuring that the Authority is sufficiently well-equipped to standardise and undertake quality assurance for the data collected,



to ensure it is consistent, accurate, and useful to the market and the public. As with the proposals to collect cost information, some submitters requested additional assurance around how the Authority would handle confidential information.

- 4.44. One submitter raised that the proposed stages may be too generalised to show progress. Conversely, one submitter suggested the stages should be as high-level as possible to allow a standardised view of progress across projects.
- 4.45. Submitters also raised concerns about ensuring the information published is accurate and credible. In particular, submitters raised questions about how the Authority would handle situations where developers:
  - (a) failed to provide sufficient information to Transpower to be passed on to the Authority
  - (b) provided inaccurate or contradictory information to Transpower to be passed on to the Authority (for example, if a developer sets a completion date significantly earlier than they would be able to have land agreements or construction in place).

### **Authority's decision/changes**

- 4.46. The Authority will continue to aggregate sensitive information about the stage of projects. For example, information about financing arrangements, land agreements and contracts for construction will not be published separately.
- 4.47. However, the Authority considers that there is a benefit in publishing some additional information about consents and planning processes. This information is generally in the public domain and is a key indicator of how a project is progressing. The Authority may publish parts of this information separately.
- 4.48. As such, the Authority's assessment of project stage may change when data is published in early 2025, to enable information about consents (and commencement of construction) to be published separately.
- 4.49. For information that participants consider to be confidential, participants have the ability under clause 2.21 of the Code to identify confidential information, including if that information would unreasonably prejudice the commercial position of the participant.
- 4.50. The Authority is obligated to deal with information identified as confidential according to the test set out in clause 2.22 of the Code, including assessing the reasons for keeping the information confidential and whether those reasons are outweighed by other considerations.
- 4.51. The Authority has included an indication of how we will treat specific information identified as confidential, such as information about the stage of projects, as part of the final 2.16 notices, attached to this decision paper as Appendices A-D.
- 4.52. Regarding the situation if developers provide insufficient or incomplete information, the Authority considers that willingness to provide information, and providing accurate information, will be key to progressing or maintaining a place in Transpower's connection queue. Transpower shared this view in their submission.



## Submissions on the Authority's overall assessment

### Authority's proposal

- 4.53. The Authority's consultation paper set out an initial assessment of the benefits and costs. We suggested that there would be significant benefits for the energy sector of improved information, by enabling better decision-making by investors and greater security of supply because of improved monitoring. The Authority's assessment was that improving the information available would also be pro-competitive.
- 4.54. The Authority's preliminary view was that the costs are relatively low, because:
- most information is already provided to Transpower in some form
  - many participants have disclosure requirements for publicly listed companies
  - the proposal will reduce the costs faced by the Authority and others currently collating and publishing information on generation investment.

### Submitters' feedback

**Table 6: Summary of submissions on the Authority's overall assessment**

Question	Agree	Somewhat agree	Disagree	No response
Q7. Do you agree the benefits of the proposed clause 2.16 notices outweigh their costs? If not, what area(s) of the Authority's preliminary assessment of benefits and costs do you disagree with?	4	2	1	0
Q8. Do you agree the proposed clause 2.16 notices are 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 Act.	4	0	0	3

- 4.55. Submitters generally agreed that the benefits of increased transparency of the generation pipeline will outweigh any additional costs of providing new information. Submitters were more likely to agree about the proposal's benefits: increased transparency, better decision-making and more standardised information.
- 4.56. One submitter proposed that the benefits may be at a greater scale for larger projects, and that the costs may be more burdensome for smaller projects. They proposed that the requirements could be tiered, with fewer requirements for smaller projects, to ensure that the benefits outweigh the costs for all projects.

- 4.57. Several submitters raised that the benefits are contingent on the published information being standardised, comprehensive, credible, and whether sensitive information is protected. They suggested that the Authority should focus on ensuring:
- (a) the information collected is standardised and there is good quality assurance built into the process before it is published
  - (b) adequate protections for commercially sensitive information, including some information around project stages
  - (c) generators are not incentivised to exaggerate the progress of their projects, which may have adverse effects on the market and other prospective developers
  - (d) the information is sufficiently clear about the conclusions that can and cannot be drawn from the data (for example, that it should not be used on its own to draw conclusions about price).
- 4.58. Submitters had more mixed views on the Authority's assessment of the costs of the proposed notice. Multiple submitters raised that the costs may be higher than acknowledged in the Authority's consultation paper. This includes:
- (a) costs to developers, particularly smaller developers, of collating and providing this information on a regular basis
  - (b) costs to the Authority to standardise, undertake quality assurance, and publish the data.
- 4.59. Submitters supported the use of 2.16 notices as the mechanism to increase data collection and publication by the Authority via Transpower.

### **Authority's decision/changes**

- 4.60. The Authority recognises that participants need confidence that the information they provide will be treated appropriately. This includes ensuring, where possible, that the information provided is accurate, as well as working with Transpower to ensure that information is standardised and appropriate context is given to any information published.
- 4.61. The Authority will communicate our expectations with Transpower directly for how we expect to receive the information. The Authority will undertake checks when we receive and process data from Transpower. This will ensure it meets the data formats we specify. We may also, where appropriate, check the data against data we already hold and against public information. We will also continue to work with Transpower to resolve any issues that arise from the data collection process once the 2.16 notice is in place.
- 4.62. The Authority has expanded, in the 2.16 notice, how we expect developers to identify confidential information, including asking for a reason, to aide the Authority's assessment of that information under clause 2.22 of the Code.
- 4.63. For information that participants consider to be confidential, participants have the ability under clause 2.21 of the Code to identify confidential information, including if that information would unreasonably prejudice the commercial position of the participant.

- 4.64. The Authority is obligated to deal with information identified as confidential according to the test set out in clause 2.22 of the Code, including assessing the reasons for keeping the information confidential and whether those reasons are outweighed by other considerations.
- 4.65. The Authority has set out in previous sections, and in Appendices A-D, more information about how we will treat information provided to ensure confidentiality.
- 4.66. The Authority has also updated its assessment of the benefits and costs of the finalised 2.16 notices in part 5 of the paper.

## Submissions on the Authority’s plan to undertake further work

### Authority’s proposal

- 4.67. The consultation paper discussed that the 2.16 notices are one part of the Authority’s work on improving the visibility of the generation pipeline. The Authority intends to continue this work and progressively make further improvements about energy and capacity adequacy, including through scenario modelling. The consultation paper sought feedback on whether the Authority should undertake further work, and what that further work could include.

### Submitters’ feedback

**Table 6: Summary of submissions on the proposal to consider further work**

Question	Agree	Somewhat agree	Disagree	No response
Q9. Should the Authority consider further work to monitor and assess the pipeline of new generation and demand?	7	0	0	0

- 4.68. Submitters did raise some issues that they considered the Authority should focus on linked to the generation pipeline, in addition to the work on the generation pipeline:
- (a) monitoring and reporting on the availability of gas for electricity generation
  - (b) assessing the level of firming capacity in the current generation stack and in the pipeline
  - (c) assessing the value to the system of the projects in the pipeline and the extent to which they contribute to solving energy and capacity challenges
  - (d) monitoring and reporting on the progression of projects through the pipeline, rather than just a static analysis.

### Authority’s decision/changes

- 4.69. The Authority recognises the value in expanding information about the availability of gas for electricity generation, as well as the availability of other thermal fuels.
- 4.70. More information about how the Authority intends to use the information collected, including to assess the level of firming capacity, the value of projects to the electricity system, and monitoring progression of projects, is included in part 6 of the paper.

## Other issues raised by submitters

- 4.71. Submitters also raised a number of suggestions, outside of the consultation questions, to improve the workability of the proposed 2.16 notices and to ensure that the information collected is comprehensive, credible and standardised.

### Reducing information requirements for smaller and less-advanced projects

- 4.72. Two submitters raised that less advanced or smaller projects may not be able to provide all the information requested in the notice. They proposed that either some of the information requested in the notice could be reserved for further-advanced projects, and/or that the information requirements could be scaled down for smaller projects.
- 4.73. Specifically, Transpower suggested that the notice could apply from the 'concept assessment' or 'application' stage, rather than the 'initial enquiry' stage.<sup>7</sup> This is because the 'initial enquiry' stage includes speculative enquiries that may not provide all the information relevant for the form and may not engage regularly (or at all) with Transpower.
- 4.74. The Authority has decided not to set out different requirements for projects that are less advanced or based on size. Even the smallest grid-connected generation and load likely represents a multi-million-dollar investment from a developer, and as such will be subject to significant regulatory requirements, along with Transpower's Connection Management Framework process.
- 4.75. Similarly, less-advanced projects (such as those at the 'initial enquiry' stage) may still have some information available about the location, type of generation, planned commissioning timeframe, and size. This information is important to ensure the Authority's generation pipeline is as comprehensive as possible.
- 4.76. The Authority does not expect Transpower to collect and provide all the information required by the notice for projects at the initial enquiry stage, because it might not exist at that stage. However, they should pass on all available information to the Authority about those projects. More fulsome information is expected about projects at all other stages of the connection process.

### Whether to collect information on re-powering or upgrade projects

- 4.77. One submitter asked whether the Authority's intention is to include projects to repower or upgrade existing generation assets (eg, hydro upgrades and wind repowering).
- 4.78. Because projects to increase output at existing generating stations (or projects to add new generation behind an existing connection) often do not require more than minor changes to Transpower assets or resources, they may proceed through Transpower's existing Access & Occupation (A&O) process.<sup>8</sup>

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<sup>7</sup> Transpower's Connection Management Framework – Process Document (V2.0 3 July 2024) sets out nine pipeline stages for connections, five of which are relevant to projects prior to commissioning. Page 6, <https://static.transpower.co.nz/public/2024-07/Connection%20Management%20Framework%20-%20process%20document%20V2%20July%202024.pdf>

<sup>8</sup> For further explanation about connection projects that may go through the A&O process is included in Transpower's recent *Decision paper: Changes to the Connection Management Framework 1 July 2024*,

- 4.79. As such, Transpower may not be aware of these projects early in development until the A&O process is triggered or the generator engages with Transpower as system operator for commissioning requirements.
- 4.80. Transpower has advised these projects do not require a connection application and as such are currently not published in Transpower's existing generation pipeline. Consequently, they would not be captured by the 2.16 notice.
- 4.81. Larger upgrade projects that require more significant changes to Transpower assets and resources will be collected through the 2.16 notices. The Authority may consider an alternative process to collect information on smaller upgrades in future.

#### **Adding information on planned commissioning date**

- 4.82. Some submitters suggested that tracking progress against developers' promises or expectations for projects' progress will be an important part of assessing the competitiveness of the generation pipeline. It would also help to inform future work about possible barriers to connection.
- 4.83. For this reason, we have also added an information category relating to the reason for project delays, with some high-level options. This will improve the Authority's assessment of why projects are delayed, and would not be published separately.
- 4.84. Information on planned or likely commissioning dates is included in the data Transpower currently collects and publishes, as well as in some other sources. The 'expected commissioning date' category has been included in the final notice.
- 4.85. Specific information about how the Authority expects developers to assess their projects' expected commissioning date is included in Appendix B.

#### **Including a review date for the 2.16 notices**

- 4.86. One submitter raised that the Authority should provide a review date to make sure the 2.16 notices are providing benefits to the electricity system. The Authority agrees that the 2.16 notices (including the benefits it provides and costs it imposes) should be reviewed.
- 4.87. We also consider that a significant benefit of this 2.16 notices is that they are intended to be an enduring solution and reduce the need for active engagement from the Authority; the intent is that it will enable the Authority to monitor how developers' plans change over time and how they deliver on projects.
- 4.88. As such, the Authority agrees on the need for a review and intends to review the notice within the next two years.
- 4.89. As set out in the Authority's *Decision paper: Improving the framework for the Authority's information gathering*, which introduced 2.16 notices, the Authority has agreed the need for the information being collected under a 2.16 notice to be reviewed periodically.<sup>9</sup>

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page 4, <https://static.transpower.co.nz/public/2024-07/Decision%20paper%20Changes%20to%20the%20Connection%20Management%20Framework%201%20July%202024.pdf>

<sup>9</sup> Paragraph 4.81, <https://www.ea.govt.nz/documents/1486/Decision-paper-Improving-the-framework-for-the-Authoritys-information-gathering-v2.pdf>

- 4.90. In our consultation, we noted that some of the details around consenting processes were subject to possible legislative changes, including the Fast-track Approvals Bill and a consenting regime for offshore wind. We expect that changes to the 2.16 notice will likely need to be made to reflect any changes to consenting regimes. Changes may also be required in future to allow for different technologies.

#### **Details about projected load connections**

- 4.91. One submitter raised a concern that the draft 2.16 notice may capture load increases on distribution networks where electricity distribution businesses (EDBs) work with Transpower on connections. They submitted that the 2.16 notice should only capture significant, new direct-connect industrial consumers (and batteries). The Authority agrees with this submission.
- 4.92. The Authority does not expect Transpower to collect or supply information for EDB projected load growth at GXPs. Information about load growth in distribution networks is expected to be covered by other changes the Authority is progressing through the Network Connections Technical Group.
- 4.93. We have made changes to the wording of the 2.16 notice to clarify this.

#### **Feedback on definitions of information categories to be collected**

- 4.94. One submitter (Transpower) provided feedback on several of the individual categories and project stage definitions in the draft 2.16 notices. Specific changes to the 2.16 notices are included in the redlined versions at Appendix B and Appendix D.
- 4.95. The Authority has made the largely changes proposed by Transpower, including moving the request about planned outage rates, amending the wording for some of the project stage categories, and clarifying that EDB load is not intended to be collected.

#### **Whether to collect information on permitting processes for offshore wind developments**

- 4.96. Since the Authority published the consultation paper, the Government has confirmed some additional details of the proposed offshore renewable energy regulatory regime. This includes that offshore wind developers will be required to apply for a feasibility permit and subsequently a commercial permit, to enable construction and operation.<sup>10</sup>
- 4.97. At this stage, final details have not been confirmed and a legislative regime has not been introduced. As such, the Authority will not include requirements to provide information about permits for offshore wind in the 2.16 notice.
- 4.98. When an offshore renewable energy regulatory regime is in place, the Authority will consider amending the 2.16 notice to collect additional information about offshore renewable energy projects. The Authority will follow the process set out in clause 2.24 of the Code to do so.

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<sup>10</sup> Ministry of Business, Innovation and Employment, Offshore renewable energy | Design of offshore renewable energy regulatory regime, <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-generation-and-markets/offshore-renewable-energy>



## **5. The 2.16 notices will promote competition, reliability and efficiency for the long-term benefit of consumers**

- 5.1. Part 5 of this decision paper covers the Authority's obligations under the Act and the Code relating to issuing 2.16 notices, including the assessment of the benefits and costs.

### **The 2.16 notices support the Authority's monitoring functions and align with our objectives**

- 5.2. Section 2.16(2) of the Code, under which these notices are issued, states that the Authority may specify information that participants must collect, collate and/or provide to the Authority regularly or in response to events only for the purposes set out in section 45(a) of the Act.
- 5.3. Section 45(a) of the Act relates to the Authority's monitoring functions, which are to:
- (a) monitor compliance with the Act, the regulations and the Code under section 16(1)(c) of the Act; or
  - (b) undertake and monitor the operation and effectiveness of market-facilitation measures under section 16(1)(f) of the Act; or
  - (c) undertake industry and market monitoring, and carry out and make publicly available reviews, studies, and inquiries into any matter relating to the electricity industry, under section 16(1)(g) of the Act.
- 5.4. The Authority considers that the 2.16 notices will support the purposes of carrying out the Authority's monitoring functions: in particular, monitoring the operation and effectiveness of market-facilitation measures and undertaking industry and market monitoring.
- 5.5. Clause 2.19(1)(b) of the Code requires that before publishing a 2.16 notice, the Authority must be satisfied that the information requirements promote one or more of the Authority's objectives in section 15 of the Act.
- 5.6. The Authority considers that the 2.16 notices promote each of the limbs of the Authority's objective in section 15(1) of the Act. The 2.16 notices promote:
- (a) competition through increasing transparency by improving availability of information that informs investment decisions
  - (b) reliable supply by better enabling an assessment of whether new generation in the pipeline is sufficient to meet expected demand and enabling the market to respond appropriately
  - (c) efficient operation by providing better information to investors and participants to help ensure that the right investment happens at the right time and in the right place.

### **The benefits of the 2.16 notices outweigh the costs**

- 5.7. Clause 2.19(1)(a) of the Code requires that the Authority must be satisfied that the benefits of the Authority obtaining the information outweigh the costs of the information requirements set out in the notice.

- 5.8. Clause 2.19(2) also requires that the Authority must consider any 2.16 notice's impact on each participant to whom the notice applies.
- 5.9. The Authority provided an preliminary assessment of the benefits and costs in the consultation paper. Submissions on the consultation paper requested additional details on both the benefits and costs, which is included below.
- 5.10. Our final assessment aligns with our preliminary assessment that the benefits of each 2.16 notice outweighs the costs, and that the notice does not have an undue impact on any participant subject to either 2.16 notice.

### **Greater transparency about the pipeline will improve investment decision-making**

- 5.11. The benefits of the 2.16 notices have been covered throughout this decision paper. A summary of the benefits is provided below for the purposes of the cost benefit analysis.
- 5.12. As noted in the consultation paper, research from Infometrics for Infrastructure New Zealand concluded that the pipeline for energy projects in New Zealand is “highly uncertain” and that “greater pipeline certainty can unlock productivity benefits and improvements to enable between \$2.3 to \$4.7 billion more capital investment each year” (across all sectors).<sup>11</sup>
- 5.13. This aligns with the Authority's view; increased transparency and certainty about the projects in the pipeline will be pro-competitive, by ensuring that all participants have access to comprehensive and reliable information about projects.
- 5.14. The Authority agrees with the recommendation from the 2023 Generation Investment Survey that the status quo, where there is a significant number of projects that are not publicly disclosed, or details are contradictory between different source of information, creates uncertainty and disrupts investment confidence.
- 5.15. The Authority's final view is that the benefits are straightforward; better decision making by investors and greater security of supply through greater system-wide information about new generation.
- 5.16. There are also benefits for improved monitoring of competition for generation in the wholesale market, better accuracy for the forward price curve, and improved information to support the orderly retirement of thermal generation.

### **Costs are relatively low as developers already produce or provide most of the information**

- 5.17. The Authority's preliminary assessment was that the costs to industry resulting from the 2.16 notices would be relatively low. Most of the information being requested already exists and is provided to Transpower by developers as part of the connection management framework. Further, some of this information, including cost information, is regularly provided to stakeholders through disclosures by listed companies.
- 5.18. The Authority's final assessment has not changed from its preliminary assessment, and we still consider that the costs are relatively low. We do note that some submitters raised that the Authority may be understating the administrative costs

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<sup>11</sup> Estimating the Costs of an Uncertain Infrastructure Pipeline, Infometrics and Infrastructure New Zealand, September 2023, <https://infrastructure.org.nz/wp-content/uploads/2023/10/Infrastructure-NZ-Estimating-the-Costs-of-an-Uncertain-Infrastructure-Pipeline-Report-SINGLE-PAGES-Media-Release.pdf>, page 4



associated with responding to the 2.16 notices, which we recognise and have taken into account by being explicit that less advanced projects will only be required to provide the information that they already have, which may not cover all the information requested in the notice.

- 5.19. The Authority also notes that some submitters raised that there may be system costs associated with the 2.16 notices. In particular, that the information provided in the notice may be presented as authoritative when in some cases it is not, which could cause some investors or developers to make decisions based on information that could still be inaccurate provided by developers.
- 5.20. The Authority's view on this is that the status quo already creates significant risks that some participants may have unrealistic expectations of projects in the pipeline, especially as public releases of information by developers may be incentivised to over-estimate progress.
- 5.21. As identified in our preliminary assessment, there are also further benefits from reduced monitoring costs to the Authority. The 2.16 notices would replace the Generation Investment Surveys undertaken by the Authority in 2022 and 2023. This would remove some of the costs the Authority currently faces in monitoring projected supply and allow more frequent collection of data.
- 5.22. The survey data for the Generation Investment Surveys was collected mostly by interview, which was time-consuming and costly. Interviews also required manual entry by interviewers of information provided during the interviews on the projects, requiring follow-up checks with developers. Removing these costs and streamlining the information provision process contributes to the relatively low costs of the 2.16 notices.
- 5.23. Specifically on cost information, this information is routinely provided by those generators and developers listed on NZX. As such, for these participants the costs of the 2.16 notices are minimal. For other developers, compiling cost information for internal purposes would be expected; the Authority's assessment remains that this 2.16 notice would not place requirements on generators to create new information.

## 6. Next steps

### **We are continuously improving information about the generation pipeline**

- 6.1. The Authority has been following a continuous improvement approach to increasing the amount and the reliability of the information available about the pipeline of new generation.
- 6.2. Earlier in 2024, we published a new [dashboard](#) displaying the data collected in the 2023 Generation Investment Survey. We also published a [dataset](#) of public generation projects with information about technology type, size, and earliest expected commissioning date.
- 6.3. Since then, we have updated the dataset and dashboard with newer information, we have published additional information on the dashboard. We will continue to improve both the content and presentation of the data over time.

- 6.4. The 2.16 notices will enable the Authority to publish further information, including maps of projects, along with more reliable information about expected commissioning dates and project stage.

### **The 2.16 notices are part of broader monitoring about the supply and demand balance and security of supply**

- 6.5. The Authority is undertaking complementary work, including changes to Part 6 of the Code and introducing scenario modelling, to improve overall information on the generation pipeline, supply and demand, and security of supply.
- 6.6. The Authority is currently consulting on proposed amendments to Part 6 of the Code relating to the non-price aspects of connections to distribution networks.<sup>12</sup> The proposal includes collecting information about large (greater than 300kW or 300KVA) generation and load developments.
- 6.7. As part of the proposals under consultation, distributors will also be required to publish information about their pipelines of new developments, including aggregated information about smaller projects. This will ensure the Authority has a holistic picture of supply and demand projections on both transmission and distribution networks.
- 6.8. In addition to publishing information on generation developments for transparency and to support investment decisions, the Authority will use the information collected to contribute to monitoring future electricity system scenarios, which will also incorporate other information, such as uptake of small-scale distributed generation and possible future retirements of thermal generation.
- 6.9. The Authority may also consider other ways to collect information about planned new generation projects that have not made any enquiry to Transpower. This may include, for example, larger projects that are a long way from commissioning, such as offshore wind projects.

### **The information we are collecting will support our focus on generation investment**

- 6.10. The Authority is focused on encouraging more and faster investment in new generation, which puts more energy into the system, strengthens resilience against future shortages and puts downward pressure on prices.
- 6.11. As one of the actions we are taking, through the Energy Competition Task Force, the Authority is progressing options to enable new generators to enter and better compete in the electricity market.
- 6.12. Having access to better information about planned generation developments will enable the Authority to assess whether we've got the settings right to enable new generation, as well as assessing any barriers that developers might face.
- 6.13. We will also use the information we collect to assess whether developers are following through on their plans for new generation. If our assessment is that the market for new generation is not competitive, or that developers are not following

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<sup>12</sup> Electricity Authority, Network connections project – stage one, <https://www.ea.govt.nz/projects/all/network-connections/consultation/network-connections-project-stage-one/>. Consultation is open until 6 December 2024

through on their plans, that will enable us to take further actions to make sure New Zealand is getting enough investment in new generation.

## 7. Attachments

7.1. The following appendices are attached to this paper:

**Appendix A Final 2.16 notice: Investment pipeline**

**Appendix B Redline 2.16 notice: Investment pipeline**

**Appendix C Final 2.16 notice: Cost of investment**

**Appendix D Redline 2.16 notice: Cost of investment**