FN-25-10 Fortnightly report 23 May 2025

This report summarises items that may be of interest to the Minister for Energy but do not necessarily require a formal briefing. Further information on any topic can be provided on request. Substantive items and decision papers will be provided to the Minister in the form of briefings.

Electricity Authority contact: Sarah Gillies, Chief Executive

Mobile: s9(2)(a) [redacted]

1. Current and upcoming publications and advice

Updated stress test regime	
Strategic outcome	Secure and resilient: *Effective risk management*
Purpose	Following the 16 April Code amendment omnibus #5 decision paper, industry participants who buy electricity from the clearing manager or who consume it directly from the grid will need to abide by the new stress test guidance, effective 15 May. Under this new guidance: • participants' stress test results now apply to the next 12 quarters, rather than just the immediate next quarter. • the Registrar now undertakes benchmarking so participants can assess their relative risk • participants submit their actual hedge cover ratios for the previous quarter • Some small aspects of the methodology and form have changed.
Action and timing	In effect: 15 May 2025
Market making under high stress conditions	
Strategic outcome	Affordable: *Effective competition*
Purpose	The Authority has decided to let the urgent Code amendment on market making under high stress expire on 12 June 2025. Consultation on the future of the urgent Code amendment closed on 14 April. Following consideration of the submissions, our view remains that widening spreads in response to high prices, even if limited to specific contracts, is likely to erode market depth and weaken the price signals that underpin risk management and investment decisions.
Action and timing	Intended publication: 27 May 2025
Retail Price Dashboard	
Strategic outcome	Affordable: *Consumer care and affordability*

Purpose	We are publishing a dashboard on our website in the form of an interactive map to show aggregated tariffs and bills based on region since February 2025. We will be collecting this data monthly until August 2025 to provide a live tool for consumers and industry to compare retail prices by region, breakdown average increases and empower consumers to make informed choices about their power bill.
Action and timing	Intended publication: 29 May 2025
Future operation of New Zealand's power system: Issues and high-level options	
Strategic outcome	Secure and resilient: *Regional resilience* Efficient: *Innovation and distributed energy*
Purpose	The Authority is publishing a consultation paper on issues and high-level options for future operation of the power system. This paper puts forward three alternative ways in which one or more electricity distributors and/or Transpower might share new distribution system operation (DSO) functions. These new functions will improve coordination of consumer-owned distributed energy resources (DER) connected to the distribution networks, such as rooftop solar, household batteries and electric vehicles. One important new function is to access and use more operational data, to better understand distribution networks' capacity and congestion at any point in time. This should enable DSO entities to coordinate and operate consumer-owned DER more effectively. It would also help consumers shift their consumption and self-supply of electricity to reduce their power bills and become more resilient to power outages. Given the right incentives, consumers will also earn revenue from their DER by exporting electricity into their networks, and thereby actively contributing to power system operation.
Action and timing	Intended publication: 3 June 2025
Promoting reliable electricity supply – a voltage-related Code amendment proposal	
Strategic outcome	Secure and resilient: *Effective risk management*
Purpose	The Authority is proposing a Code amendment that benefits consumers, including by lowering the risk of:

	• electrical equipment not operating properly or being damaged • power supply interruptions. In general terms, the Code amendment proposal would require most larger (10MW or more) power stations on electricity distribution networks to operate in a manner that supports the voltage on these networks.
Action and timing	Intended publication: 3 June 2025
A regulatory roadmap for battery energy storage systems	
Strategic outcome	Efficient: *Innovation and distributed energy*
Purpose	The Authority has a programme of work underway to ensure our regulatory settings enable new technologies such as battery energy storage systems (BESSs) to benefit our electricity market. BESS will play an important role in our transition to a power system with more intermittent and variable renewable generation and contribute to power system stability. It will also benefit consumers by providing back-up electricity during power outages and lowering consumers' power bills by drawing on stored energy when wholesale prices are high. We have developed a regulatory roadmap setting out the Authority's BESS work plan for the next two years. We intend to share this roadmap with stakeholders to seek their insights on any gaps and to inform work stream prioritisation.
Action and timing	Intended publication: 10 June 2025

2. Consultation underway

Improving visibility of competition in the OTC contract market consultation	
Strategic outcomes	Secure and resilient, Affordable
Purpose	We are seeking feedback on a proposal to require all retailers (including gentailers) and large industrials (who buy electricity from the clearing manager) to regularly provide the Authority with their over-the-counter requests for buying contracts and responses to those requests.

	This is intended to improve the transparency of, and competition in, the over-the-counter hedge market to drive greater retail competition, aligned with the findings from the Risk Management Review and recommendations from the Market Development Advisory Group. Improved retail competition increases downward pressure on electricity prices and provides more choice for consumers.
Action and timing	Consultation closes: 26 May 2025
14 January 2025 under-frequency event	
Strategic outcomes	Secure and resilient: *Effective risk management*
Purpose	We are seeking feedback from market participants who may have been substantially affected by an under-frequency event on 14 January 2025. An under-frequency event occurs when the system frequency falls below 49.25 Hertz (Hz) because of a loss of injection of more than 60 megawatts (MW) into the grid. Our draft determination is that Genesis Energy Ltd, as a generator, was the causer of this under-frequency event because: • the interruption of energy injected into the grid occurred at Unit 1 of the Huntly power station, which belongs to Genesis • no other asset was identified as having caused or potentially caused the event • in the system operator's view, Genesis was the causer of the event • Genesis has accepted that it was the causer.
Action and timing	Consultation closes: 3 June 2025
Working together to ensure our electricity system meets the future needs of all New Zealanders – Decentralisation green paper	
Strategic outcome	Secure and resilient, Affordable, Efficient
Purpose	The purpose of this green paper is to initiate discussion and debate about decentralisation and the future of our energy system. We are seeking feedback from people and organisations with an interest in the energy system to help shape our regulatory thinking about what a more decentralised

	electricity system might look like, how this might benefit consumers, and what might be needed to gain these benefits.
Action and timing	Feedback closes: 4 June 2025
Promoting reliable electricity supply: Frequency-related Code amendment proposals consultation	
Strategic outcomes	Secure and resilient, Efficient
Purpose	We're seeking feedback on our proposal to amend Part 8 of the Code to address the frequency-related common quality issue, which is described as: *an increasing amount of variable and intermittent resources, primarily in the form of wind and solar photovoltaic generation, is likely to cause more variability in frequency within the 'normal band' of 49.8–50.2Hz, which is likely to be exacerbated over time by decreasing system inertia.* We are proposing to: • lower the 30-megawatt threshold for generating stations to be automatically excluded from being required to comply with aspects of Part 8 of the Code. • set a permitted maximum dead band beyond which a generating station must contribute to frequency management and frequency support.
Action and timing	Consultation closes: 17 June 2025

3. Upcoming Electricity Industry Participation Code 2010 amendments

3.1. The following table has Electricity Industry Participation Code amendments that need to be presented to the House by the Minister's office within **20 working days** following the date on which it is made.

Tracking number	Name	Date made	Date of Gazette notification	Date in force	Due date for presentation to the House
	N/A				

4. Key external engagements

- 26 May: Electricity Networks Aotearoa/CE
- 27 May: Electricity CEO Forum/Various Electricity CEOs/CE
- 28 May: Public Service Commission/CE
- 29 May: Security and Reliability Council members/CE/GM Wholesale and Supply
- 29 May: Te Waihanga Pre Symposium Pre-Event Panel meeting
- 29 May: Transpower event – Aotearoa 2025/CE and general managers
- 30 May: Transpower Chairs and CEs Quarterly meeting/CE/Chair
- 4 June: NZ Steel/CE/Chair
- 4 June: EAAG Chair/Chair
- 6 June: Energy Competition Task Force/Commerce Commission/MBIE/CE/Chair
- 6 June: EAAG Chair/CE

5. Investment pipeline monthly update

This is the second of our regular monthly updates

5.1. Last year, the Authority required Transpower (on our behalf) to request more detailed information from developers about where each generation investment project is in the investment pipeline – including finance, land acquisition, consenting status, and connection queue status.

5.2. Data is being collected on an ongoing basis and covers exact project locations and development milestone dates for individual projects.

5.3. This information is now provided on a public online dashboard: Investment pipeline | Tableau Public.

5.4. We continue to monitor project progress and timeframes, including commissioning times. We also released the first of our annual surveys into barriers to investment and what factors are delaying projects.

5.5. This update presents the data insights currently available. In summary:

(a) **Slight decrease in capacity**: There are currently 60.3GW of projects in the investment pipeline. There has been a slight decrease (~4GW) in the total capacity of projects in the pipeline since our last update due to projects being cancelled. We expect more projects to be classified as cancelled in our next update as many of them are inquiries only and never intended to progress. This is not surprising as not all projects are expected to progress to commissioning.

(b) **Average commissioning time 3.5 years:** Of the solar and BESS projects which have detailed project stages and dates, the average expected time for

commissioning after consent is ~3.5 years. This compares to ~2.5 years for the most recent thermal generation plant connected to the grid, Nova's Junction Road in 2020. Solar generation construction time should be similar to (or faster than) small thermal plants. Prior to 2019, there were very few generation projects being progressed, so there were fewer competing demands for connection and construction resources.

(c) **No apparent construction delays:** The expected average time from construction beginning to commissioning of these projects is ~19 months. This is comparable to construction and commissioning time for similar projects in Australia, suggesting there are no additional construction delays in NZ.

(d) **Majority is intermittent generation:** Planned firming capacity (BESS, geothermal and hydro) remains low relative to planned intermittent generation capacity (solar and wind). There is a higher proportion of firming capacity in the North Island. This is because there is less hydro firming capacity in the North Island and current thermal generation in the North Island will decrease in future.

We now have better insight into where new developments are being built

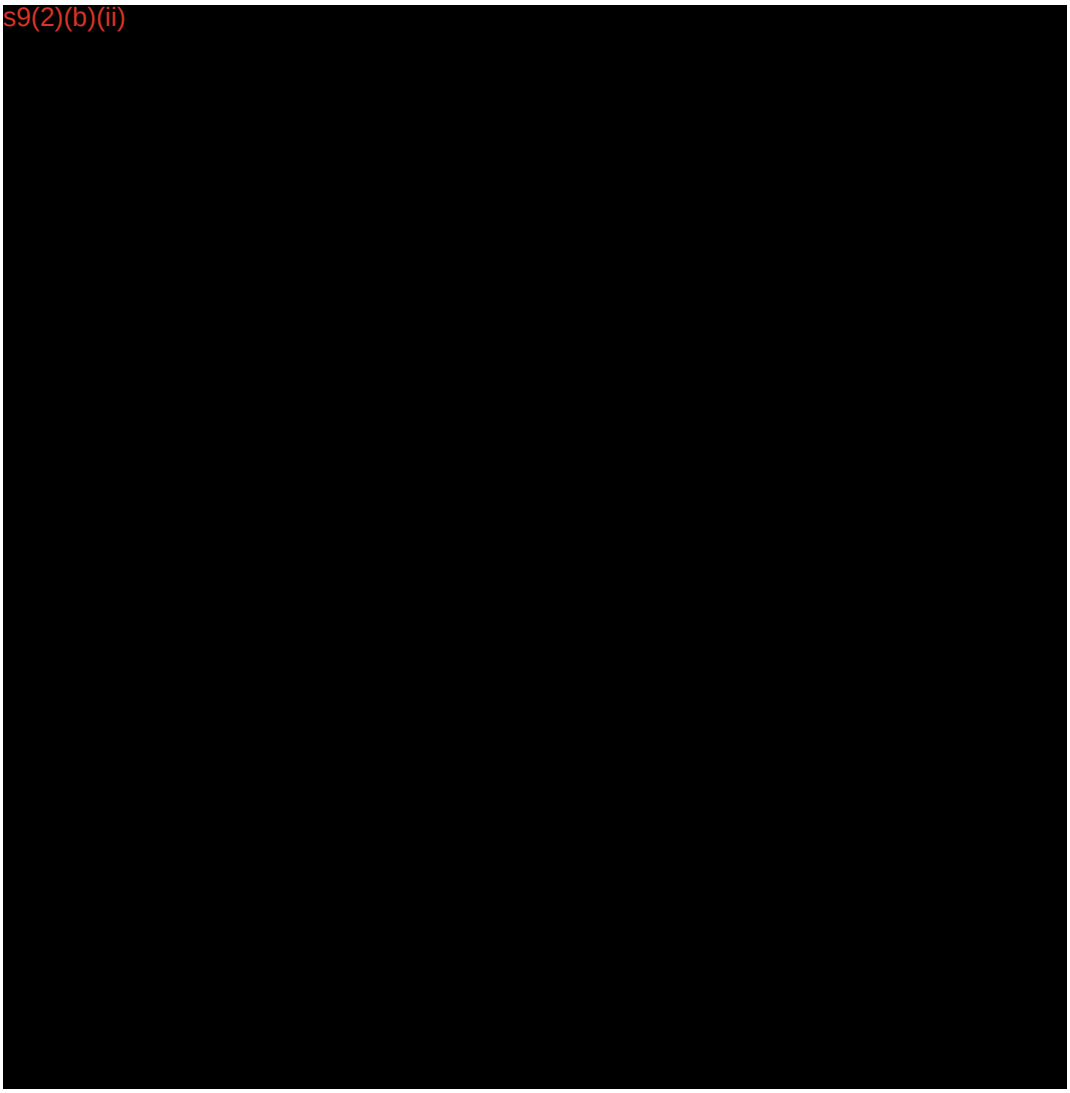
5.6. Figures 1 and 2 show the approximate known locations of planned generation developments that have progressed past the initial enquiry stage, by generation type and developer, respectively. Figure 3 shows the approximate location of load developments by type. The project markers are scaled to reflect the MW capacity of each project.

5.7. Most generation projects with known or approximate **locations are near major population centres or large industrial sites**, with 17.5GW of projects in the North Island and 4.7GW of projects in the South Island. The capacities of individual projects range from 14 to 2,200 MW.

5.8. The **North Island has the highest proportion of planned firming capacity**[1] (25% firming, 75% intermittent). The **South Island has the highest proportion of intermittent capacity** (13% firming, 87% intermittent). Increased firming capacity would improve North Island security of supply, as a significant amount of North Island demand is currently met by intermittent renewables and South Island hydro. Figure 1: Locations of new generation projects, by generation type.

[1] Currently geothermal, BESS and hydro in the investment pipeline.

s9(2)(b)(ii)

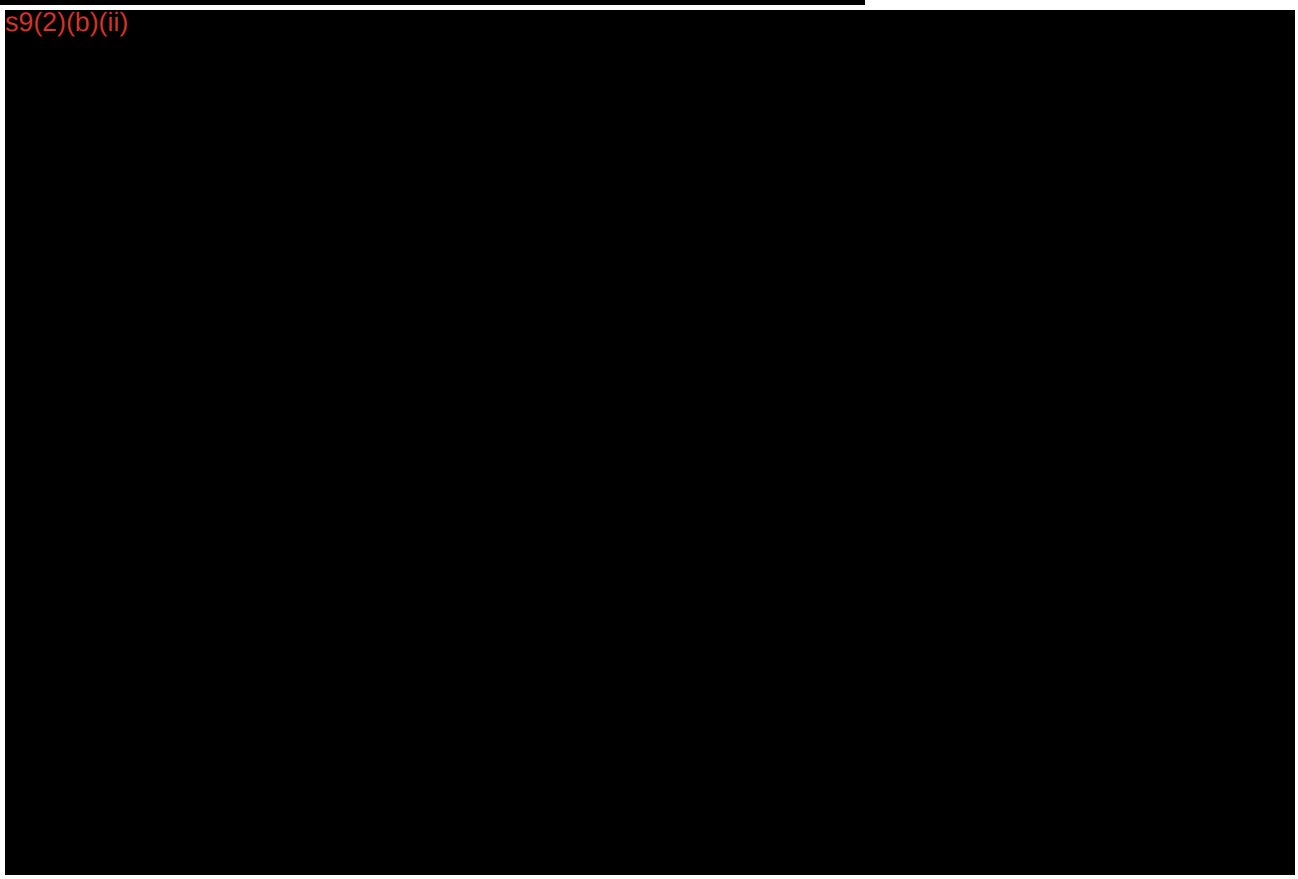


5.9. 79% of new generation by capacity is being developed by independent developers, not gentailers (excluding initial enquiries and offshore wind projects). This could improve the level of competition in the market and help lower prices for consumers. There is **more investment from gentailers in the North Island than the South Island**, where only three projects (less than 10% of South Island projects by capacity) are being developed by gentailers.

s9(2)(b)(ii)

5.10. There are **currently only five load projects in development** s9(2)(b)(ii) Table 1 contains the details of these projects. Better visibility of planned new load (capacity and type) will support more informed generation investment decisions. Transpower and others will be able to use this information to inform possible future scenarios for security of supply planning. We are also increasing our visibility of projected load increases within distribution networks under our changes to Part 6 of the Code.

s9(2)(b)(ii)



[2] Here we look at the stages as set out in Transpower's connection management framework: Our grid connection process | Transpower.

Individual Projects – Monitoring and Reporting

5.11. Figure 4 shows key events in the development process of individual projects. **Most of these projects are solar or battery and progress relatively quickly**. The average expected timeframes are:

(a) **232 days between consent applications being filed and granted** for these projects (excluding Mahinerangi and Kaiwera Downs, see below).

(b) **~3.5 years for commissioning after consent is granted**.

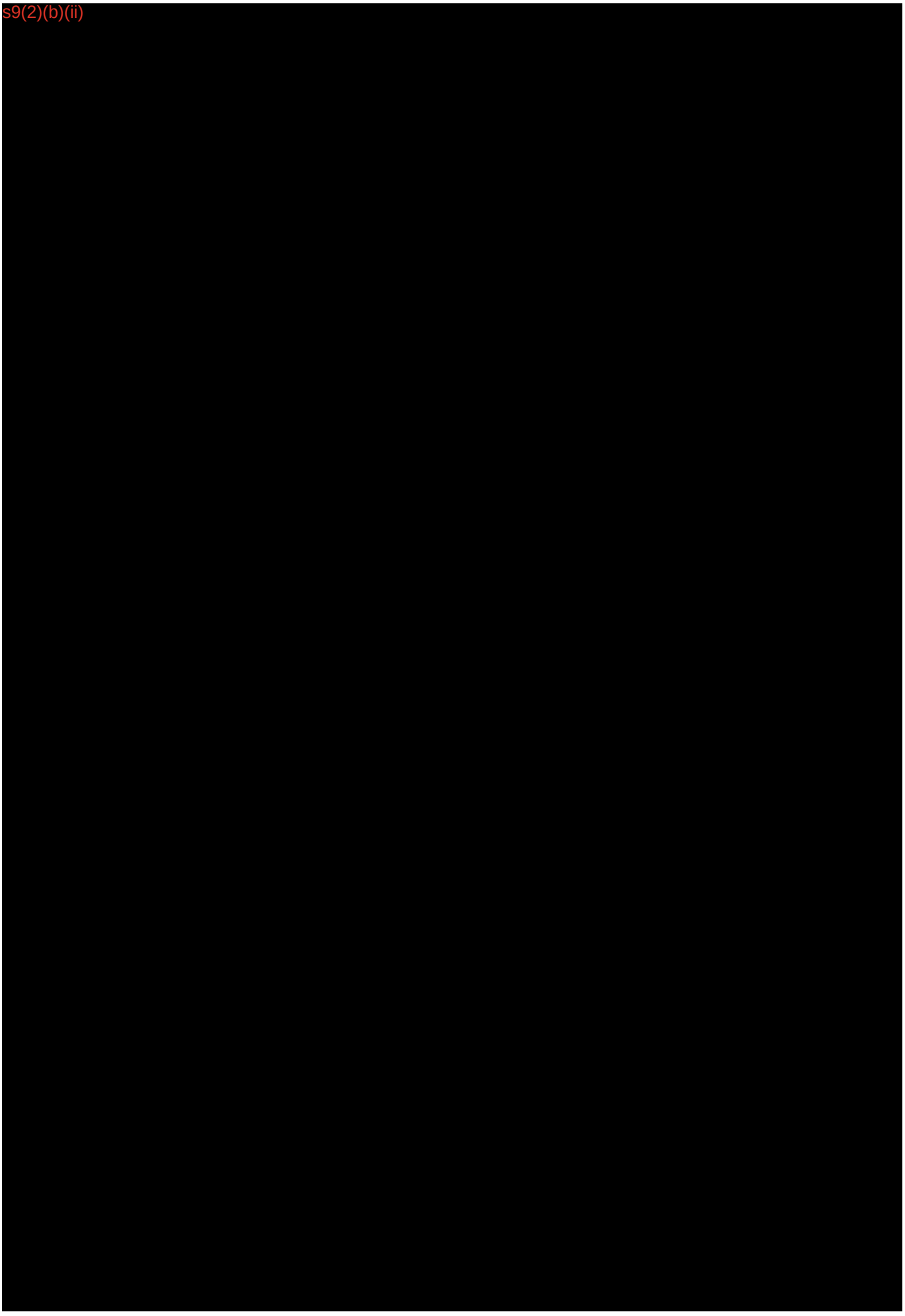
(c) **~19 months from the start of construction to the commissioning** of these projects. This is comparable to ~21 months for Australian solar projects completed between 2016-2020[3].

5.12. Two large wind farm expansions (Mahinerangi Wind Farm Stage 2 and Kaiwera Downs Stage 2) were granted consent in 2009 but experienced significant delays. The original developer of the Kaiwera Downs expansion, Tilt Renewables, stated the project was delayed as they were waiting for market conditions to become more favourable[4]. The project was acquired by Mercury Energy in 2021 and construction began in June 2024. Mahinerangi was split into two stages to "utilise the existing 33kV transmission line…avoiding the requirement for transmission infrastructure..".[5] Mercury have recently sought changes to the resource consent for stage 2 and have put the project forward under the fast-track process.

5.13. Table 2 provides additional details for the projects shown in Figure 4.

[3] https://iceds.anu.edu.au/news-events/news/renewable-projects-are-getting-built-faster-%E2%80%93-there%E2%80%99s-even-more-need-speed
[4] https://www.stuff.co.nz/southland-times/news/107242302/kaiwera-downs-wind-farm-still-on-the-horizon
[5] Mahinerangi Wind Farm - Wind Energy NZ | Mercury

s9(2)(b)(ii)



s9(2)(b)(ii)

There has been a slight decrease in the generation investment pipeline capacity compared to our last update.

5.14. Table 3 shows there are currently **60.3GW of projects in the investment pipeline**, a **decrease of around 4GW** from the last update, due to project cancellations. We continue to work with Transpower and developers to get accurate information. There are still many projects listed that have had no further contact with Transpower since the initial inquiry was made, sometimes up to 4 years ago. Transpower aims to follow up with all developers currently in the connection queue by the end of May. If no response is received, these projects will be listed as “cancelled”.

5.15. The largest capacity change is a decrease of 1,662MW from cancelled solar projects.

Table 3: Pipeline by fuel type and connection stage - as at 30 April 2025[6]

Stage	Battery	Solar	Onshore wind	Offshore wind	Geothermal	Hydro	Other
Initial enquiry (MW)	570	10,318 ↓	7,021 ↓	0	0	0	60 ↓
Concept assessment (MW)	1,725 ↓	7,422 ↓	4,132 ↓	7,710	50 ↓	122 ↓	0
Application (MW)	2,698 ↓	4,248 ↓	2,590 ↓	0	56	56	0
Investigation (MW)	1,695 ↓	4,102 ↑	1,198 ↑	0	190	21 ↑	360
Delivery (MW)	200 ↓	1,688 ↓	311 ↑	0	100	0	0
Connection commissioned (MW)	0 ↓	0 ↓	73 ↑	0	0	0	0
Generation commissioned (MW)	135	146.4	219	0	225	0	0
Net change since 28 February 2025	-1,288	-1,662	-1,554	0	-110	-111	-920

[6] Arrows indicate change since 28 February 2025

6. Energy Competition Task Force work programme update

Initiative	Current stage	Next published milestone	Next update to you
PPAs (1A)	Feedback received on published working paper on 28 February, update paper developed for publication 28 May	Publish Update paper 28 May: • Will not pursue immediate Code change to allocate firming to PPAs – not supported by working paper submissions (incl. from new generators) • Policy direction adjustment to expand scope of level playing field work (1D), and supporting other non-Code initiatives	15 May – briefing (currently with you)
Standardised flex product(1B)	First phase completed – standardised super-peak hedge product launched January 2025	s9(2)(f)(iv) [redacted]	
Virtual disaggregation (1C)	Outline published for feedback – now part of level playing field work	N/A	N/A
Level playing field measures (1D)	Outline of measures and proposal for non-discrimination obligations for gentailers published • Submissions closed 7 May	s9(2)(f)(iv) [redacted]	
Initiatives promoting consumer choice (2A-C)	Feedback received on Code change proposals on 26 March	s9(2)(f)(iv) [redacted]	
Short-term flexibility revenue (2D)	Developing papers for stakeholder feedback; issues and options paper developed for publication 28 May	Publish Industrial demand flexibility issues and options paper, including Roadmap, 28 May s9(2)(f)(iv) [redacted]	15 May – briefing (currently with you)