

Expiry of Urgent Code regarding market making under high stress conditions

Consultation paper

17 March 2025

Executive summary

In September 2024, the Electricity Authority Te Mana Hiko (Authority) implemented an urgent amendment to the Electricity Industry Participation Code (Code). This urgent amendment reduces obligations on regulated market makers during periods of high futures market prices. This change was intended to reduce market makers' financial exposure, preserving liquidity and access to electricity futures contracts for retailers and other purchasers.

The urgent Code amendment increased the bid-ask spread from 3% to 5% on contracts where the price exceeds \$500/MWh. The urgent Code amendment expires on 12 June 2025.

This paper seeks feedback on whether to make the urgent Code amendment permanent and provide some relief to market makers from their obligations in times of market stress; or to let the urgent Code amendment expire and revert to previous settings. It is the Authority's preference to let the urgent Code amendment expire.

The futures market and market making

The futures market plays an important role in New Zealand's electricity system by enabling buyers and sellers to fix their future price of electricity. It is one of the ways that participants can insure themselves against the risk of volatile prices in the spot market; it is a key enabler for retailers in offering fixed prices to consumers.

As well as helping participants manage risk, the futures market fulfils another key role, by producing the forward price curve. The forward price curve gives valuable information to electricity sector participants and others to help make efficient decisions about operations and investment.

Market making is a vital service for the effective functioning of the futures market. Market makers improve access to contracts in the market, which supports liquidity and price discovery. To meet the Authority's goals of a robust forward price curve and available risk management tools, the Authority needs market makers to reliably provide these services. This is especially important during times of market stress, when prices in the spot and futures markets are increasing rapidly.

Market making under high stress conditions

High stress conditions in the futures market increases the costs to market makers, impacts financial viability and risks the withdrawal of their services. Recent examples of high stress conditions include:

- the Pohokura Gas outage in 2018
- high prices and volatility in August 2024.

In response to market stress during August 2024, the Authority considered the urgent Code amendment was in the public interest to address a risk that increases in price and volatility in the futures market may reoccur with little warning, and before the Authority could create a permanent change to the Code. This led us to make the urgent Code amendment.

The Authority's analysis of events around and subsequent to winter 2024 do not support making the urgent Code permanent and indicate that letting the urgent code amendment expire in June 2025 is appropriate. Specifically:

- An increase in spreads favours market makers over other participants in the futures market and makes trading more costly and less efficient, particularly during periods of high prices. A wider spread means participants face higher transaction costs and reduced liquidity, making it harder to trade at the desired price when timely transaction is critical.
- The Authority is already progressing other initiatives that will further strengthen security of supply in the coming winters. These initiatives address the underlying causes of sustained high prices in the spot and futures market including a review of generator contingency arrangements, improving the level of thermal fuel disclosure, and improvements to hedge market arrangements.
- The data shows that market conditions did not impact trading behaviour as much as previously thought. Trade volumes remained stable (excluding the impact of the commercial market maker's absence from trading), even during period of high prices and market stress.

We have observed a more conservative approach to the use of exemptions. With the lessons learned from winter 2024, we would expect market makers to manage their exemptions carefully, thereby providing a stronger buffer against periods of market stress. We also expect market makers will continue to focus on accurate compliance with requirements. Minimising inadvertent errors is important to preserve exemptions for the most stressful periods.

Together, the analysis and the initiatives above improve participants' ability to assess and mitigate energy and capacity risk.

They also place responsibility for managing risk with the parties best placed to manage risk, in contrast with extending the urgent Code amendment (which transfers risks to parties less well placed to manage the risk).

We invite feedback from stakeholders on the Authority's assessment of the case for letting the urgent Code amendment expire. While our assessment supports letting the urgent Code amendment expire, we welcome alternative views from stakeholders and, should the evidence support, remain open to alternatives.

Contents

| | |
|--|-----------|
| Executive summary | 2 |
| 1. What you need to know to make a submission | 6 |
| What this consultation is about | 6 |
| How to make a submission | 6 |
| When to make a submission | 6 |
| 2. Are relief provisions required to maintain market making services during times of market stress? | 7 |
| 3. The futures market allows buyers and sellers to manage price volatility | 7 |
| The futures market reduces risk for both buyers and sellers | 8 |
| The futures market has benefitted from market making since its inception | 9 |
| Market makers have clear obligations that support the futures market | 11 |
| 4. Reliable market making supports the Authority's Statutory Objective | 12 |
| 5. Futures market stress impacts market making | 13 |
| Stress in the futures market is when market making is needed the most | 14 |
| 6. Market stress in 2018 caused the Authority to set obligations on market makers | 15 |
| The Authority introduced more obligations following the Electricity Price Review | 16 |
| The introduction of commercial market making improved transparency and diversity | 16 |
| 7. Market stress in 2024 led to temporary reduced obligations on market makers | 17 |
| The Authority took prompt action to maintain market making services | 18 |
| The Authority also enacted an urgent Code amendment | 19 |
| 8. The Authority has three main policy options | 20 |
| Option 1: Let the urgent Code amendment expire | 20 |
| Option 2: Make the urgent Code Amendment permanent | 21 |
| Option 3: Modify the urgent Code amendment provision | 22 |
| 9. Authority analysis suggests the case for permanent relief at high prices is less strong | 23 |
| Some market outcomes may be negatively impacted by a permanent relief mechanism | 23 |
| The Authority is undertaking further initiatives to address risks for Winter 2025 and Winter 2026 | 24 |
| Market conditions did not impact trading behaviour as much as previously thought | 25 |
| Regulated market maker losses should be considered in the context of their wider portfolio results | 26 |

| | |
|---|-----------|
| The use of exemptions has changed since the stress period | 26 |
| 10. The Authority tested the policy options against policy criteria. | 27 |
| 11. The Authority prefers to let the urgent Code amendment expire | 28 |
| 12. The Authority will continue to assess the role of market making | 28 |
| Appendix A Format for submissions | 30 |
| Appendix B Assessment against Policy Criteria | 31 |

1. What you need to know to make a submission

What this consultation is about

- 1.1. The purpose of this paper is to consult on options for the upcoming expiration of the September 2024 urgent Code amendment on market making in June 2025. It also seeks feedback to inform a wider review of market making settings, to commence in 2025. The Authority is undertaking this consultation to assist with improving the market making framework, to achieve the Authority's Statutory Objective.

How to make a submission

- 1.2. The Authority's preference is to receive submissions in electronic format (Microsoft Word) in the format shown in Appendix A. Submissions in electronic form should be emailed to market.making@ea.govt.nz with "Market Making Consultation Paper" in the subject line.
- 1.3. If you cannot send your submission electronically, please contact the Authority (market.making@ea.govt.nz or 04 460 8860) to discuss alternative arrangements.
- 1.4. 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).
- 1.5. 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.
- 1.6. 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.

When to make a submission

- 1.7. Please deliver your submission by 5pm on Monday 14 April 2025
- 1.8. Authority staff will acknowledge receipt of all submissions electronically. Please contact the Authority market.making@ea.govt.nz or 04 460 8860 if you do not receive electronic acknowledgement of your submission within two business days.

2. Are relief provisions required to maintain market making services during times of market stress?

- 2.1. The Authority requires reliable market making, including in times of stress. This has particular relevance following the August 2024 market stress events; and the subsequent urgent Code amendment that will soon expire.
- 2.2. The August 2024 period saw significant increases in price and volatility as a result of extremely high spot prices caused by gas scarcity, low hydro lake storage and unfavourable conditions for wind generation. This led to the Authority intervening in the futures market. Temporary relief of market making obligations was provided, followed by an urgent Code amendment in September.
- 2.3. The provision of relief from different market obligations and the use of various stress mechanisms (such as circuit breakers) are relatively common in various international markets.¹ The question is whether relief is necessary to assist with the ongoing operation of market making in the New Zealand electricity futures market; and if so, what form of relief best secure the policy objective and promotes the long term interests of consumers?
- 2.4. To address this question, the Authority has considered the effectiveness of the following three options at maintaining market making that is reliable, sustainable and fit for purpose (ie, that improves efficiency and promotes competition)
 - (a) Option 1: Let the urgent Code amendment expire, and revert to the status quo
 - (b) Option 2: Make the current urgent Code amendment permanent
 - (c) Option 3: Modify the urgent Code amendment provision
- 2.5. The balance of this paper sets out:
 - Sections 3-6:** the futures market and market making
 - Section 7:** market stress in 2024 and urgent Code amendment
 - Section 8:** urgent Code amendment expiry and options available
 - Section 9-12:** our assessment and findings

3. The futures market allows buyers and sellers to manage price volatility

- 3.1. Electricity in New Zealand is bought and sold on the wholesale market. The wholesale market is also called the spot market because transactions are settled 'on the spot', every half hour.

¹www.worldexchanges.org/storage/app/media/US_Circuit_Breakers_V20220914%20w_Cover2.pdf

- 3.2. Electricity spot prices change frequently, reflecting the instantaneous level of demand, the cost and availability of generation (including costs relating to fossil fuels as well as renewable sources such as water, wind, and sun) and the nature of the transmission network.
- 3.3. An increase in the share of intermittent generation has meant that electricity spot prices have become more volatile. This increase in volatility leads to more risk for buyers and sellers of electricity.
- 3.4. One of the ways that electricity market participants can manage volatility in the spot market is by purchasing “insurance” on the hedge market.
- 3.5. The New Zealand electricity hedge market is comprised of three separate (but related) markets:
 - (a) The over-the-counter (OTC) market, where participants trade electricity contracts bilaterally with one another. These contracts have varied terms and conditions and are negotiated between the parties.
 - (b) The financial transmission rights (FTR) market, where participants bid to own contracts to manage the risk arising from differences in price between two nodes on the electricity transmission grid.
 - (c) The electricity futures market hosted on the Australian Stock Exchange (ASX), where participants trade standardised contracts. This is the market that this consultation paper is mainly concerned with.

The futures market reduces risk for both buyers and sellers

- 3.6. The New Zealand electricity futures market is an exchange-based market, hosted by the ASX. Market participants trade standardised contracts for difference (CfDs). A CfD is a financial contract where the buyer agrees to pay the seller the difference between the final contract price, and its value when the contract was traded².
- 3.7. Contracts in the electricity futures market create certainty by allowing buyers and sellers to fix the price of an amount of electricity for a specified period. This is important for all participants in the wholesale electricity market – and is particularly important for smaller or new entrant participants, who may be less resilient to price volatility than larger, diversified, and established participants.
- 3.8. Futures contracts also allow electricity businesses without generation to compete, innovate, and deliver value to customers. For example, non-integrated retailers (those that do not own significant generation or storage) can make use of these contracts to lower the risk of offering fixed price contracts to customers.
- 3.9. The futures market also helps to show the collective expectations about future electricity prices. The electricity futures market – especially near-term futures – is influenced by price volatility in the spot market.

² CfD contracts are standardised and relate to prices for baseload electricity at Benmore and Otahuhu. The contracts are based on periods of time (months or quarters) and the final price reflects the simple average of the spot price for all periods in the month or quarter. Each contract is for 0.1MW for the relevant time period.

- 3.10. When individual parties offer to buy or sell a futures contract, the pricing and size of those contracts adds to the market's information and assessment of future prices. The more parties that participate in a futures market, more information is included in the future price curve.
- 3.11. Greater participation in a market leads to better price signals in the forward price curve, which can inform participants' decisions in the short term (such as when to use fuel to generate electricity, or to start or stop using electricity), and in the longer term (investment decisions in for example, generation, batteries and demand response).
- 3.12. The Authority considers the production of a forward price curve and maintaining the ability for participants to manage risk as the central policy objectives in the futures market. The futures market ensures efficient decisions are made within the electricity sector; and this gives New Zealand consumers more efficient prices.
- 3.13. These objectives help the Authority to meet its Statutory Objective to "...promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers".

The futures market has benefitted from market making since its inception

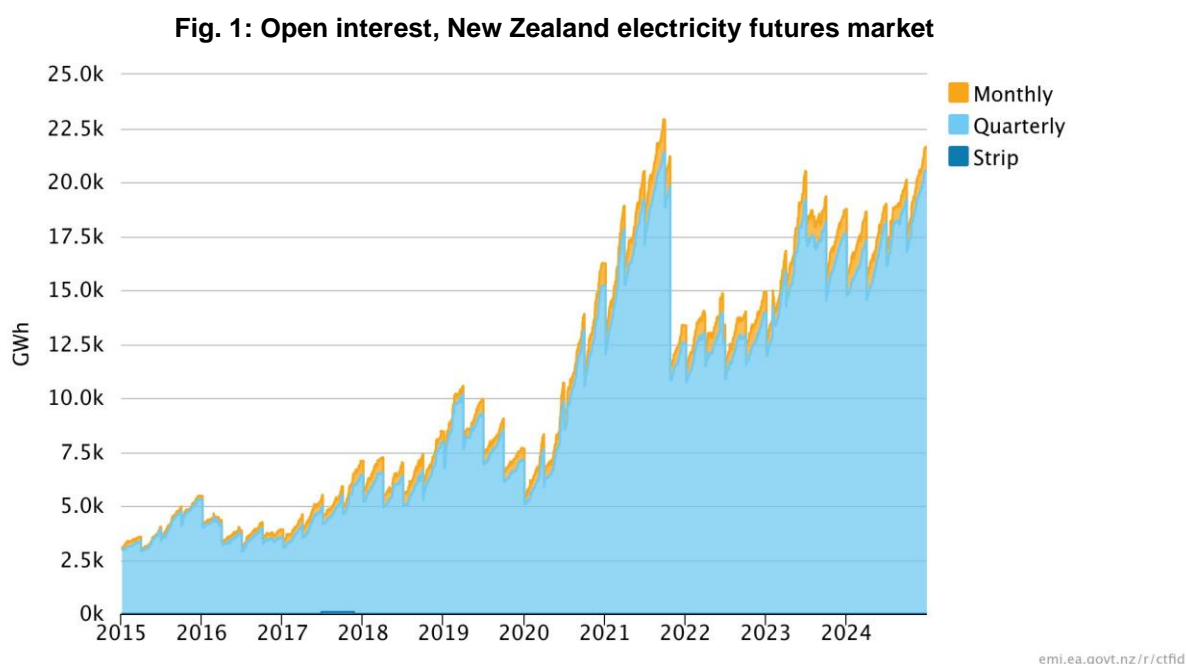
- 3.14. The New Zealand electricity futures market as hosted by the ASX was established following a 2010 Ministerial Review³. This was considered necessary due to New Zealand's electricity market being dominated by four vertically integrated generator-retailers; which meant a successful exchange-traded futures market was unlikely to develop on its own.
- 3.15. The concern was that large generator-retailers might be motivated to withhold supply (through either price or non-price barriers) to their competitors. This would be possible because the large generator-retailers control most generation capacity in New Zealand, and so were the largest group of natural sellers of hedge products to independent retailers.
- 3.16. Market making assists with breaking down these barriers; and market makers have played an important role in the electricity futures market since its inception. At the introduction of the futures market on the ASX, the generator/retailers were encouraged to voluntarily provide market making services to the futures market.
- 3.17. Market makers are specialised parties whose purpose is to improve the market in terms of liquidity, transparency, price discovery, volatility mitigation, and to reduce the spread between bid and ask prices.
- 3.18. A market maker helps create a market for a product by offering to both buy and sell that product. The presence of offers to buy and sell a product help to establish a market price. Market makers can make returns by charging a spread between the

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<http://www.beehive.govt.nz/sites/default/files/Improving%20competition%20and%20restraining%20electricity%20price%20increases.pdf>

buy and sell prices. Without market makers, there would be lower liquidity and less opportunity for other parties to trade when they need to.

- 3.19. In addition, the trading of these contracts helps create a more robust forward price curve that can be used by many parties who need to factor the price of electricity into their decisions.
- 3.20. Market making requirements on the largest generator-retailers mean that:
- (a) market makers are unable to impose price barriers because of their obligation to offer to both buy and sell contracts at a set price differential or spread – if they sought artificially to inflate the price of contracts, traders would be able to sell contracts to the market makers at a similar price – resulting in a loss for the market maker; and
 - (b) market makers are unable to impose non-price barriers because trades take place anonymously and are cleared centrally on the exchange.
- 3.21. Since its inception, market making has contributed (along with other reforms by the Authority⁴) to an improved exchange-traded futures market. This includes increases in measures like liquidity and open interest. When the futures market began, there was a clear direction to see the increase in open interest to 3,000 GWh; open interest has steadily grown over the past ten years to over 20,000 GWh, as shown in Fig. 1 below.



- 3.22. The futures market has also contributed to an increasingly competitive retail market in New Zealand. A reduction or cessation of market making activity during periods of market stress threatens these outcomes.

⁴ For example, via the longstanding *Hedge Market Enhancements* project.

Market makers have clear obligations that support the futures market

- 3.23. When the Authority was established in 2010 it was required, among other obligations, to facilitate or provide for an active market for trading financial hedge contracts for electricity. Over this time, it has established the requirements and level of market making services.
- 3.24. The New Zealand electricity futures market has five market makers currently:
- (a) four market makers regulated under the Code (generally referred to as 'regulated market makers'), which are the major vertically integrated electricity generators and retailers (Contact Energy limited (Contact), Genesis Energy Limited (Genesis), Mercury Energy Limited (Mercury) and Meridian Energy Limited (Meridian)); and
 - (b) one commercial market maker.
- 3.25. The regulated market makers have been required to provide market making services under the Code since 2021.⁵ The commercial market maker is contracted to provide market making services under the same service level parameters as the regulated market makers. This has been operating since September 2022, and is a paid service (ie, by contract with the Authority), with direct financial penalties for non-performance rather than regulated Code processes for the regulated market makers.
- 3.26. Market makers are required to provide services for base load monthly futures and base load quarterly futures,⁶ consistent with the obligations set out below:⁷
- (a) there is a total market making volume of 12 MW per contract listed on the ASX (with 2.4 MW allocated to the commercial provider and 2.4 MW allocated to each of the four regulated providers)
 - (b) the maximum spread between buy (bid) and sell (offer) prices is 3%
 - (c) market makers are expected to provide services, with limited exemptions of five days per rolling 20 trading days
 - (d) there is a voluntary 'refresh' option for market makers. Market makers can split their volume obligation into two parts, with the second part contingent on whether the first part is traded.
- 3.27. A market maker is required to meet the volume and spread obligations for the first six monthly contracts and all quarterly contracts listed on the ASX for 25 minutes of the 30-minute market making window. If the market maker buys or sells in combination the 2.4 MW in a contract, they are deemed to have met their obligations for the remainder of the session.

⁵ Previously these were provided under voluntarily arrangements.

⁶ These products are available at either Otahuhu or Benmore nodes.

⁷ The market is open within the ASX opening hours. Market makers are required to post prices during the 3.30pm to 4.00pm half-hour trading window each trading day.

- 3.28. Market makers may take an exemption from trading any day in advance. In addition, if they fail to meet their obligations they may choose to apply an exemption to the trading session. Market makers are permitted five exemptions per rolling 20 trading days. This arrangement is the same for both regulated and commercial market makers.
- 3.29. Market makers face different consequences for not fulfilling their obligations (in particular, where they exceed five exemptions in the twenty-day period). The regulated market makers are governed by their contract with ASX and the Code. The commercial market maker is governed by their contract with the Authority.
- 3.30. If the regulated market makers fail to meet their obligations without an available exemption three times in a 90-day period, they are then subject to mandatory Code provisions, with reduced exemption levels (two exemptions in a rolling 20 days). Should the market maker further fail to meet obligations, the Authority may allege a breach of the Code.

4. Reliable market making supports the Authority's Statutory Objective

- 4.1. The Authority's main Statutory Objective has three limbs: competition, reliable supply, and efficient operation.
- 4.2. The Authority exercises its functions for the long-term benefit of consumers to:
- (a) facilitate or encourage increased competition in the markets for electricity and electricity-related services
 - (b) encourage industry participants to efficiently develop and operate the electricity system to manage security and reliability
 - (c) increase the efficiency of the electricity industry.
- 4.3. Facilitating or encouraging increased competition in the electricity market benefits consumers over the long term if it helps entry by innovative suppliers and encourages efficient investment.
- 4.4. Market making is critical to meet the objectives for the futures market. Market making of exchange-traded futures was initiated to create an active market for trading financial hedge contracts and remove barriers to greater competition for the benefit of consumers. It supports the success of exchange-traded futures contracts, which in turn supports the production of a robust forward price curve. It also ensures exchange-traded futures are available for New Zealand participants to manage risk.
- 4.5. The Authority requires market making services that are reliable, sustainable, and fit-for-purpose. Fit-for-purpose market making services are services that provide a positive net benefit for consumers, and that improve efficiency and promote competition for the long-term benefit of consumers. The Authority is concerned with how market making services support the futures market under conditions of high stress.

- 4.6. The Authority has previously noted, during the hedge market enhancements project, that the continued success of market making in the New Zealand electricity futures market can be characterised as facing a trade-off between three key factors:
- (a) **The cost of providing the services by market makers.** These costs will be incurred regardless of whether they are publicly visible through a levy or internalised by a regulated market maker, and in either case will be borne by consumers.
 - (b) **The service levels of market making.** These include considerations such as the depth and breadth of contracts covered by the services (what types of contracts and for what period into the future), the volumes required to be offered, and the maximum bid-ask spread.
 - (c) **The reliability of market making services.** This includes arrangements in place around market making service provision during periods of market volatility or market maker financial stress. In many ways, reliability is simply a way to express the cost and benefit trade off that are made by market makers. For example, maintaining service levels under any circumstances will increase the reliability of market making services but will also increase their costs; and vice-versa.
- 4.7. The Authority's primary objective in considering the urgent Code amendment is to consider reliability. To meet the goals of a robust forward price curve and available risk management tools, the Authority needs reliable market making services at all times, particularly in times of high stress.
- 4.8. Reliable market making contributes to stakeholder confidence about price formation on the futures market. A lack of confidence in the market is detrimental to consumers because it may result in a less trading and a less robust forward price curve, resulting in less efficient outcomes in electricity market.

5. Futures market stress impacts market making

- 5.1. In the past, the futures market has become stressed when there is uncertainty about the cost and supply of generation for future periods. This happened during the Pohokura outage in 2018 where there was significant uncertainty about the availability of gas. This uncertainty led to some market makers being unwilling to sell contracts and the widening of price spreads to manage this uncertainty.
- 5.2. The uncertainty about the cost and supply of generation for future periods also occurred in August 2024 when a combination of issues, including the reduction in expected gas field deliveries, and poorer than average hydrological inflows, led to a period of very high prices.
- 5.3. High prices or volatility that come from supply shortages or uncertainty create market stress for participants, including market makers. The financial risk to market makers increases if they hold positions when the underlying price changes adversely.
- 5.4. Conditions of market stress may result in certain behaviours by market makers that run counter to the objectives of the futures market. When under stress, market

makers may take all their remaining exemptions at once to avoid trading. They may even refuse to market make after all their exemptions have been used, due to the financial losses they might sustain from trading out of their existing positions.

- 5.5. If one or two market makers completely withdraw their services, then it places greater pressure on the remaining market makers. This means that in the face of such a withdrawal, it is likely that all remaining market makers would also withdraw (a cascading failure) due to the actual or perceived risks of continuing to market make.
- 5.6. The implications of market making withdrawal are:
 - (a) It can lead to significant disruption in the futures market, with low volumes traded and wide spreads between the buy and sell prices.
 - (b) It can damage both participant and public confidence in the futures market, and wider wholesale market.
 - (c) It can have negative implications for the functioning of the wider wholesale market, and for enabling efficient decisions (ie, about investment), fostering competition, and transparency.
 - (d) The re-entry of market makers might be slow, with either regulated market makers having to be compelled to enter in a coordinated fashion, or commercial market makers being reticent to re-enter. There would be significant barriers to re-entry both through Code processes and contractual processes with the commercial market maker.
- 5.7. As such, severe disruption or withdrawal of market making can lead to:
 - (a) The forward price curve being unreliable for efficient decision making
 - (b) Difficulties purchasing hedge contracts, especially for smaller and non-integrated retailers, that use these contracts to help them manage their risk.
- 5.8. The two outcomes above would run counter to the objectives of market making and the futures market, and to the Authority's Statutory Objective of promoting the long-term interests of consumers.

Stress in the futures market is when market making is needed the most

- 5.9. High stress conditions are when market making is needed the most. The importance of the futures market in setting a forward price curve was illustrated during the rapid increase in prices seen in July and August 2024.
- 5.10. At the time, the high prices shown by the forward price curve contributed to significant decisions to mitigate those high prices, including the demand response option by Meridian at New Zealand Aluminium Smelters, and the transfer of natural gas supplies from Methanex to the electricity market.
- 5.11. This would have also contributed to decisions about the following year, with reference to expected spot prices in 2025. For example, industrials may have considered that hedge prices could be too high to keep their operations profitable, or electricity producers would have taken action to contract for thermal fuel.

- 5.12. These examples demonstrate that at times of stress, market making can have the greatest value to participants, but may create the most risk to market makers. If market stress leads to the withdrawal of market making services, the overall policy objectives of market making are compromised.
- 5.13. The Authority has dealt with the two main examples of futures market stress quite differently, as described below.

6. Market stress in 2018 caused the Authority to set obligations on market makers

- 6.1. In 2018, there was a sustained period of elevated spot electricity prices after an unplanned outage at the Pohokura gas facility. Uncertainty in the futures market ultimately led to the withdrawal of voluntary market making services. There was a widening of bid-ask spreads for ASX contracts, and complaints about a lack of contracts available to trade.
- 6.2. Following the events of October 2018, voluntary market making activities took significant time to restart. This prompted widespread stakeholder interest in reforming market making arrangements. The Authority determined changes were needed, to address two key issues:
 - (a) A lack of confidence by some stakeholders in both market making and the market for exchange-traded contracts, and a need for more diversity among market makers, and stronger incentives for market makers to provide services.
 - (b) Making arrangements needed to be more 'service-oriented' so consumers and beneficiaries of market making services could signal either a desire for service level change (including improved reliability) or their willingness to make the necessary trade-offs (such as meeting the costs of improved reliability).
- 6.3. In late 2019, the Authority met with market makers to discuss wholesale / hedge market performance. It was resolved that voluntary market making arrangements be enhanced by:
 - (a) reducing the maximum bid-ask spread from 5% to 3%
 - (b) increasing the volume of all market-made contracts to 3MW
 - (c) providing the Authority certain data to improve transparency.

The Authority introduced more obligations following the Electricity Price Review

- 6.4. In addition to the above actions, market making was also covered by the 2018-2019 independent Electricity Price Review.⁸ Regarding the wholesale market, the Review was primarily concerned with the contract market, and how the voluntary market making system had faltered when the spot market was under stress.
- 6.5. The Government established new workstreams to action many of the Review's recommendations. One of these recommendations was to "Introduce mandatory market making obligations, unless the electricity sector develops an effective incentive-based scheme".
- 6.6. In response, the Authority urgently amended the Code in 2020 to require the existing voluntary market makers to compulsorily provide market making services if their voluntary performance did not meet standards set by the Authority.
- 6.7. In 2021, the Authority made the temporary regulatory backstop permanent. In 2022, the Authority formalised market making requirements in the Code for the four large vertically integrated generator retailer firms (Contact, Genesis, Mercury and Meridian) and procured a commercial market making service.
- 6.8. The Authority's interventions through 2018 to 2022 saw market maker performance improve, with an aggregate increase of the number of days where market makers provided services, smaller spreads between the best bid and the best offer price for futures contracts, increased trading of futures contracts and increases in the open interest in futures contracts.

The introduction of commercial market making improved transparency and diversity

- 6.9. A commercial market maker in 2022 was added to help strengthen and support the operation of the hedge market; enhancing efficiency and improving trust and confidence in forward prices of electricity in the wholesale market.
- 6.10. The Authority consulted on the commercial scheme, which allowed participants to give feedback on their desired service-levels in terms of volume, spread and the price of market making. This helped the Authority determine a level of market making services that was for the long-term benefit of consumers, it struck an appropriate balance between the costs and benefits of the services.
- 6.11. Its introduction also provided for more transparency. Previously the price of market making was hidden, with the costs of market making for generator retailer market makers not disclosed. The establishment of the commercial scheme made it clear

⁸ This Review investigated whether the electricity market was delivering a fair and equitable price to consumers and considered improvements to future-proof the sector and its governance structures. The full review is linked here: <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-consultations-and-reviews/electricity-price>

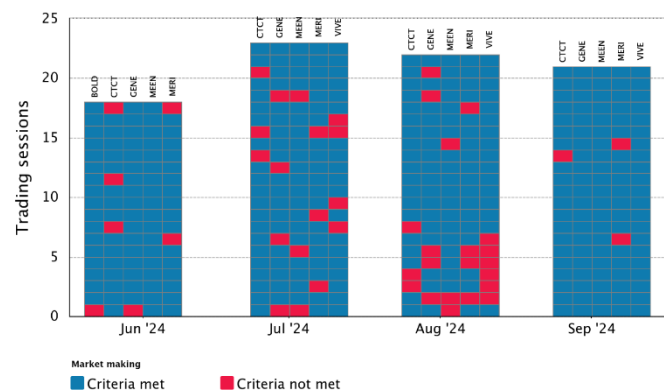
that there is a cost to market making, and over time, the tendering of a contract will help ensure efficient pricing for commercial market making.

- 6.12. It also meant the possibility of introducing a greater diversity in market makers (firms who are not currently physical market participants as defined in the Code), such as banks, trading houses or other financial service providers. To date, commercial market makers have not been physical participants.
- 6.13. The addition of a commercial market maker has introduced more information to the forward price curve, contributing to greater reliability and greater confidence in the forward price curve.
- 6.14. Commercial market makers may also address the concern from some participants that market makers with a physical presence in the market are biased in the prices they offer. 20% of the total market making volume obligation is covered by a commercial provider, with the remaining 80% provided by the four regulated market makers.

7. Market stress in 2024 led to temporary reduced obligations on market makers

- 7.1. In July and August 2024, spot prices increased to extremely high levels due to a combination of gas scarcity, low hydro lake storage, and calm conditions that reduced wind generation.
- 7.2. The high spot market prices were reflected in the electricity futures market, leading to increased prices and volatility – particularly for the shorter duration products. All market makers had periods where they reached (or exceeded) their allowed exemption levels.
- 7.3. The situation in July and August was challenging for many market makers as evidenced by the graph below, which depicts from June to September 2024 whether market makers had met criteria.

Fig. 2: Market maker performance from June to September 2024 – ASX⁹



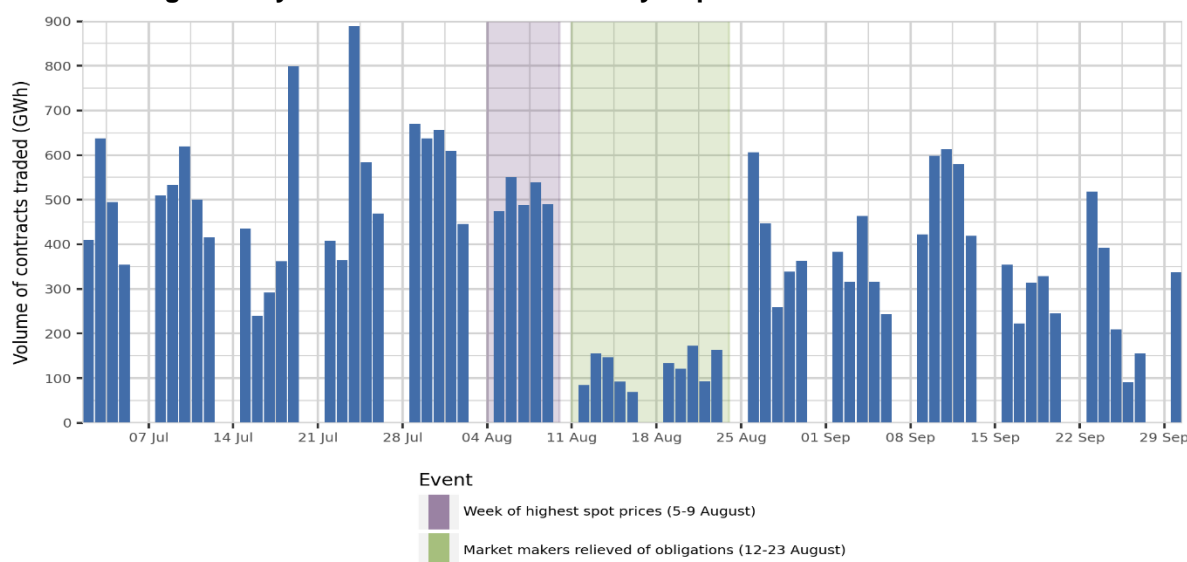
⁹ The market maker codes are: CTCT (Contact); GENE (Genesis); MEEN (Mercury); MERI (Meridian); and VIVE (VivCourt).

- 7.4. Fig. 2 shows that the use of exemptions was significant over July and August. At the time some regulated market makers informed the Authority that they were making significant losses providing market making services. The Authority was concerned that market making settings would not be sustainable in a context where the financial losses from market making were likely to exceed any fines that market makers may have received from breaching the Code.¹⁰
- 7.5. The Authority assessed that the continuation of market conditions with very high and volatile price levels, and reduced flexibility for market makers (exemptions being exhausted in some cases), had the potential to create a cascade failure of the futures market.
- 7.6. If one or two market makers withdrew their services, others may have followed causing full withdrawal of market making services and reducing the functioning of the futures market. In particular, the Authority wished to avoid a repeat of the 2019 post-Pohokura incident, where market making service levels were reduced for many months.

The Authority took prompt action to maintain market making services

- 7.7. On 12 August, the Authority issued a notice advising that it would exercise its discretionary powers not to undertake enforcement action, subject to market makers continuing to provide services. These services needed to be within spreads of 15% (increased from 3%) and volume requirements of at least 12 lots (a reduction from 24 lots). The impact of this is shown below, in Fig. 3.

Fig. 3: Daily volume traded between July-September 2024 – ASX



Source: ASX

¹⁰ The maximum penalty under the Code is: “an amount not exceeding \$2 million and a further amount not exceeding \$10,000 for every day or part of a day during which the breach continues”.

- 7.8. The Authority noted that the relief from enforcement was temporary and would expire on 23 August 2024. The temporary relief was withdrawn in stages:
- (a) The first stage withdrawal was on 21 August where spreads tightened to 8% and volumes increased to 18 lots.
 - (b) The second stage of the withdrawal was on 26 August, when market maker conditions returned to the Code settings: a 3% spread and a total volume of 24 lots.
- 7.9. The Authority's use of discretion in early August slowed trading, and market makers stopped using exemptions. Market makers performance returned to more regular levels of compliance as spot and futures prices reduced. Spot prices eased due to:
- (a) **Industrial demand response.** Between June and early August 2024 some large industrial electricity users reduced or paused production to avoid exposure to high wholesale electricity prices.
 - (b) **Higher temperatures.** Spring temperatures soared; and warm temperatures caused a drop in demand.
 - (c) **Gas supply increased.** In mid-August, Contact and Genesis negotiated a deal to buy natural gas from Methanex, the country's largest natural gas user.
 - (d) **Wind generation increased.** During the period of highest prices in early August, wind generation was low but then picked up significantly. In late August, New Zealand experienced the highest proportion of wind generation on record, at over 15% of total generation.

The Authority also enacted an urgent Code amendment

- 7.10. During this period the Authority determined that there remained a medium-term risk of volatility due to fuel scarcity or unplanned outages; and that there was ongoing uncertainty in the outlook for the balance of supply and demand. The Authority considered it prudent to take a Code-based approach to provide the market with greater certainty about how it would respond should a similar situation arise in the near-term.
- 7.11. The Authority informed market participants on 15 August of its intention to put in place an urgent Code amendment, to assist with continuity of market making services during future periods of high stress. The urgent Code amendment¹¹ was enacted on 12 September, and had three main characteristics:
- (a) **The use of a price-based trigger.** This price-based test was chosen as it was simple, transparent, and based upon objective data. The threshold for the trigger was \$500/MWh, as indicated by the ASX futures settlement price in each product.
 - (b) **An increased bid-ask spread** (from 3% to 5%) for those contracts where the previous days' settlement price was at or greater than \$500/MWh .

¹¹ 13.236LA, under 'subpart 5B-Hedge market arrangements', which came into force on September 9, 2024.

- (c) **Volume requirements were unchanged.** Reducing the volume requirement on market makers was not considered appropriate as it could have prolonged price changes in the futures market, increasing volatility, stress, and eroding market confidence.
- 7.12. The urgent Code amendment will expire on 12 June 2025. The Authority is considering the future status of this mechanism in this consultation.

8. The Authority has three main policy options

- 8.1. The Authority is seeking increased reliability of market making, including in times of stress. In considering how to best achieve the objectives of the futures market and the preservation of market making under various conditions, the Authority has identified three main options:
- (a) Option 1: Let the urgent Code amendment expire, and revert to the status quo
 - (b) Option 2: Make the current urgent Code amendment permanent
 - (c) Option 3: Modify the urgent Code amendment provision
- 8.2. The Authority has assessed these options based upon:
- (a) The objectives of the futures market and market making
 - (b) Observed behaviour – and new data obtained – since the period of market stress in August 2024
 - (c) Qualitative assessment against relevant policy criteria
 - (d) Other Authority initiatives for Winter 2025 and 2026
- 8.3. Options 1 and 2 are described in more detail below, with the benefits and drawbacks listed, and assessed against the various criteria in a summary table. Option 3 is discussed in paragraphs 9.12 to 9.14. On balance, the Authority decided that the options to modify the urgent Code amendment provision had significant drawbacks relative to Option 1 and Option 2. We welcome stakeholder feedback on our position.

Option 1: Let the urgent Code amendment expire

- 8.4. This option would involve letting the current urgent Code Amendment expire on 12 June 2025, with no other changes to market making settings. The expiry of the urgent Code amendment would mean that there was no Codified or other explicit relief for market makers at times of market stress.
- 8.5. The Authority's expectation is that compliance with market making obligations would rely on either pre-existing Code obligations for the regulated parties or contractual provisions for the commercial market maker. If the urgent Code were to expire, it would be the Authority's expectation that the exemptions available, 5 exemptions in a rolling 20-day window, and the additional exemptions taken before facing mandatory provision (2 in a 90-day window), are sufficient for market makers to manage their risk appropriately.

- 8.6. In the case of regulated market makers, the expectation is that non-compliance with obligations in the Code would initially see regulated market makers face the mandatory code provisions. Further non-compliance with those mandatory provisions would result in the Authority alleging a Code breach, which would be tested with the Rulings Panel. At that point, it would be the decision of the Rulings Panel for any sanctions available.

Option 2: Make the urgent Code Amendment permanent

- 8.7. The urgent Code amendment was developed to stabilise the futures market at times of high stress, by providing targeted relief for market makers to lower their risk profile at these times. The continued presence of market makers aids the functioning of the electricity futures market.
- 8.8. The urgent Code Amendment involves the use of a price-based trigger of \$500/MWh as indicated by the ASX futures settlement price in each product. This price-based test was chosen as it was simple, transparent, and based upon objective data. The threshold for the trigger was \$500/MWh, as indicated by the ASX futures settlement price in each product.¹²
- 8.9. It seeks to mitigate market risks through increasing the bid-ask spread from 3% to 5%. A simple and predictable measure was favoured, that minimised disruption to trading volumes (there are no changes to volume requirements in the relief mechanism) and would be a relatively easy change for market makers to make in managing their processes.
- 8.10. The rationale for the choice of the urgent Code amendment was as follows:
- (a) The spread was set at 5% as the period of trading when spreads were 15% and 8% saw significant decreases in trading volumes (in excess of the percentage reduction in market maker volume).
 - (b) The change in spreads was limited to only high-priced futures contracts, thus specifically targeting those contracts with the highest prices and avoiding impact to lower priced contracts.
 - (c) The chosen price level of \$500/MWh for a settlement price reflects the Authority's view of the Short Run Marginal Cost of running the most expensive thermal generation, Whirinaki (\$545/MWh). A futures price in excess of \$500/MWh indicates the market expects Whirinaki to run for the duration of the contract, which represents significant stress to the spot market.
 - (d) The price of \$500/MWh also represents the period of time of peak stress in the futures market, as marked by maximum use of exemptions by market makers.

¹² At the time the Authority considered recent market conditions when specifying the test for adjustment. Futures prices from May to August 2024 indicated that at least one futures contract reached \$500/MWh during this period. The suggested threshold also reflected the short-term marginal cost of operating high-cost generation plants such as Whirinaki (SRMC estimated as \$545/MWh).

- 8.11. If Option 2 were to be taken, the Authority would need to go through a standard Code amendment process. This would involve the release of a Decision paper and consultation on the draft Code itself.

Option 3: Modify the urgent Code amendment provision

- 8.12. The Authority also initially considered further alternatives to providing relief to market makers in periods of stress. These included:
- (a) creating variations on the urgent Code amendment relief provision to make the trigger value higher in \$/MWh, or making it more difficult to trigger (an increased duration of high prices before the trigger was met)
 - (b) changes to the price trigger to reflect volatility
 - (c) increases to the number of exemptions available to market makers
 - (d) building relief to market makers into the Code with discretion to the Authority to trigger it as required.
- 8.13. The Authority's preliminary analysis discounted these options for the following reasons:
- (a) A more rigorous trigger value, if relief is required, would run the risk that the relief would be granted too late. Also, the trigger value was based on the Authority's assessment of actual costs in the market. Deviation from that level would have no strong justification.
 - (b) A volatility trigger was considered based on day-to-day changes in settlement prices. There was a greater risk that volatility triggers would result in false positives, such as increases in price at low price levels. Mitigating low price flags, would require introduction of additional factors while the Authority's view is that it was the absolute price level that caused risks of financial losses to market makers.
 - (c) An increase of the number of exemptions to market makers would potentially lower the number of days markets were made in aggregate in all trading days, high stress or low stress. This was regarded as not a precise form of relief.
 - (d) Authority discretion to trigger relief was discounted as it would be based on a subjective measure. The Authority received strong feedback that subjective measures are not favoured by the market. The Authority is also aware that a subjective decision right would open the Authority up to lobbying, which is an unacceptable outcome.
- 8.14. As a result of this preliminary analysis, these options were not considered in further detail.

9. Authority analysis suggests the case for permanent relief at high prices is less strong

- 9.1. With the expiry of the urgent Code amendment, the settings will revert to the previous Code provisions with no additional relief mechanism to market makers beyond exemptions to help manage market issues.
- 9.2. The absence of an additional Code-based mechanism (beyond exemptions) may be viewed as a risk to some participants. The Authority has undertaken recent analysis which shows that reduced obligations on market makers is correlated with poorer market outcomes. In particular, the changes during August 2024 that reduced liquidity made it harder for participants that held positions to trade out of them increasing the risk of financial losses. The outcomes of this analysis are set out below.

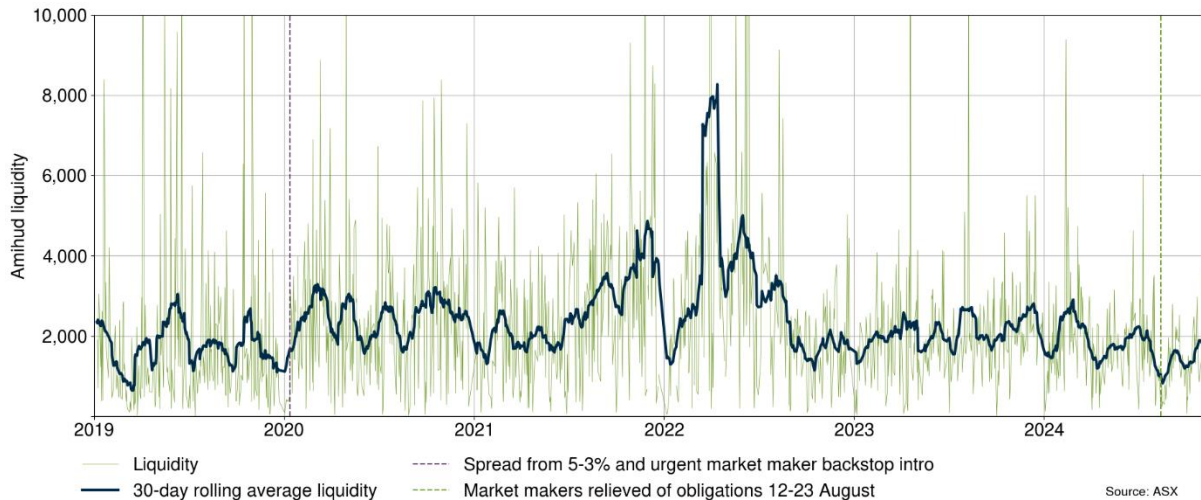
Some market outcomes may be negatively impacted by a permanent relief mechanism

- 9.3. To assess whether the objectives of the futures market are being met, the Authority can measure market outcomes that are focussed on efficiency. Price efficiency can be thought of in terms of how much information is contained in the price. More trading, and more participation in a market will lead to greater price efficiency, with a more liquid market contributing to this.
- 9.4. Liquidity in financial markets means that:
 - (a) it is easy to transact in either direction
 - (b) volume is available
 - (c) a small transaction should not move the price much
 - (d) the transaction costs are low.
- 9.5. In monitoring liquidity, the Authority generally measures:
 - (a) Trade volumes: more trading means more people confident they can trade in and out of positions
 - (b) Bid-ask spreads: the smaller the spread, the lower the transaction cost of trading, the more confident traders can be that the price is efficient
 - (c) Market depth: how much volume is available to buy.
- 9.6. The Authority has constraints in assessing the possible impact of Option 1 and Option 2 against market metrics. At this point, the urgent Code amendment has not been triggered. This means that we do not have any available market data on the impact that this mechanism may have on the market.
- 9.7. In the absence of data on the operation of the urgent Code amendment, the Authority has analysed how different market measures have been impacted by specific events and policy interventions including:
 - (a) Broad changes to the market making requirements in 2020
 - (b) The introduction of the commercial market making scheme, and the new ordering split

(c) The period of temporary relief in August 2024.

9.8. Fig. 4 below shows how the liquidity has changed over the past 5 years.

Fig. 4: Liquidity measure 2019 to 2024¹³



- 9.9. Higher levels of liquidity on the vertical axis signal better market outcomes. Observations from the above graph show liquidity increasing as the spread reduced from 5% to 3% and market maker volumes increased from 1 MW to 3MW in 2020.
- 9.10. The liquidity increased up until late 2022, when it fell away again. Through 2023 and 2024, liquidity remained relatively consistent, but there was a fall in liquidity at the point of the market maker relief in August 2024.
- 9.11. This data suggests there may be an inverse impact on liquidity if the urgent Code amendment provisions are active and spreads increase from 3% to 5%. This will be limited to those contracts affected, but there is likely to be an adverse impact to market outcomes.

The Authority is undertaking further initiatives to address risks for Winter 2025 and Winter 2026

- 9.12. The Authority is undertaking other work to address security of supply in the coming winters. This work will help address the underlying causes of sustained high prices in the spot and futures market.
- 9.13. Measures underway include work on both energy and capacity risk management to ensure the electricity system is well prepared for the peak demand periods of winter.

¹³ Liquidity is measured by the inverse of Amihud illiquidity which is the ratio of A (the absolute log of future price divided by the lagged future price) to B (the trading volume)

- (a) Energy risk management in the near term is focussed on improving generator contingency arrangements and the collection and publication of market resource information. For 2026, work is starting on support for the System Operator contingent storage review, and ensuring an update of the security of supply standards is undertaken.
 - (b) Capacity risk management for Winter 2025 is focused on strengthening the availability of standardised flexibility products, improving market signals to commit resources with a review of scarcity pricing, improving outage coordination and the System Operator's review of low residuals.
 - (c) Capacity risk management for Winter 2026 is focused on improving settings for industrial consumer demand response, reviewing of peak management ancillary service and the system security assumptions
- 9.14. Beyond these Authority initiatives, the physical security of supply situation for 2025 and 2026 is improved relative to 2024 with new generation commissioning, battery storage under construction, and active steps by generators to improve fuel and plant availability.
- 9.15. Concerns about security of supply often show up in high spot and futures market prices. Addressing the underlying causes will lessen the need to relief for market makers (the symptoms of high prices).
- 9.16. The Authority also notes the role of the ASX market (in providing risk management contracts and the forward curve) does have substitutes. The recent Authority work on developing the Hedge Disclosure Obligations provides an alternative source of information to produce a forward curve. Also, there are other alternatives for risk management products, such as the OTC market. The OTC market was previously observed as operating as a substitution during the Pohokura interruption to the futures market, as well as providing an alternative for market participants who lost access to the ASX market when their clearing participant access was lost.
- 9.17. Both the alternative forward curve and the alternative risk management options through the OTC market are not perfect substitutes for the services provided by the ASX market but do provide an alternative.

Market conditions did not impact trading behaviour as much as previously thought

- 9.18. Even though spot and futures prices were at their peak and the commercial market maker did not provide services during that week, the week of 4 August to 8 August saw regular levels of trading. There was no discernible reduction in trade volumes (excluding the impact of the commercial market maker's absence from trading) compared to prior weeks that had lower prices and stress. Fig. 3 shows the daily volume traded across the three-month period.
- 9.19. Exemption use by the regulated market makers was slightly raised (with six exemptions taken by all market makers across the five days), likely a fair reflection of performance and risk in the highest priced period that the futures market experienced to date. Although we note that it may also reflect a lack of exemptions remaining to be used. Overall, market makers continued to actively trade in spite of high stressed conditions.

Regulated market maker losses should be considered in the context of their wider portfolio results

- 9.20. In August, some regulated market makers had noted that they were experiencing significant financial stress while market making.
- 9.21. At the time, the Authority considered that the Code penalty relative to the sustained losses claimed was an important factor in providing relief to market makers, with the aim of retaining market making services.
- 9.22. Subsequently, the Authority obtained data on market makers' financial situations during the highest-stress period during August and September. This data showed that while some market makers experienced periods of high losses, they continued to trade – even beyond the peak of the futures market prices and past the period of reduced obligations.¹⁴
- 9.23. The Authority had a focus on reducing the risk that trading losses made by market makers would result in them withdrawing market making services. However, our current view is informed by broader consideration of the overall position of market makers' portfolios. We also observed that market makers continued to provide services even at times of stress suggesting strong motivation to comply with Code obligations. These considerations reduce the need to provide further relief.

The use of exemptions has changed since the stress period

- 9.24. Another argument against making the urgent Code amendment permanent is around the use of exemptions. A key consideration for the Authority in providing enforcement discretion and the urgent Code amendment in August and September was the number of exemptions that had been used by market makers.
- 9.25. Just before the enforcement discretion was granted, three market makers had no exemptions remaining, one had one, and one had two. The Authority considered at the time that there was a strong chance that market makers may exceed their allowed exemptions and exit from providing services. At the time this was considered good grounds for an intervention.
- 9.26. Following these events, the Authority has observed a change in behaviour by market makers regarding their exemption use. In the six-month period from January to June 2024, the five market makers collectively used an average of 11 exemptions per month. For the period September 2024 to end of February 2025, market makers collectively used an average of 9 exemptions per month.
- 9.27. It appears that some market makers have become more focussed on retaining exemptions following the high stress period of July and August. This more conservative use is consistent with a higher value being attributed to retaining exemptions for use in a stressed period.

¹⁴The Authority has been advised of the market making profits and losses for the majority of Regulated market makers, however this is commercially confidential and is unable to be shared.

- 9.28. With the lessons learned from winter 2024, we would expect market makers to manage their exemptions carefully, thereby providing a stronger buffer against periods of market stress. We also expect market makers will continue to focus on accurate compliance with requirements. Minimising inadvertent errors is important to preserve exemptions for the most stressful periods. The Authority has considered both options against policy criteria

10. The Authority tested the policy options against policy criteria.

- 10.1. These are listed below, with ratings against both Option 1 and Option 2. The table below lists the ratings against each of the measures and totals them. The rating system has been devised from Strong=1; Neutral=0; and Weak=-1. Mixed ratings are assigned a halfway point (ie, 'Neutral/Strong'=0.5).
- 10.2. The total rating for the options is:
- (a) Option 1 (revert to status quo) – Neutral / Strong
 - (b) Option 2 (make urgent Code amendment permanent) – Neutral.
- 10.3. Option 1 is the preferred, and default option given it will revert to the current state with no further action. Consequently, Option 2 needs to be a clearly stronger solution for it to be the Authority's preference.

Table 1: Qualitative assessment of options against policy criteria

| Criteria | Option 1 (revert to status quo) | Option 2 (make urgent Code amendment permanent) |
|--------------------------------|---------------------------------|---|
| Narrower mean bid-ask spread | Neutral / Strong | Neutral / Weak |
| High liquidity | Neutral | Neutral |
| Provides regulatory certainty | Neutral | Weak |
| Simple to understand | Strong | Strong |
| Ease of implementation | Strong | Strong |
| Durable and effective | Neutral | Neutral |
| Minimum intervention necessary | Neutral | Neutral/Weak |

| Criteria | Option 1 (revert to status quo) | Option 2 (make urgent Code amendment permanent) |
|---|---------------------------------|---|
| Equitable treatment of Market Makers and other participants | Strong | Neutral/Weak |
| Supports market confidence | Neutral | Neutral / Strong |
| Total rating | Neutral / Strong | Neutral |

11. The Authority prefers to let the urgent Code amendment expire

- 11.1. At the time of implementing the urgent Code amendment, the Authority considered there to be a real risk that the high market stress conditions could reoccur, with little warning, in the short to medium term.
- 11.2. Given it was thought that these conditions might have arisen before consultation on a normal Code change process; and that such circumstances could have placed significant stress on market makers, the urgent Code amendment was put in place.
- 11.3. Since then, the Authority has conducted analysis of that period, market behaviour, the regulatory frameworks, and market making over time. The Authority has observed that:
 - (a) relief for market making services – even when targeted – can have negative impacts on the market in general
 - (b) market makers may not require the level of relief they received in August 2024
 - (c) the full use of the pre-existing Code provisions is sufficient.
- 11.4. From this, the Authority does not consider that there is sufficient evidence to propose making the urgent Code amendment permanent. This is based upon the benefits and drawbacks of the option, the broad intervention criteria, new information obtained since the events of August-September 2024, and the regulatory and market developments since Winter 2024.
- 11.5. On balance, we consider that market making settings do not require additional permanent relief provisions and that the pre-existing provisions in the Code are sufficient to ensure compliance. However, we remain open to alternatives should submissions present new information and evidence.

12. The Authority will continue to assess the role of market making

- 12.1. This consultation paper confirms the importance of market making to the performance of the New Zealand electricity futures market. The performance of the

futures market will be important to the overall health of the electricity system as New Zealand transitions to a renewable dominated system.

- 12.2. A healthy electricity system will lead to more efficient and competitive electricity prices and better outcomes for consumers. Therefore, in addition to this specific consultation on the current urgent Code settings, a further broader review of the market making arrangements is sensible.
- 12.3. Following the conclusion of this consultation, the Authority will prepare a broader review of the role that market making plays in the overall New Zealand electricity market. We anticipate releasing this in the second half of 2025.
- 12.4. There is good reason for a broader review: there have been significant events in the past three years since the introduction of a commercial market maker. These include the high spot and futures prices in winter 2024, and the loss of access to the ASX futures market through the withdrawal of clearing participants in 2022 and 2023. The Authority also notes that the potential for losses to market makers, regulated and commercial, has increased with higher prices and higher volatility, and the current and future balance between cost and service levels and reliability should be considered.
- 12.5. The scope and shape of the review is yet to be determined. However, it is likely that the Authority will include in the review an assessment of how commercial market making contributes to the futures market's performance.
- 12.6. Any decision to change the share of commercial market making will be made deliberately and based on evidence that changes to commercial market making is in the long-term benefit of consumers.
- 12.7. The review will also consider the wider provision of market making services. For example, the current market makers provide in aggregate 12 MW of volume (over a refresh option) for monthly and quarterly contracts at a spread of 3% between the bid and ask prices. Market makers are provided five exemptions from providing services in a rolling 20 days. These settings are likely to form part of the review.
- 12.8. The Authority wishes to get stakeholders' perspectives on the current operation of market making, including the settings of volumes, bid-ask spreads and exemptions, as well as stakeholder's view on the costs and benefits of market making currently.

Appendix A Format for submissions

| | |
|------------------|--|
| Submitter | |
|------------------|--|

| Questions | Comments |
|--|-----------------|
| Q1. The Authority notes that the Urgent Code amendment provisions have not been activated yet. What is your feedback on the costs and benefits to consumers of the urgent Code amendment? | |
| Q2. Please provide feedback about your view between reliability and cost of market making with and without the urgent Code amendment? | |
| Q3. Please provide feedback on your preferred option for the market making urgent code amendment, and how your option is consistent with the Authority's statutory objective (section 15 of the Electricity Industry Act 2010). | |
| Q4. The Authority is scoping a further review of market making and market making settings. Please provide your feedback on the costs and benefits of the volume, bid-ask spread, exemption levels, how volumes are offered and the role of commercial market makers. | |

Appendix B Assessment against Policy Criteria

1. This Appendix sets out in more detail the Authority's assessment of Option 1 and 2 against policy criteria. These are listed below.

Regulatory certainty

2. In general, regulatory certainty has clear and transparent settings that are robust and are enforced. In both Option 1 and 2, the settings will be clear and transparent. The Code under both 1 and 2 will be clear and prescribed.
3. The introduction of relief provisions may create risks that undermine the integrity of the policy settings, such as increasing the chances of participant lobbying for changing the nature of the relief settings and the type of relief. The trigger mechanism will also need constant revision based on the explicit link between the marginal cost of thermal plan and the trigger level.
4. On balance, this regulatory certainty criterion is 'Neutral' for Option 1 and 'Weak for Option 2.

Simple to understand

- 12.9. The intervention needs to meet a general test of being as simple as possible to understand. This avoids regulatory burden (ie, imposing interpretation costs upon participants), avoiding ambiguity in how it is applied and the logic of the intervention is clear to current and future policymakers.
- 12.10. For Option 1 this is strong. All parties have worked with this model to date and it is well understood.
5. For Option 2 this is also strong. While this model is new, it has a simple, explicit, and fixed price-based trigger and relief mechanisms, and has been in place in the market (without being triggered).

Ease of implementation

- 12.11. The intervention must be able to be implemented efficiently, without imposing undue cost on either the system, the participants, or the regulator.
6. For Option 1 this is strong. The implementation is to let the urgent Code amendment expire.
- 12.12. For Option 2 this is also strong. This option currently exists in the Code.

Durable and effective for market stress periods

- 12.13. The intervention must not be too specific and it must be applicable across a range of likely scenarios.
- 12.14. For Option 1 this is neutral. This model has some risk around its durability, given it does not provide for relief in cases of high prices.
- 12.15. For Option 2 this is neutral. This model may not be durable, given it has a set trigger point (which may mean triggering too early) and set relief parameters (which may mean additional relief is needed).

Any relief provided is the minimum necessary to support stable market making

- 12.16. There is both a cost to the market if market makers were to exit, and a cost to providing relief. Both of these scenarios would have a negative impact on the policy objectives of a robust forward curve and access to risk management. As such, the objective is to strike a good balance between avoiding market maker exit, and if relief is required, then having that relief be as minimal and targeted as possible.
- 12.17. Option 1 model provides no relief at all, in this respect, it is strong. However there remains the risk that market makers may exit at periods of high stress. However, the Authority believes existing Code parameters are sufficient for market makers to remain in the market. The overall rating is neutral.
- 12.18. For Option 2 it is true that relief is targeted only at contracts where the price exceeds \$500/MWh; this retains tighter spreads in contracts where settlement prices are lower.
- 12.19. However, the Option 2 model provides relief under a strict set of parameters, when market makers may not require them (ie, they may not all be suffering high financial stress). Also, it may simply delay the market makers exit. If the urgent Code amendment was to be triggered, and the spreads relaxed from 3% to 5%, it would provide relief to market makers; yet this may only be a temporary measure in times of market stress – and market making services may indeed still exit. On balance, this appears neutral/weak.

Practical equity across all parties

7. This criterion has two aspects:
- (a) The Authority recognises that at periods of stress, market trading is still required. Having the Code amendment expire ensures parties can knowingly trade under the same conditions even when prices are elevated.
 - (b) Perceived or actual transfer of cost. The provision of relief to market making entities could come at the expense of other future market participants, though this is limited to only those high-priced contracts.
- 12.20. Under the above, for this criterion Option 1 is strong, and Option 2 is neutral.

Market confidence

- 12.21. A repeat stress event could cause future confidence issues. It may also be reflected in the increase in price for a commercial market maker contract due to the risk of regulatory intervention, or the risk of disorderly trading as a result of limited supply quantity. Given there is now precedent and history regarding an intervention, this will now be a factor.
- 12.22. If the Authority chooses to revert to previous settings, it is assuming those settings are sufficient for market makers in all times, stressed and non-stressed. A lack of relief during high stress may mean market makers are more likely to cease market making, leading to a partial or full withdrawal of regulated market making. This could result in an absence of market making similar to that following the Pohokura outage in 2018, where market making activities took significant time to restart following the period of high volatility.

- 12.23. For this criterion, Option 1 is neutral, and Option 2 is neutral to strong. The primary benefit is that the current Code amendment provides relief when market makers need it most. This reduces the pressure market makers face at times of high stress (as indicated by high prices). By reducing the pressure market makers face, it reduces the chance that market makers might exit.