Level Playing Field measures

Options paper

Energy Competition Task Force initiatives:
Level playing field measures and
Prepare for virtual disaggregation of the flexible generation base

27 February 2025

ELECTRICITY AUTHORITY
TE MANA HIKO

Executive summary

The Electricity Authority Te Mana Hiko (the Authority) is seeking feedback on an approach to Level Playing Field measures as proposed by the Energy Competition Task Force (Task Force) in September 2024. Level Playing Field measures are intended to address hedge contract related competition risks arising from control of the New Zealand's flexible generation base by, and vertical integration of, the four large generator-retailers – Contact Energy Ltd, Genesis Energy Ltd, Meridian Energy Ltd and Mercury NZ Ltd (together the Gentailers).

Hedge contracts matter – they support the financial viability of new and independent retailers and generators in the electricity sector. They are critical to enabling competition, which will get more power into the system, provide more choice to consumers and put downward pressure on electricity prices. The Gentailers control the flexible generation that backs these hedges.

Following the Task Force's consideration of Level Playing Field options, the Authority's current view (subject to feedback) is that:

- Mandatory non-discrimination obligations are the most appropriate response to these competition risks, giving non-integrated retailers and generators access to products (such as hedge contracts) on substantially the same terms as Gentailers supply themselves internally.
- These obligations should be applied to the Gentailers as soon as possible.
- A three-step progressive approach would be the most effective way to implement non-discrimination obligations, beginning with principles-based rules, and able to be escalated through a series of stronger, more prescriptive options if necessary.

We are now seeking your feedback on this proposed approach, and any variants you consider could be more effective in promoting competition, including for the supply of flexible peak period generation.

Our thinking on the design of Level Playing Field measures has progressed significantly since the initiative was first announced by the Task Force in September 2024. In this paper we put forward a version of virtual disaggregation as one of the progressive options for non-discrimination obligations; a shift from the thinking set out in the 2023 Market Development Advisory Group (MDAG) report. However, to best enable stakeholders to give informed feedback we have included both the MDAG approach (set out in Appendix D) and our proposed progressive approach to non-discrimination obligations concurrently in this options paper.

We consider Level Playing Field measures will achieve better outcomes for consumers

Our proposal is consistent with the Task Force's core mission to increase competition, innovation and choices for consumers over the long term. It also aligns with the Authority's aim to achieve a secure and resilient, efficient and affordable energy system that protects domestic and small business consumers and improves long-term outcomes for all consumers and New Zealand.

The Task Force and the Authority are committed to taking pragmatic and sensible actions to promote investment in renewable energy and innovation, while improving resilience, affordability and accessibility for electricity consumers. Our focus on hedge contract liquidity, price and even-handedness will help to achieve these outcomes.

We expect the proposed Level Playing Field measures, if implemented, together with the recently released standardised flexibility product, would have a material positive impact on retailers' and generators' ability to fairly access hedge contracts, particularly for morning and evening periods when consumer demand is highest. This would promote electricity generation and retail competition, which flows through to more choices and more affordable electricity for consumers.

The proposed measures would be supported by increased monitoring of Gentailers' responses and consumer outcomes.

Our current view is that non-discrimination obligations should be implemented now

We are concerned about the competition risks related to shaped hedges, including the high level of concentration in the supply of shaped hedging contracts. While evidence of Gentailers exercising market power is not clear-cut, the liquidity and pricing risks are clear. We set out these risks in our November 2024 Risk Management Review issues paper, and again in the *Reviewing risk management options for electricity retailers – Update paper following submissions,* published as a companion to this options paper.

Despite having access to relevant information, those who disagreed with our competition concerns in their feedback did not present any specific evidence to support their views. Therefore, we have not seen further evidence that would disprove or reduce the competition risks.

It is clear that shaped hedges are important for increasing competition and generation investment, both now and into the future. Further, over time the share of flexible hydro and remaining thermal generation is expected to decline relative to the intermittent generation base. Control over these sources of flexible generation may become even more concentrated amongst a few parties. This could lead to thinning of competition in the supply of flexibility, and an increased ability for those parties to exercise market power, that is, more competition risk.

Level Playing Field measures would ensure all participants compete on equal terms and make the market more efficient and effective by:

- increasing choices for consumers
- increasing security of supply and putting downward pressure on prices over the longer term.

Level Playing Field measures would also improve access to risk management contracts (or hedge contracts) by:

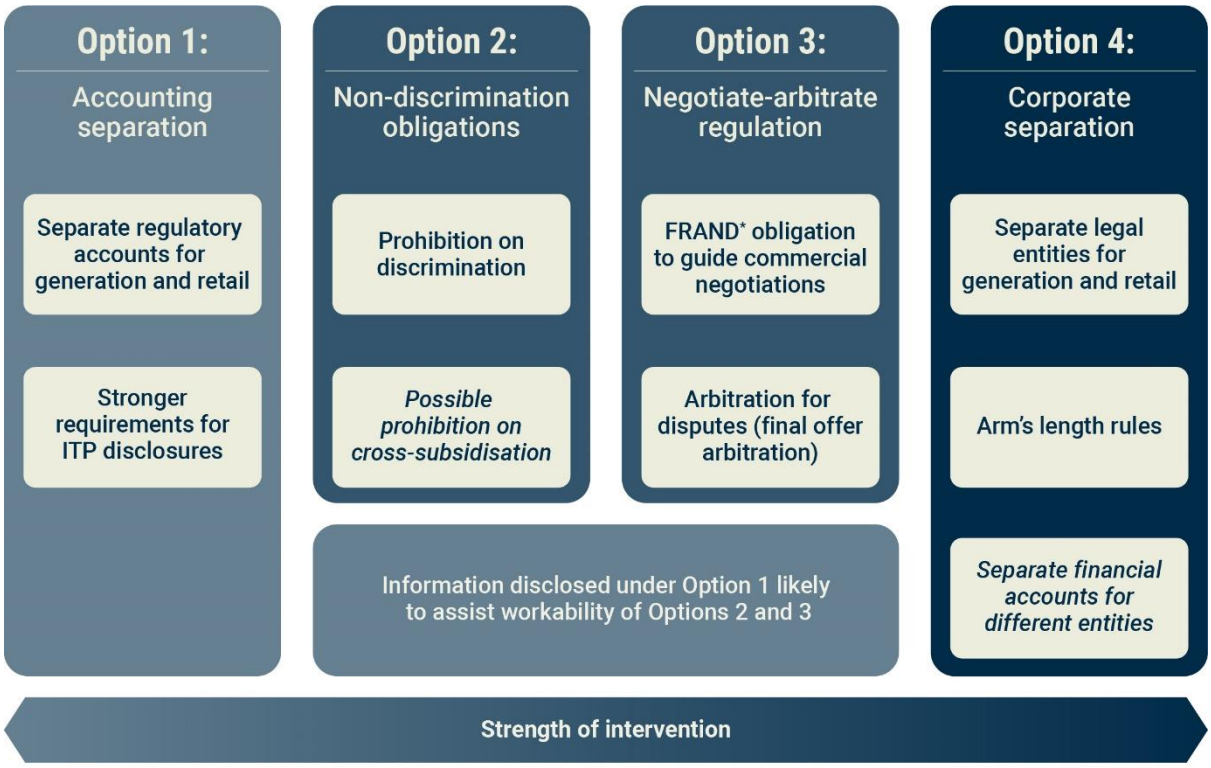
- helping market participants manage financial exposure to volatile wholesale electricity prices
- helping new generation investors access stable revenue streams through long-term PPAs

- providing price stability directly to industrial consumers and indirectly to business and domestic consumers (through retailers).

On this basis, our current view is that the non-discrimination obligations should be implemented as soon as possible to promote competition in, and efficient operation of, the electricity industry. We welcome feedback on this – including whether all hedge contracts should be captured, or whether non-discrimination obligations should apply to super-peak hedges only, that is, the type of hedge contract where the immediate competition risk has been identified.

We considered four main Level Playing Field options before confirming non-discrimination obligations as our preferred solution

The following figure shows the options we considered, escalating from less intrusive measures to more intrusive ones.



* FRAND = Fair, reasonable and non-discriminatory.

We considered the four options against a set of assessment criteria informed by our understanding of potential competition risks in the electricity market.

The assessment criteria included transparency, hedge market liquidity (access to contracts), retail entry/expansion, generation entry/build, investment in new flexibility, other efficiencies, costs and timing, and workability.

To address competition risks in New Zealand's electricity market, we propose supplementing non-discrimination obligations with key parts of other options, such as disclosure obligations drawn from accounting separation. We welcome feedback on this.

Non-discrimination obligations are effective and easier to implement

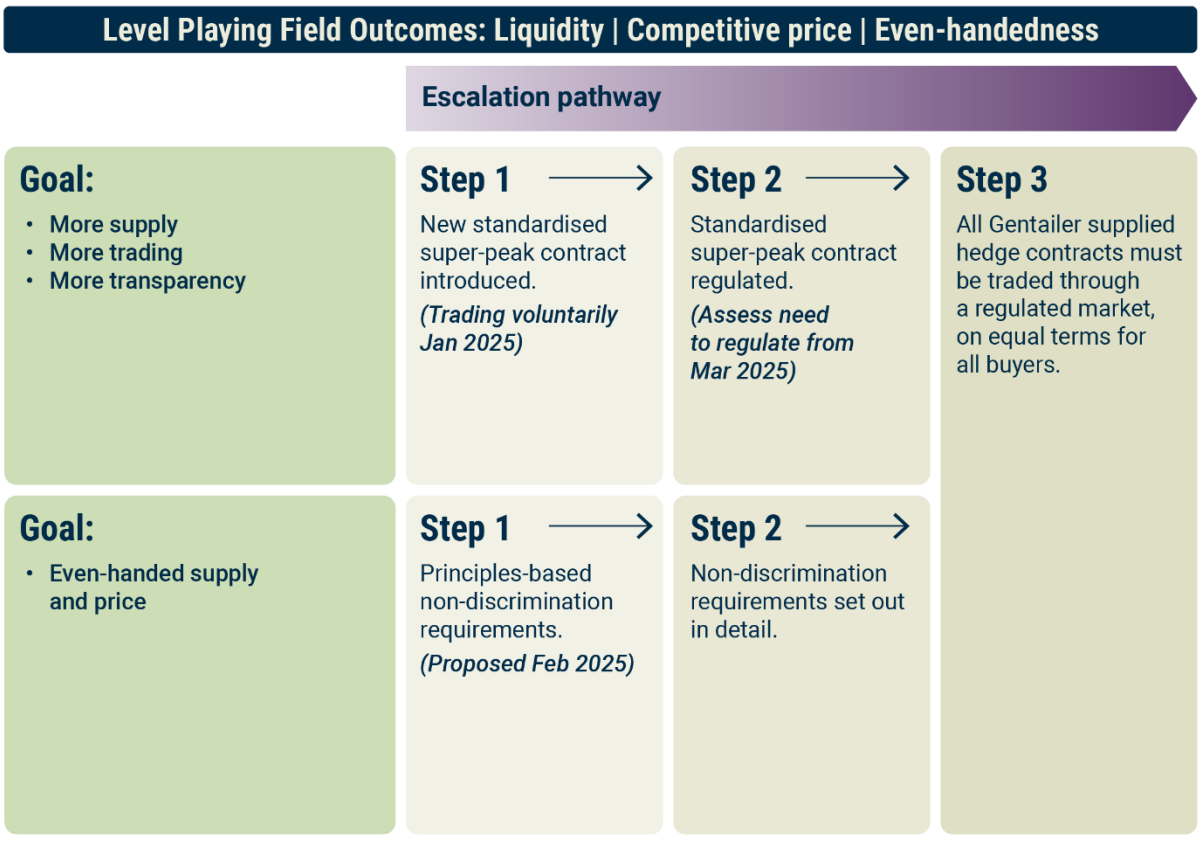
We consider non-discrimination obligations are likely to be the most effective way to ensure Gentailer hedges are available to all parties more even-handedly. Details about how this might operate are set out in the paper, and particularly at Appendix B.

Non-discrimination obligations give non-integrated retailers and generators access to products (such as hedge contracts) on substantially the same terms as Gentailers supply themselves internally while maintaining investment incentives and security of supply. Non-discrimination obligations would also complement the standardised flexibility product already in the market – together they will make a material difference to hedge contract liquidity, price and even-handedness. We expect that non-discrimination obligations would likely lead to Gentailers offering a range of risk management contracts externally and internally. For example, if they enter into longer-term hedges between their wholesale and retail arms, to comply with non-discrimination requirements they would also need to give external buyers access to longer-term options on the same terms. Principles-based non-discrimination obligations can also be implemented quickly, in months rather than years.

We are putting forward a three-step progressive approach to non-discrimination obligations

Our suggested progressive approach to non-discrimination measures is shown in the following figure.

Market performance approach (Task Force Package One)



Although the principles-based non-discrimination regime (Step 1) would be mandatory under the Code, in some cases there would likely be more than one valid way that Gentailers could comply.

We would include a principle requiring Gentailers to establish an economically meaningful portfolio of internal transfer prices (ITPs) for hedges. This portfolio would then provide the basis for Gentailers to demonstrate they have complied with the non-discrimination obligations, and better data for the Authority, allowing us to better detect and assess any ongoing hedge access issues. We have set out indicative drafting of non-discrimination principles as Appendix B to this paper, including more detailed guidance alongside the high-level principles.

We believe that developing the Step 2 and 3 escalations at the same time is also beneficial. While we expect Step 1 if implemented would have an impact, clarity on further potential measures provides the industry, and current and potential investors, with a degree of regulatory certainty about the strength and nature of the additional regulation being considered.

Of the options assessed, we believe this package would bring the greatest value for consumers, at the greatest speed. It deliberately balances the significant long-term benefits of promoting competition with the nearer-term risks related to direct market intervention – for example, the risk that investment slows due to uncertainty about the rules.

We want your feedback

The proposed options presented in this paper represent a material change, with significant implications for the sector, particularly Gentailers. We encourage you to read this paper and email us your feedback at levelplayingfield@ea.govt.nz, with the subject line ‘Feedback on Level Playing Field measures’.

Please send us your feedback by **5:00pm on Wednesday, 23 April 2025**.

You can also provide a verbal submission. Contact us at levelplayingfield@ea.govt.nz or call 04 460 8860 to discuss arrangements.

Glossary of key terms

Market terminology

A **hedge contract** is a way of reducing or eliminating exposure to risk in a market. A hedge contract can also be called a risk management contract. For example, non-integrated retailers are exposed to the risk that the electricity spot price will be higher than the price for which they have already agreed to sell electricity to their customers. To reduce this risk, they can buy an over-the-counter (OTC) hedge contract from a Gentailer or an exchange-traded contract on the ASX that guarantees them electricity at a certain price instead of the spot price during a future period, or use other risk management options as discussed in the risk management review.

There are different types of hedge contracts. They can be for **baseload** (a fixed volume of energy traded during a fixed period for a fixed price, for all trading periods, that is, the same volume in each trading period), **peak** (a fixed volume of energy traded for all trading periods during the day), or **super-peak** (a fixed volume of energy during periods at 'super-peak' times of consumer demand, that is, morning and evening peaks).

The **hedge market** in New Zealand is primarily the electricity futures market (run by the ASX) and the OTC market for hedge contracts. Standardised baseload hedge contracts can be traded on ASX. In the OTC market, generators and traders can enter standardised or bespoke hedge contracts, including **shaped** contracts. Shaped hedge contracts are customised to meet specific load profiles or consumption patterns of end users.

The **standardised flexibility product** is a new, standardised super-peak hedge OTC contract that was co-designed with industry and announced in December.

Generation

Flexible generation means the ability to increase or decrease the amount of electricity produced, by turning generation on or off when needed (or ramping output up or down). Hydro is the most common type of flexible generation. Most flexible generation assets are controlled by the Gentailers. Ownership of those assets underpins the ability to offer shaped hedge contracts and firming for intermittent generation.

Intermittent generation means generation such as wind or solar power that may not be able to generate at times when its fuel source is unavailable (for example, if it there is no wind or it is cloudy). The more intermittent generation there is in the system, the more flexible capacity is required to firm it.

Firming means ensuring intermittent generation can reliably meet demand by supplementing it with flexible generation or other flexible resources such as battery energy storage solutions. A **firming contract** is an agreement that ensures the availability of a specified amount of electricity supply during times when it is needed, especially when dealing with variable or intermittent generation sources.

Retailer types

gentailer means a generator-retailer, an electricity business that operates both as a generator and a retailer of electricity. In this paper, we use '**Gentailer**' to refer to the four

large generator-retailers that control the vast majority of New Zealand's flexible generation: Contact Energy Ltd, Genesis Energy Ltd, Meridian Energy Ltd and Mercury NZ Ltd.

Independent or **non-integrated retailer** means a retailer that does not own generation.

Key regulatory concepts this paper considers

Level Playing Field measures are measures that are designed to ensure fair and even-handed access treatment of all participants in a market. They can range from disclosure obligations to structural remedies like corporate separation.

Non-discrimination obligations are a level playing field measure that, in relation to the supply of hedges, would require Gentailers not to treat themselves substantially differently from their non-integrated competitors, or to treat different competitors substantially differently.

Virtual disaggregation is another level playing field option discussed in the paper. It refers to splitting the flexible generation capacity of participants who exceed a certain market share into two components: a portion that would be required to be offered, and a portion that would be used by the participant as they see fit.

Contents

1. How you can inform our thinking

What this paper is about

1.1. The Authority is seeking feedback on potential Level Playing Field measures for the New Zealand electricity sector. Level Playing Field measures would seek to address competition concerns arising from vertical integration of the four large generator-retailers: Contact Energy Ltd, Genesis Energy Ltd, Meridian Energy Ltd and Mercury NZ Ltd (together the 'Gentailers').

1.2. There is a risk that the combination of Gentailer vertical integration and their control of flexible generation is hindering competition in generation and retail, and investment in new electricity generation. Gentailers own the key flexible generation assets used to ensure electricity supply during peak periods.

1.3. While other sources of flexibility are developing, in the near to medium term non-integrated retailers seeking to compete with the Gentailers require access to the flexible generation through flexibility contracts. Access to that flexible generation is also important to industrials (for financial risk management), and for parties (including retailers and larger end users) buying PPAs that support independent generators.

1.4. This paper considers various measures to allow non-integrated retailers and generators to compete with the Gentailers on a more equal footing. This would help enable new generators and independent retailers to enter and better compete in the market.

1.5. In this paper, we set out:

(a) the context for this work — where it fits into the broader Task Force work programme

(b) the problem definition — the ways vertical integration between the generation and retail functions of large electricity companies may provide them advantages over non-integrated generators and retailers (resulting in an uneven playing field)

(c) the main Level Playing Field options we have identified to address competition concerns arising from Gentailer vertical integration

(d) our preliminary assessment of the advantages and disadvantages of these Level Playing Field options in the context of the large generator-retailers operating in the electricity sector, including identifying our preferred option (non-discrimination obligations)

(e) a possible roadmap for implementing non-discrimination obligations, including options for escalation if the initial implementation does not drive sufficient change

(f) our current thinking on virtual disaggregation of the flexible generation base, and particularly how it best fits into the possible roadmap for implementation.

1.6. Your feedback will inform our next steps, including further development of Level Playing Field measures and/or any consultation on proposed changes to Electricity Industry Participation Code (Code) to implement Level Playing Field measures. We are particularly interested in views on:

(a) our selection of non-discrimination obligations as our preferred Level Playing Field measure

(b) whether non-discrimination obligations are necessary or desirable to promote competition in, and the efficient operation of, the electricity industry

(c) our proposed roadmap for implementation of non-discrimination obligations.

How to provide feedback

1.7. We prefer to receive feedback in electronic format (Microsoft Word). Please email your feedback to levelplayingfield@ea.govt.nz, with 'Feedback on Task Force Level Playing Field measures' in the subject line.

1.8. If you cannot send your feedback electronically, please contact us at levelplayingfield@ea.govt.nz or call on 04 460 8860 to discuss alternative arrangements.

1.9. Please note we intend to publish all feedback we receive. If you consider that we should not publish any part of your feedback, please:

(a) indicate which part should not be published and explain why you consider we should not publish that part

(b) provide a version of your feedback that we can publish (if we agree not to publish your full submission).

1.10. If you indicate part of your feedback should not be published, we will discuss this with you before deciding whether to not publish that part of your feedback.

1.11. However, please note all feedback we receive, including any parts that we do not publish, can be requested under the Official Information Act 1982. This means we would be required to release material not published unless good reason existed under the Official Information Act to withhold it. We would normally consult with you before releasing any material that you said should not be published.

When to provide feedback

1.12. Please deliver your feedback by 5:00pm, **Wednesday 23 April 2025.**

1.13. Authority staff will acknowledge receipt of all feedback electronically. Please contact us at levelplayingfield@ea.govt.nz or on 04 460 8860 if you do not receive an electronic acknowledgement of your submission within two business days.

2. Context for this work

2.1. The Authority and the Commerce Commission Te Komihana Tauhokohoko (Commission) jointly established the Task Force during a period of sustained high wholesale electricity prices in August 2024, during which there were significant fuel shortages.

2.2. The Task Force, with the Ministry of Business, Innovation and Employment (MBIE) as an observer, is focusing on short- to medium-term actions to improve the performance of the electricity market.

2.3. The Task Force's work programme focuses on two overarching outcomes.

(a) Package One — enabling new generators and independent retailers to enter and better compete in the market

(b) Package Two — providing more options for end users of electricity.

2.4. These outcomes will encourage efficient investment in new electricity generation, boost competition, and enable homes, businesses and industrials to better manage their own electricity use and costs and put downward pressure on prices.

2.5. Package One of the Task Force's work programme contains four initiatives that focus on improving competition in the electricity industry. The Authority has prepared this paper to progress two Task Force initiatives under Package One.

(a) Prepare for virtual disaggregation of the flexible generation base (also known as Task Force Initiative 1C)

(b) Investigate Level Playing Field measures such as non-discrimination rules (also known as Task Force Initiative 1D).

Access to flexible resources is essential to support competition

2.6. Competition in the electricity market is critical to achieving more choice and more affordable electricity for consumers.

2.7. An important enabler of competition for market participants is access to risk management products backed by flexible electricity resources (including generation, storage and demand response). This allows:

(a) retailers to manage their exposure to wholesale electricity price volatility, and still provide price stability to consumers, through risk management contracts or 'hedges'

(b) end users (or retailers) who buy PPAs from generators to manage price exposure for their residual (non-PPA) demand, which supports PPA demand that in turn supports generation entry

(c) other generation entry business models, including merchant generation (selling output through wholesale markets) and vertical integration (building a retail position).

2.8. Improved access to risk management products that are generally underpinned by flexible resources would enable new generators and independent retailers to enter and grow and better compete in the market.

2.9. Several factors provide important context for the Authority's and Task Force's work in improving electricity market competition.

Increasing wholesale market volatility

2.10. Wholesale market volatility has materially increased since the Pohokura gas field outage in mid-2018. Our subsequent review of competition in the wholesale market, which started in March 2021 and finished in May 2023, found that wholesale market prices reflect a sector in transition:[1]

(a) prices between January 2019 and mid-2021 had, at least to some extent, reflected underlying supply and demand conditions, but we noted that generators may have been exercising market power in the wholesale market during that period

(b) from mid-2021 to early 2023, changes in average spot prices had been explained mostly by underlying demand and supply factors

(c) forward prices out to 2027 — while trending downwards — remain above the cost of new supply (as estimated in 2023), reflecting factors such as time to build new generation, investment-impeding uncertainty and insufficient commercially viable resources to firm intermittent supply.

2.11. High volatility was most recently observed in August 2024, when price spikes resulting from a shortage of gas combined with low hydro inflows and unfavourable conditions for wind generation saw wholesale electricity prices temporarily increase from around $300/MWh to over $800/MWh. Wholesale price volatility has also been materially impacted by reduced gas supplies and ongoing supply uncertainty, which has been influenced by (among other things) previous government policies regarding the phase out of gas for energy use in New Zealand. We expect gas-fired generation will continue to often be the marginal generation in the wholesale market, so will continue to impact price volatility.

2.12. We expect wholesale price volatility to continue. It is a natural and expected consequence of increasing demand combined with the rapid uptake of renewable intermittent generation, like wind and solar generation, which makes the electricity system more sensitive to weather effects.

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1 Electricity Authority, Decision Paper: promoting competition through the transition, May 2023.

2.13. For retailers, large users and generators seeking to access risk management products to manage their exposure to wholesale market volatility, the impact of these market conditions is twofold: increasing wholesale market volatility will drive increased demand for risk management options, while at the same time, it may become more difficult for generators to supply over-the-counter contracts and other risk management products that meet buyers' needs, as the generation mix changes.[2]

2.14. In December 2023, MDAG recommended a package of work to increase competition and ensure market participants have access to options to efficiently manage their wholesale price risk in the transition.[3] Its recommendations included a focus on increasing access to flexible generation by developing the market for flexibility contracts (or 'shaped products', which provide protection against high spot prices at specific times), increasing demand-side flexibility and other measures to increase competition.

2.15. MDAG's recommendations included developing a high-level outline of 'virtual disaggregation' of participants assessed as having undue market power to 'put in the drawer' ready for use if developing the market for flexibility contracts is not effective in addressing that market power. This recommendation has informed the Task Force's virtual disaggregation initiative, discussed further in Chapter 7 of this paper.

Vertical integration and competition concerns

2.16. High levels of vertical integration characterise New Zealand's electricity market. Four large Gentailers effectively control the flexible generation base. We discuss this further in Chapter 3.

2.17. This Gentailer control of the flexible generation base means that when independent retailers are seeking risk management contracts, and parties are seeking firming for independent generation, they generally are seeking supply from the same Gentailers they compete with in the retail or wholesale market.

2.18. Independent retailers particularly have raised competition concerns about the behaviour of the Gentailers in offering and pricing these risk management contracts. These concerns can be summarised as Gentailers:

(a) refusing to supply (or constructively refusing to supply) appropriate OTC contracts (including shaped peak and super-peak products)[4], inhibiting non-integrated retailers' ability to compete in the retail market

(b) using their generation profits to cross-subsidise their retail businesses via internal transfer prices (ITPs) and retail pricing, which, alongside their pricing

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2 These dynamics are discussed in greater detail in the Authority's Risk Management Review Issues Paper.

3 MDAG 'Price discovery in a renewables-based electricity system' (December 2023).

4 Peak hedges provide risk management cover throughout the day; super-peak hedges provide more targeted risk management cover during the morning and evening peaks.

and supply of OTC contracts, is resulting in a margin squeeze whereby non-integrated retailers have insufficient margin to compete against the Gentailers' retail operations. [5]

2.19. Underlying these concerns is the independent retailers' view that the four Gentailers have substantial market power in the wholesale market and that their conduct has had the effect of substantially lessening competition in closely related downstream markets.

2.20. During 2023, several independent retailers wrote individually to the Commission requesting an investigation into these concerns under section 36 of the Commerce Act. The Commission undertook enquiries into these complaints during 2023, including engaging with us on the issues raised in the complaints.

2.21. In December 2023, the Commission announced it had decided not to open an investigation at that time, noting our intention to review retailers' risk management options in 2024, and that assessment by us and potential regulatory reform (if required) was a more appropriate response to these competition concerns than a Commerce Act enforcement investigation. The Commission assisted us with the risk management review over the course of 2024 (see below).

Our risk management review and post-implementation review of ITP disclosures

2.22. In December 2023, against the background of increasing wholesale market volatility, increasing intermittent generation and competition concerns raised by independent retailers, we began reviewing the risk management options available to independent retailers — called the risk management review.

2.23. We published our issues paper for the risk management review in November 2024. Our initial findings included that while there were a range and combination of options available to retailers to manage their risk, shaped risk management contracts would remain important for retailers in the short to medium term, and questions remain about the pricing and availability of those contracts, specifically those that cover 'super peak' periods (when demand and wholesale prices are highest).

2.24. While the evidence was not definitive, the review provided a good indication of the risks to retail competition. As discussed in paragraph 3.47, our consideration of the submissions received on the issues paper did not cause us to change our preliminary findings.

2.25. Alongside the risk management review, we reviewed the disclosure regime for Gentailer ITPs — the ITP and retail gross margin (RGM) post-implementation review. We found the regime has limited, if any, benefit in providing the necessary

[5] Or, alternatively, that Gentailers' retail arms are engaging in predatory pricing by retailing energy at below-cost prices.

assurances about competitive Gentailer retail pricing or increased participant trust and confidence.

2.26. Our risk management review and review of ITP disclosures provide important inputs into the Task Force's Package One Initiatives. We discuss these reviews and their findings in more detail in Chapter 3 of this paper.

Government priorities for the electricity industry

2.27. The Authority and the Commission are independent Crown entities. The Authority, as the electricity industry regulator, must have regard to government policy statements concerning the electricity industry when performing its functions.[6] In October 2024, the then Minister for Energy issued a statement of Government policy on the electricity industry that emphasised the importance of a workably competitive electricity market.[7] Key themes of relevance are:

(a) the expectation that coming decades will see substantial increases in demand, which will require significant investment in new generation and related services

(b) the benefits that participation by a diversity of parties can bring by promoting innovation and competition for the benefit of consumers

(c) the benefits that accurate price signals and decentralised risk management provide in promoting efficient reliability and security of supply

(d) the benefits that effective competition brings by mitigating misuse of market power, supporting clear price signals, spurring innovation and exerting sustained downward pressure on costs and prices

(e) the expectation that hydro generation with storage will play an increasingly important role in smoothing out electricity supply in periods when wind and solar are low

(f) the importance of improved price discovery, particularly in relation to flexible supply to cover periods of low wind, sun and/or hydro inflows.

2.28. The Government policy statement includes that we should ensure that market arrangements facilitate competition, including in relation to flexible supply.

Task Force Package One initiatives have been refined to provide a comprehensive response to competition concerns

2.29. Package One of the Task Force's work programme comprised four initiatives to improve competition.

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6 Under section 17 of the Electricity Industry Act 2010.

7 https://www.beehive.govt.nz/sites/default/files/2024-10/Government%20Policy%20Statement%20on%20Electricity%20-%20October%202024.pdf

(a) Consider requiring Gentailers to offer firming for PPAs

(b) Introduce standardised flexibility products

(c) Prepare for virtual disaggregation of the flexible generation base

(d) Investigate Level Playing Field measures such as non-discrimination rules.

2.30. Significant progress has been made on Package One.

(a) In December 2024, a new industry-designed standardised flexibility product was announced, with trading starting in January 2025. Trading will initially be voluntary, but we are also designing a regulated standardised flexibility product should voluntary trading not achieve the intended outcomes (increased liquidity at a competitive price).

(b) In January 2025, the Task Force published a working paper to better explore the context, headwinds and options for PPAs. The paper identifies the potential for Gentailers to dampen independent PPA activity via pricing of contracts to supply potential PPA buyers' residual demand.

2.31. This paper focuses on Level Playing Field options and virtual disaggregation. These initiatives were originally separate 'backstop' initiatives to provide a firmer regulatory response to competition concerns should the standardised flexibility product and PPA initiatives fail to prove effective in promoting competition.

(a) The Level Playing Field initiative was investigating the advantages and disadvantages of various measures to ensure a level playing field between Gentailers on one hand and non-integrated retailers and generators on the other.

(b) The virtual disaggregation initiative was preparing an outline of virtual disaggregation of the flexible generation base, consistent with a specific future market power concern laid out by MDAG.

2.32. The Task Force's work programme has evolved as evidence has emerged and thinking has been refined. This options paper reflects changes in thinking in two key respects.

2.33. First, this paper reconsiders the potential role of virtual disaggregation. Rather than the tightly focussed option envisaged by MDAG, a version of disaggregation is proposed to become part of a staged approach to the imposition of non-discrimination obligations under the Task Force's Level Playing Field measures. If implemented, this would mean the Level Playing Field measure effectively subsumes the separate targeted virtual disaggregation previously contemplated by the Task Force. We discuss this proposed change in approach in Chapter 7 of this paper.

2.34. Second, rather than treating Level Playing Field measures as a future backstop option, the Authority is now proposing an immediate staged introduction of a form of Level Playing Field measures — non-discrimination obligations. We discuss the reasons for this change in approach in detail in Chapter 6 of this paper.

2.35. Considering the evidence examined, from the risk management review, the Authority and the Task Force are now thinking of the four Package One initiatives as part of a complementary set of interventions that work best together — specifically, the following.

(a) The standardised flexibility product and PPA initiatives target a fast intervention to address a specific flexibility product availability concern. For example, independent retailers have difficulty securing supply of shaped hedges. The standardised flexibility product provides a targeted response to that (within the bounds of any scarcity limitations). We expect this type of specific intervention to make an immediate difference but not to fully resolve the underlying competition concerns.[8]

(b) The broader competition concern — that Gentailer actions may be negatively impacting both wholesale and retail competition — has a vertical integration component that should be addressed in parallel. That is, the broader risk of Gentailers discriminating in favour of their own internal business units over non-integrated competitors (which also has price and volume components, but in this case looked at from a relative standpoint, that is, compared to Gentailer internal supply). Better third-party access to flexibility products may not be enough to address the potential competition risks arising from the dual supplier/competitor role that Gentailers have in these circumstances.

(c) We are considering Level Playing Field measures to respond to that broader competition concern about discrimination. But Level Playing Field measures are likely less well suited, compared to targeted measures like introducing a standardised flexibility product, to dealing with immediate availability concerns for shaped hedges.

(d) When faced with availability issues and discrimination concerns regarding shaped hedges, our current view is that multiple parts of Package One need to be deployed in response, rather than stepping through each initiative in turn.

2.36. The Authority and the Task Force therefore consider (subject to feedback) that there may be a valid case for taking a more comprehensive approach by introducing a proportionate Level Playing Field measure now, in addition to the more targeted product availability measure. This is likely to provide more comprehensive assurance that the competition concerns arising from vertical integration were being effectively managed.

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[8] Virtual disaggregation, as contemplated by MDAG, was also a relatively narrow remedy for a specific access concern. We appreciate though that other stakeholders have a range of views about ways in which virtual disaggregation could be deployed in response to competition concerns. We set out our current view on virtual disaggregation, and how it fits with other Package One initiatives, in Chapter 7 of this paper.

3. Problem definition — competition concerns from Gentailer vertical integration

3.1. The Authority is investigating Level Playing Field measures to address risks to competition arising from Gentailer vertical integration.

3.2. The risks to competition associated with vertical integration are well known. Many markets around the world apply regulatory measures to address these risks, including in the electricity sector. For example, the Great Britain electricity generation licence conditions overseen by Ofgem include regulatory accounting rules, a prohibition on discrimination when selling electricity, and a prohibition on cross-subsidies.[9] The telecommunications sector also commonly applies Level Playing Field measures to address access issues resulting from vertical integration.[10]

3.3. Several submissions in response to our request for early input on Level Playing Field measures asked that we set out a clear problem definition for this initiative.[11] This chapter sets out our current thinking regarding the risks Level Playing Field measures are intended to address.

3.4. We are seeking to test our current thinking now — both on the problem definition set out in this chapter and our proposed solutions that follow later in this paper — before any proposals to amend the Code are considered.

Market structure and context — vertical integration of the Gentailers

3.5. Vertical integration through the electricity supply chain is common, particularly historically. Electricity companies have often been involved in more than one of generation, transmission, distribution and retailing.

3.6. New Zealand electricity sector reforms during the 1990s separated the natural monopoly elements of the supply chain (transmission and distribution lines) from the elements which are potentially subject to greater competition (generation and retail). For example, electricity distribution businesses are prohibited from engaging in generation and retailing activities through corporate separation and arm's length rules under the Act and Code.

3.7. Vertical integration became a more significant feature of the New Zealand electricity sector in the early 2000s after the commercial failure of New Zealand's biggest independent retailer (at the time) and their negotiated exit from the market.[12]

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9 Electricity Generation Standard Licence Conditions Consolidated (see conditions 16, 17 and 17A).

10 For example, Telecom NZ was structurally separated into Chorus (the network and wholesale business) and Spark (the retail business) due to competition concerns arising from vertical integration.

11 Appendix A summarises the key themes raised in submissions.

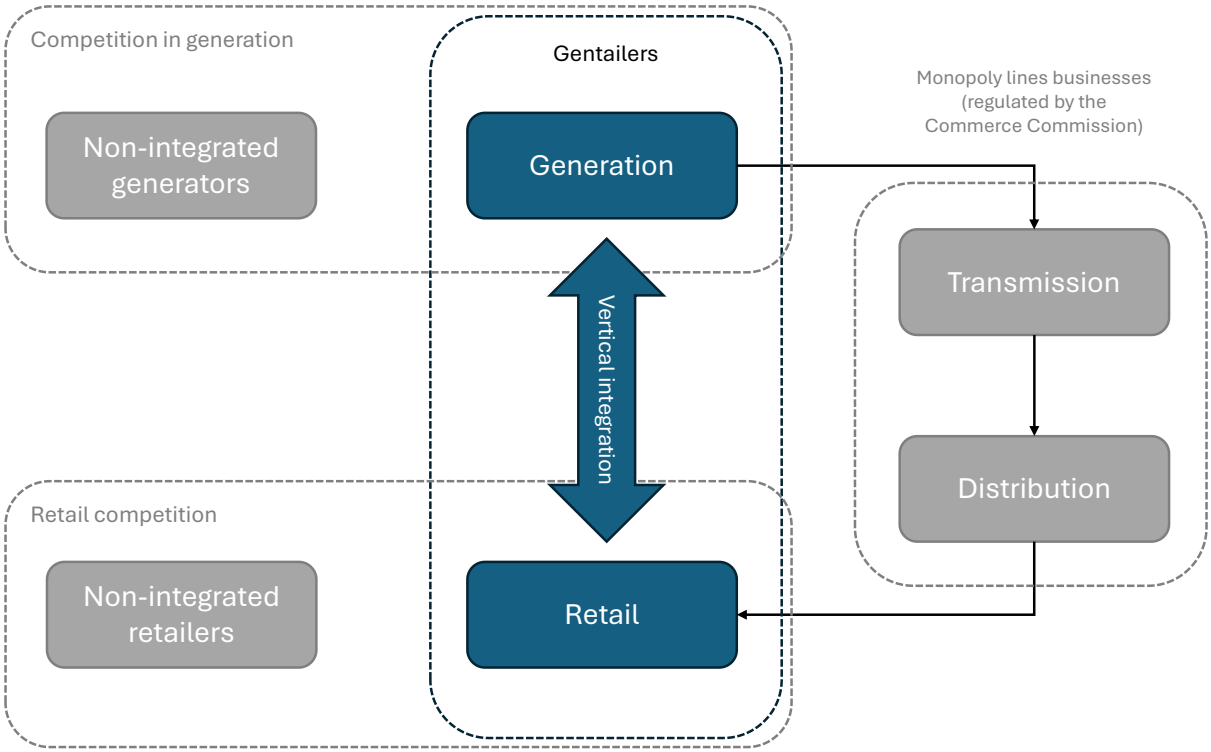
12 As noted in paragraph 3.17(g) below, TransAlta New Zealand exited the market in the early 2000s.

3.8. The largest electricity retailers in New Zealand are the four large, vertically integrated generator-retailers: Mercury, Genesis, Contact and Meridian. The Gentailers own most of New Zealand's large-scale flexible generation (such as the large hydro stations), which was built under Government ownership.[13]

3.9. The integrated nature of these large retailers provides them with a natural risk management hedge (mitigating the price risk from the wholesale spot market through their own generation).

3.10. Under the current market structure, Gentailers have the benefit of vertical integration between their generation and retail businesses. This vertical integration is shown in Figure 1 below.

Figure 1 – Gentailer vertical integration



3.11. Gentailers compete with each other (including with smaller entrant generator-retailers) but also face competition from stand-alone (non-integrated):

(a) generators at the generation level

(b) retailers at the retail level.

3.12. The Commission regulates the monopoly electricity lines operated by Transpower and electricity distribution businesses under Part 4 of the Commerce Act.

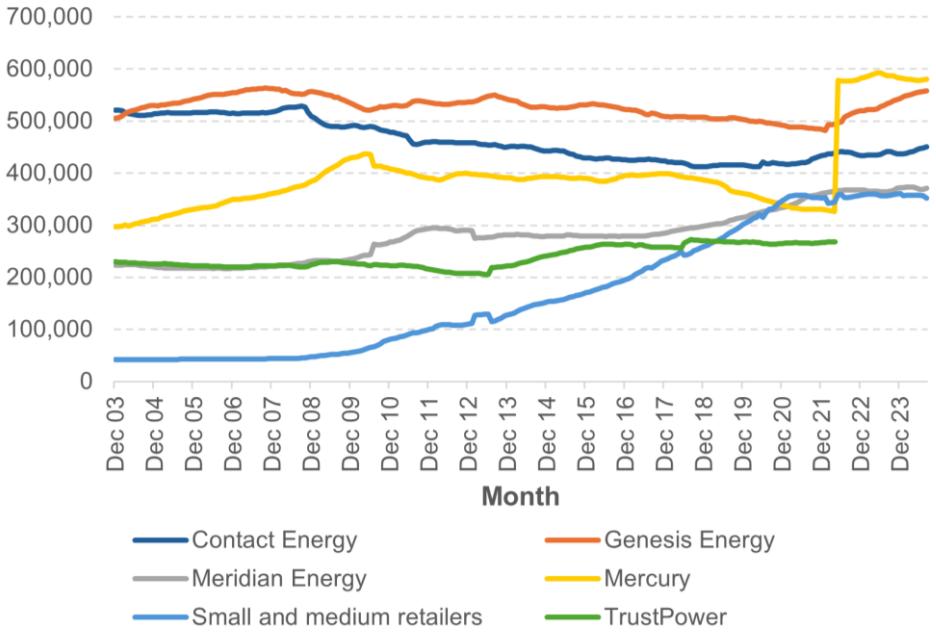
[13] Other smaller vertically integrated generator-retailers in New Zealand also own flexible generation, for example, Nova.

Gentailers are the largest suppliers of electricity in New Zealand and competition has not developed as quickly as expected

3.13. The Gentailers have sustained high retail market shares, while growth of competing retailers has been stagnant since 2021. As has been well traversed in the sector, market share of small- and medium-sized retailers has plateaued after a sustained period of growth, as set out in Figure 2:[14]

Figure 2 – Retail market share by ICP

Dec 2003 to Aug 2024



Source: Risk Management Review issues paper[15]

3.14. The four Gentailers have also continued to have high market shares for generation and there have been recent attempts to consolidate (for example, Genesis' purchase of the Helios solar site in Edgecumbe and Contact's proposed acquisition of Manawa Energy). Figure 3 below shows that the Gentailers' proportion of total generation has been around 85% since 2010.[16]

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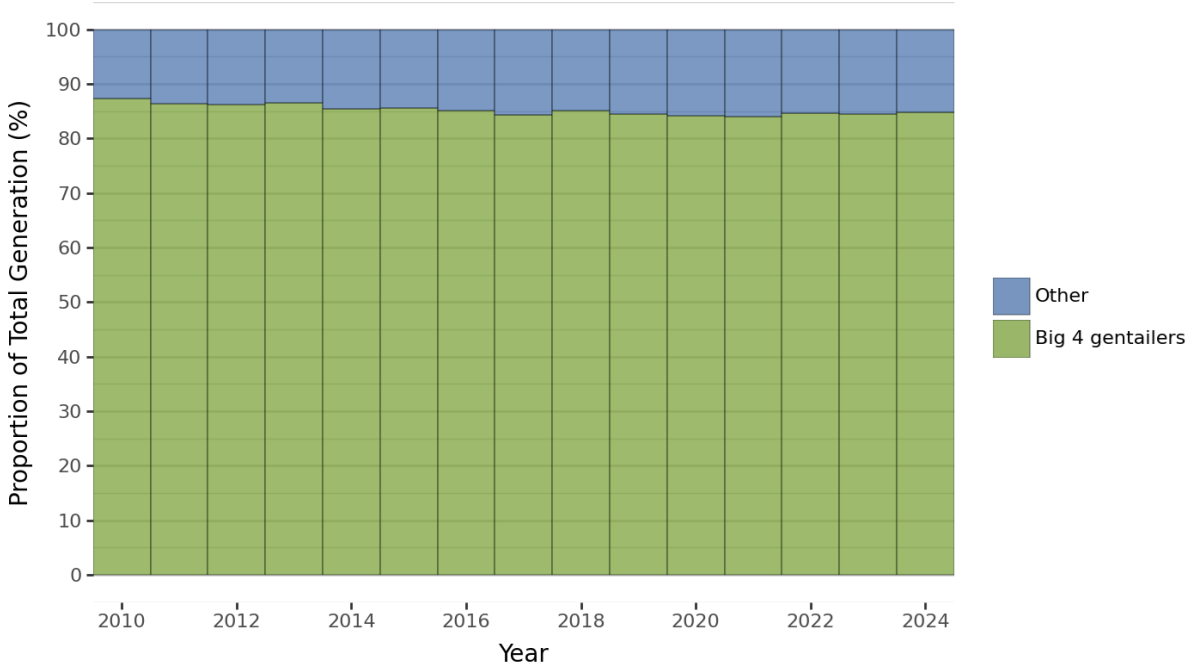
14 The sudden increase observed in Mercury's market share in Figure 2 is due to its acquisition of Trustpower's retail ICPs in mid-2022.

15 Electricity Authority 'Reviewing risk management options for electricity retailers – issues paper' (7 November 2024), Figure 2, page 6.

16 Some assumptions have been made for joint ventures.

Figure 3 – Gentailers' proportion of total generation



3.15. The limited growth of competing retailers and generators suggests there may be barriers to entry and/or expansion in retail and generation. For example, we would typically expect to see small to medium retailers vigorously competing to grow their share, as occurred until 2020, including through innovation, agility and/or highly competitive pricing. That competitive impact appears to have stalled. This highlights a competition risk, particularly given that a group of small to medium retailers are pointing to a specific issue (as they see it) as a barrier to expansion.

Vertical integration between generation and retail can lead to efficiency benefits

3.16. Gentailer vertical integration may generate efficiencies through synergies or cost savings from operating at multiple levels of the supply chain.

3.17. Examples of benefits that could arise from gentailer vertical integration include the following.[17]

(a) **Risk management.** Vertical integration can reduce risk for a gentailer by providing more certain downstream demand for the generation business and providing the retail business with more certain supply. Gentailers can limit their exposure to spot price risk by maintaining an approximate balance between their own generation output and the total electricity demand of their retail customers (internal hedge).

[17] NERA 'International Experience of Vertical Integration in the Electricity Sector: A Report for AGL Energy Ltd' (22 November 2017); Cognitus economic insight 'Review of the Economics Literature on the Pros and Cons of Vertical Integration and Vertical Separation in Electricity Sectors' (October 2021).

(b) **Reduced financing costs.** The risk profile of a vertically integrated firm can support lower cost access to finance than may be achievable by an independent generator. This can translate to a lower system expansion cost, which can in turn place downward pressure on prices.

(c) **Reduced transaction costs**. The internal flexible hedge provided by a gentailer balancing their own generation output with retail demand reduces contracting costs, by limiting the need to trade risk management products through wholesale markets.

(d) **Coordination of investment.** Vertical integration can provide greater coordination between investments at different levels of the supply chain, potentially reducing overall system costs and promoting security of supply.

(e) **Economies of scope.** Cost savings could arise from producing more than one product (that is, both generation and retail), through shared assets and knowledge across various parts of its business.

(f) **Elimination of double marginalisation.** Vertical integration can avoid inefficiencies in pricing along the vertical supply chain. Double marginalisation is where two firms with market power, operating at different vertical levels in the same supply chain, each apply a mark-up to their prices. Under vertical integration there is only one markup, not two.

(g) **Financially robust.** Vertical integration necessitates a larger capital base, which tends to result in more financially robust and stable electricity retailers, that are more able to endure financial shocks or adverse changes in market conditions. This contrasts with the failure of TransAlta New Zealand, a large non-integrated retailer, in the early 2000s, which adversely impacted over 500,000 electricity consumers.

3.18. Independent retailers have suggested that the benefits of vertical integration are largely financial, or risk management based, and that a well-functioning market would provide appropriate risk management options for non-integrated competitors:[18]

> 'The efficiencies that can be derived by the gentailers from vertical integration seem almost entirely financial or risk management based, rather than productive efficiencies, and we urge the EA to properly consider the competitive effects and optimal market design without placing undue weight on unquantified and ill-defined vertical efficiencies.'

3.19. We respect the right of businesses to choose their own structure and form their own view of the benefits of different structural options. We prefer to not unnecessarily restrict this choice.

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[18] See Matthews Law's letter, on behalf of four independent retailers, to the Electricity Authority Chair and Chief Executive dated 7 August 2024 at paragraph 31.

3.20. We also understand that the natural hedge resulting from vertical integration between generation and retail is valuable for risk management. However, vertical integration is not the only way of managing the risks of price volatility — this can also be done through risk management contracts and demand response.

There are also important risks to competition from Gentailer vertical integration

3.21. While efficiencies may arise from vertical integration, these could be outweighed by conditions or conduct that compromise the ability of non-integrated generators and retailers to compete.

3.22. Vertical integration is not an issue per se — it is a legitimate business approach, pursued in many sectors. However, competition issues can arise where vertical integration is combined with market power. Competition can be harmed where a vertically integrated firm, with at least some degree of market power in one of the markets in which it operates, can leverage its position at one level of the supply chain to benefit its operations at another level of the supply chain.[19]

3.23. Key risks to competition, as identified by the UK Competition and Markets Authority, include the following.[20]

(a) **Liquidity.** Gentailers have a natural hedge — they can manage risks internally even where products are not available externally. This could affect liquidity of hedge products. If liquidity is poor, non-integrated retailers or generators may be less able to hedge their demand or output, increasing their risk or causing them to pay a premium to reduce risk (that is, raising barriers to entry/expansion).

(b) **Foreclosure (or raising rivals' costs).** Gentailers could sacrifice profits in one part of their business to distort another market, in such a way that non-integrated firms are worse off (to the overall benefit of the vertically integrated firm). There are two types of foreclosure.

- *Input foreclosure:* This would involve gentailers acting upstream (at the generation level) to disadvantage non-integrated retailers. For example,

[19] Conversely, vertical integration would generally not be expected to lead to competition concerns where it is not combined with market power.

[20] CMA 'Energy market investigation: Final report' (24 June 2016), chapter 7.

this could include imposing a margin squeeze[21] or refusing to supply hedge products to non-integrated retailers.[22]

- *Customer foreclosure:* This would involve a gentailer causing harm to upstream competitors (non-integrated generators) by strategically reducing their ability to sell their output. For example, this could include limiting non-integrated generators' ability to attract customers by refusing to sign PPA firming contracts.

(c) **Transparency.** Vertical integration can blur the lines between business divisions in financial accounts. This could make it difficult to compare the performance of firms in the sector or identify whether gentailers favour their own retail businesses over non-integrated retailers.

3.24. Where these matters are observed in practice, hedge contract buyers (especially independent retailers and generators) cannot be confident that the shaped hedges they need will be available (liquidity), will be competitively priced, or that they will be treated even-handedly (compared to their competitors). Non-integrated retailers and generators are likely to face higher costs or less favourable terms, resulting in less dynamic competition (innovation over time). This would ultimately be expected to result in higher prices for consumers. As discussed in paragraph 3.51 below, these competition risks are of material concern to us, especially given the valuable role we expect that new generation and retail competition will play as the New Zealand electricity sector transforms.

3.25. These risks of vertical integration may persist absent a change in market structure or introduction of Level Playing Field measures. The question for us is whether we are observing indicators suggesting that these risks to competition are present and justify regulatory intervention.

3.26. In the current context, the competition concerns associated with vertical integration and indicated by the evidence relate primarily to Gentailer offers of firming contracts or hedges backed by flexible generation, and particularly whether those offers are impacting generation or retail market competition. In other words, competition concerns are likely to be greatest where Gentailers are both key competitors of retailers and generators, and a supplier of an important input. These issues were canvassed in the Risk Management Review and are discussed further below.

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21 Where a vertically integrated firm (or set of firms) has market power in the supply of an input, it can set prices at a level that reduces the margin available to its downstream competitors, leaving those firms unable to compete in the downstream market. (A margin squeeze could also be imposed by setting prices in the downstream market at a sufficiently low level to leave their competitors unable to compete. Where the firm sets its downstream prices below cost, that could also amount to predatory pricing.)

22 Refusal to supply could be actual or constructive. Constructive refusal to supply is where, for example, a business responds to a request for supply with terms that no competitor would reasonably be willing to accept.

How those competition risks are playing out — access to flexible resources for other market participants

3.27. We have identified specific concerns in the New Zealand market around availability of flexible resources. Flexible generation is the ability to increase or decrease the amount of electricity produced, by turning generation on or off (or ramping output up or down). Non-generation flexible resources include storage technologies (such as grid-scale batteries) and demand response, such as the Tiwai demand curtailment option.

3.28. Hydro and thermal generation are key sources of generation flexibility in New Zealand, which can be used to meet demand at peak times. In contrast, 'intermittent' generation sources such as solar and wind energy are not continuously available but fluctuate depending on weather conditions.

3.29. Access to flexibility is something that all market participants need as explained in the following examples.

(a) Non-integrated retailers currently (and for the foreseeable future) require access to flexible resources through risk management (hedge) contracts to manage the risk of volatile prices on the wholesale spot market compared to the largely fixed price contracts they have with mass market retail customers. Risk management is also an important input for large industrials.

(b) Non-integrated generators, who are looking to invest in new intermittent generation sources such as solar or wind, may require access to 'firming' to enable them to meet electricity demand when that generation is not running, (for example, there is no wind). Lack of access to firming can also prevent electricity users from entering long-term contracts with generators, called PPAs. These PPAs can help non-integrated generators secure finance for construction of these new generation assets.

3.30. Around 90% of all hydro and thermal generation is owned by the Gentailers. Gentailers' natural hedge — the ability of their retail arms to have first call on the flexible generation operated by their generation arms — means they are less reliant on access to risk management contracts than non-integrated suppliers.

3.31. Gentailers' dual role, as both retailers and suppliers of this crucial flexibility input (to both their own retail arms and their competitors), also raises the risk of discriminatory behaviour when non-integrated firms seek access to hedge products from Gentailers.

3.32. There is a substantial change occurring in the sector, as demand increases, and more intermittent generation is built — the market has yet to find its new equilibrium. In relation to risk management specifically, we expect the following.

(a) Supply of hedge contracts — backed by existing resources — will become tighter as the resources that back them become more scarce (as there is more intermittent generation to firm, but likely less thermal generation in the market).

(b) The ability to expand flexibility resources is constrained, especially resources that can firm longer duration sequences — such as multi-day low-wind spells in winter, or multi-week dry spells.

(c) Other flexibility resources that can address shorter-duration sequences, such as mass-market demand response and vehicle-to-grid, are still developing.

3.33. This context — more demand for risk management, less flexible resource to back hedge contracts, and constrained ability to expand resources — is important in the short and medium term. That is, all other things being equal, these three factors will likely impact retail competition, and therefore choice and price for consumers, during the next few years at least.[23]

The interaction between scarcity and competition

3.34. As acknowledged in the Risk Management Review, some concerns we have raised have both a scarcity and a competition risk component to them, and it has been difficult to draw an exact line between the two.

3.35. Conceptually though, we have a clear view of how these drivers should operate.

(a) Scarcity of fuel or capacity for flexible resources, properly estimated and evidenced,[24] will limit the number of shaped hedges (backed by those flexible resources) that are available for a given future period. Assessment of the number of shaped hedges available at any given time should be a matter for experts,[25] and ultimately provides 'the size of the pie'.

(b) Managing competition risk is then where regulation comes in. Once the pie size has been assessed, competition risks give us cause to consider 'whether the pie is being shared/sliced appropriately, including how each slice is priced'. If we are not satisfied with this — that is, we consider that the sharing is occurring in a manner that is harming competition — regulation can be used to recalibrate the slicing and pricing.

3.36. We discuss some implications of addressing competition risks in the context of fuel scarcity in Chapter 6.

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23 Electricity Authority 'Reviewing risk management options for electricity retailers – issues paper' (7 November 2024), page 3.

24 Acknowledging that no estimate of future scarcity will be 'right' given it involves unknowable inputs such as future rainfall, a robust assessment should be made based on known fact, trends, credible forecasts and a well understood methodology.

25 Noting that the size of the pie – the level of flexible generation capacity backing hedges – can change over time and can be influenced by regulation.

The evidence demonstrates a risk of competition issues in the hedge market

3.37. Concerns regarding the impact on competition of Gentailer vertical integration have gained more prominence recently, particularly following the fuel shortage issues of August 2024.

3.38. Our recent work has provided some evidence of the risk of competition issues resulting from Gentailer vertical integration. Issues identified in the Risk Management Review and ITP/RGM post-implementation review are particularly relevant.

Preliminary findings in the Risk Management Review issues paper

3.39. The Risk Management Review has identified concerns regarding both availability and pricing of super-peak hedge contracts. More specifically, the Risk Management Review issues paper found the following.[26]

(a) All retailers managing wholesale price risk use a portfolio of complementary risk management options — there is no one 'right' solution when insuring against wholesale electricity market volatility.

(b) There are several close risk management substitutes for an OTC contract-based portfolio (baseload hedges and any super-peak hedges, peak hedges or caps), for example, baseload hedges combined with one of battery renting, demand response or retail tariffs.

(c) However, these alternative options are only starting to be deployed in the New Zealand market, so may not yet — and perhaps for a few years — be able to discipline the prices of shaped OTC hedge contracts.

(d) Retailers so far have been able to secure substantial shaped hedge cover through OTC contracts, but the market for shaped cover is neither deep nor liquid. Over a third of the time retailers receive only one offer in response to requests for shaped hedges.

(e) The evidence points to fuel or capacity scarcity often being the driver behind the current thin and illiquid market for shaped hedge cover.

(f) Our analysis indicates that the prices for OTC baseload and peak hedge contracts are likely to be competitive. However, we could not reach the same conclusion for OTC super-peak hedge contract prices as they trade at a substantial unquantified premium over ASX baseload prices adjusted for shape.

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[26] Electricity Authority 'Reviewing risk management options for electricity retailers – issues paper' (7 November 2024), pages 2–4.

(g) While the evidence points to scarcity, it did not definitively show why some Gentailers sometimes elected not to respond to requests for proposals for shaped hedges, or why some Gentailers provided non-conforming responses.

(h) Nor could we determine from evidence whether the prices of OTC super-peak hedges were consistent with competitive prices, and whether the increase in OTC super-peak prices (as a percentage of ASX baseload prices) that we observed over the assessment period is justified.

(i) While the evidence points to scarcity being a driver, there is also a plausible driver that has competition implications (for example, refusing to supply products on appropriate terms to counterparties who are downstream competitors), indicating that some level of market power could have been in play.

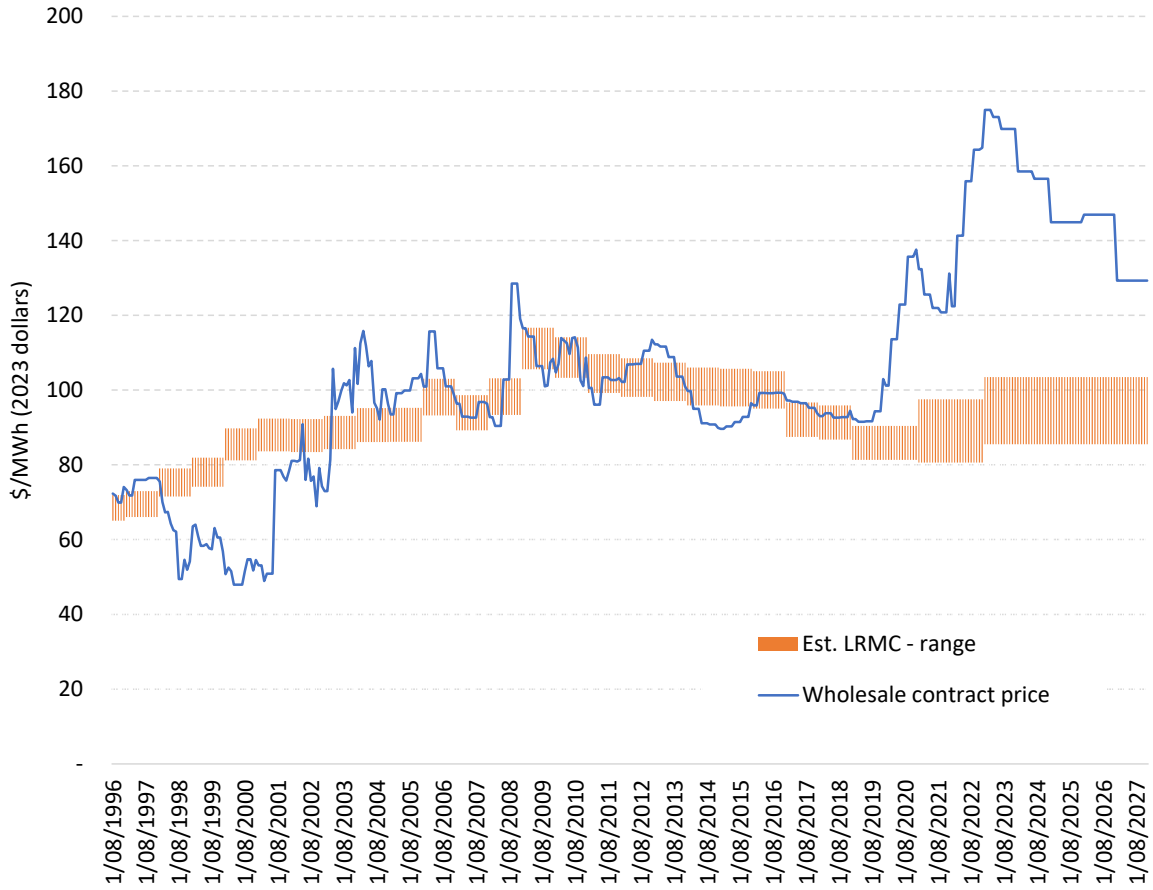
3.40. The Risk Management Review has not specifically focused on retail pricing. Therefore, the Risk Management Review issues paper did not make any preliminary findings regarding whether there is a margin squeeze (as alleged by independent retailers).[27]

3.41. We also note that there is also an ongoing gap between the forward curve derived from ASX hedge prices and the cost of new generation build, as shown in Figure 4 below. The gap is significant and has endured for many years.

3.42. A conclusion some parties have drawn from this ongoing gap is that there are barriers impacting the extent or effectiveness of new entry or expansion that would close the gap. An alternative explanation is that a range of factors explain this gap, including material market uncertainties at various points (for example, gas supply uncertainty, whether the Tiwai Pt aluminium smelter would continue to operate, the previous Government's proposed Lake Onslow pumped hydro scheme), and investment lag.

[27] Electricity Authority 'Reviewing risk management options for electricity retailers – issues paper' (7 November 2024), page 5.

Figure 4 – Contract prices and estimated costs for new baseload supply (2023)



Source: Concept Consulting[28]

Internal transfer price post-implementation review

3.43. The underlying issue with Gentailers' ITPs is that they are not currently set on a basis that would allow the Authority to make a meaningful comparison between how the Gentailers treat themselves compared to how they treat third parties.[29]

3.44. The ITP/RGM post-implementation review found a general consensus that the current ITP and RGM reporting had limited usefulness, with Gentailers using ITPs primarily for accounting purposes rather than setting retail prices.[30] This reflects the ITPs not being reliably constructed to take account of future price expectations in a comparable way as the hedge contracts sold to non-integrated retailers, which led to us concluding:

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28 Concept Consulting 'Generation investment survey – prepared for the Electricity Authority' (2023 update), slide 6.

29 Gentailers' ITPs are effectively the price at which their generation arms 'sell' electricity to their retail arms.

30 Electricity Authority 'Internal Transfer Price and Retail Gross Margin post-implementation review' (7 November 2024).

> ‘We accept the consensus from all parties that provided feedback to us that the current ITPs are not a useful measure for any assessment that is seeking to better understand competition in the retail electricity market.’

3.45. This disconnect between the ITPs and retail pricing suggests there may be an uneven playing field. The Gentailers’ vertical integration means their retail arms may not be exposed to the same choices, risks and costs faced by non-integrated retailers. For example, the Gentailers’ retail arms largely do not need to make choices regarding how much hedge cover they purchase — instead they have ITP cover available for variable volumes without having to absorb some type of premium for this benefit. While that is an understandable driver of the decision to vertically integrate, when that integration then aggravates competition concerns, it necessarily invites closer regulatory consideration.

3.46. While Gentailers largely dismiss the value of ITPs, including the extent of their influence on retail prices, these internal prices remain in place, and Gentailers have not substantively responded to criticism of them. In an environment where level playing field and margin squeeze concerns have been raised, the existing approach to ITPs is not fit for purpose.

Submissions on the Risk Management Review issues paper have not caused us to doubt the views we set out

3.47. As set out in Authority’s *Reviewing risk management options for electricity retailers — Update paper following submissions,*[31] released at the same time as this Options paper:

> “… submissions have not caused us to change our preliminary risk management review findings.
>
> …
>
> The Authority is charged with promoting competition, reliability and efficiency in the electricity industry for the long-term benefit of consumers. The findings above highlight competition risks regarding the availability and pricing of shaped hedge contracts. In the short to medium term this in turn risks impacting the expansion of non-integrated retailers, the entry of new generators, and/or the financial risk management of industrial customers. The onus is on the Authority to respond accordingly, to address potential competition issues, and promote generation and retail competition to deliver better performing markets for consumers.
>
> While submitters put forward a range of views for and against these findings, parties that disagreed did not present further data or specific evidence to support these views, despite having the best access to relevant information. Given the lack of evidence provided to disprove or reduce the Authority’s competition concerns, we consider it is appropriate to

[31] Electricity Authority ‘Reviewing risk management options for electricity retailers – Update paper following submissions’ (27 February 2025), published at the same time as this options paper.

take steps to address these concerns to promote competition in, and the efficient operation of, the electricity industry for the long-term benefit of consumers."

Other Task Force initiatives will not completely address issues arising from vertically integrated firms controlling the majority of flexible generation

3.48. Although we expect other Task Force Package One measures to help promote competition, they are more targeted solutions at immediate issues, which will not fully address the competition concerns arising from vertical integration of the big four Gentailers. We are:

(a) considering a range of options to support the development of the PPA market in New Zealand

(b) facilitating the development of standardised flexibility products which should improve access to these products and provide the sector with more information about future electricity prices, supporting risk management and investment decisions.

3.49. Neither standardised flexibility product nor PPA initiatives are likely to fully address the broader risk of Gentailers discriminating in favour of their own internal business units over non-integrated competitors in relation to firming or hedging.

3.50. The products and options being considered under the standardised flexibility product and PPA initiatives are looking at the most immediate needs. These are both helpful, but they are targeted solutions which do not address the full range of ways in which Gentailers could seek to leverage any market power that they have (for example, other hedge products, differences in decision making and processes between ITPs and externally traded hedges where Gentailers have an information advantage and ability to favour themselves).

3.51. So given the concerns identified at paragraph 3.37 to 3.47 above, in our view there are good reasons to consider the introduction of a proportionate Level Playing Field measure in addition to the standardised flexibility product and PPA initiatives to address the competition risks in relation to hedging/firming that we have identified — specifically the following.

(a) The competition risk is clear — Gentailers have the opportunity and incentive to restrict generation and retail competition because of their control of the flexible generation base, and therefore of the firming/hedging input their competitors need (at least in the short to medium term).

(b) The evidence, particularly from the Risk Management Review, raises genuine concerns that this risk may be playing out — withholding of supply, over-pricing, favouring supply to internal channels over external competitors.

(c) The Gentailers have an information advantage over all other parties (including us) — vertical integration combined with ITPs that are not fit for purpose make it more difficult for any third party to assess price risks and competition issues.

The Gentailers have not put forward any new or compelling evidence to reduce our concerns.

(d) This competition risk is a concern to us as the New Zealand electricity sector transforms (growing demand, increased intermittency and need for flexibility). In this environment, new generation and retail competition will play a key role providing more options to consumers to manage their electricity use and cost, enhancing security of supply and applying downwards pressure on prices, including through substantial increases in generation investment. Consumer outcomes will be poorer without this competitive pressure.

(e) In the circumstances and given the risks, at this stage (subject to submissions) it is necessary in our view to consider introducing proportionate non-discrimination measures. These measures start with principles-based non-discrimination obligations — which are at the lower end of potential interventions — and are likely to promote competition and dynamic long-run benefits for New Zealand consumers, in the face of a substantial known risk.

(f) Our preliminary view is that that the benefits and basic logic of this intervention are worth pursuing. The Gentailers that own critical flexible generation resources should treat all businesses that need supply from that generation fairly. This is orthodox infrastructure regulation, that has been applied overseas and in other contexts (often with more extensive interventions) based on the identification of similar competition risks.

Questions

Q1. What are the benefits of vertical integration between generation and retail? Do you have any evidence to better specify and quantify these benefits? In particular, we are interested in benefits that would be realised by New Zealand's electricity consumers.

Q2. Do you agree with our description of the competition concerns that can arise from the combination of Gentailer vertical integration and market power? Why/why not? Do you have any evidence to better specify and quantify the competition risks of vertical integration?

Q3. To what extent does vertical integration of smaller gentailers, such as Nova and Pulse, raise competition concerns? Should these smaller gentailers be subject to any proposed Level Playing Field measures?

Q4. Are there other specific areas (other than access to hedges) where Gentailer market power and vertical integration are causing competition concerns?

Q5. Do you agree with our preliminary view that the evidence indicates there may be good reasons to introduce a proportionate Level Playing Field measure to address the competition risks in relation to hedging/firming? Why/why not?

4. Level Playing Field options we have identified

We have focused on four Level Playing Field options

4.1. To address the competition concerns described above, the Authority has focused on four main Level Playing Field options.

(a) Option 1: Accounting separation

(b) Option 2: Non-discrimination obligations

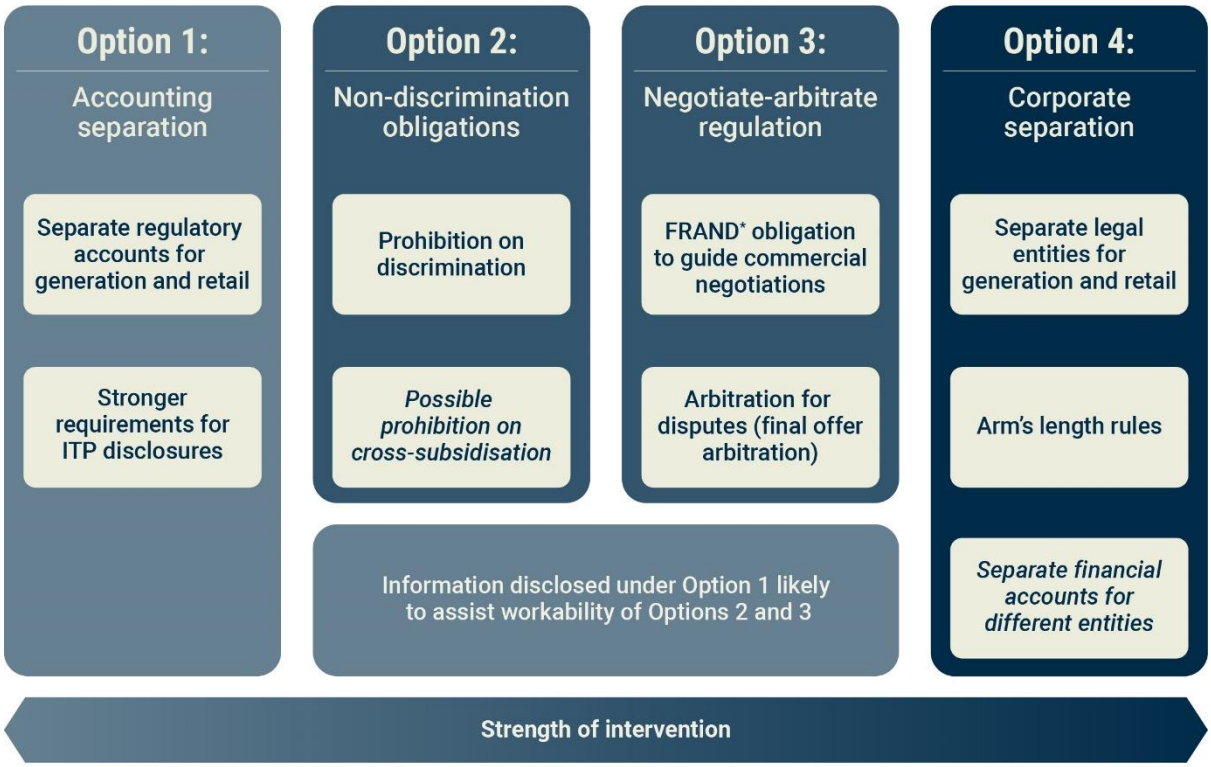
(c) Option 3: Negotiate-arbitrate regulation

(d) Option 4: Corporate separation

4.2. We have aimed to include a menu of options, so that the most appropriate solution(s) can be chosen based on the specific circumstances at the time of the assessment. We have also focused primarily on measures within our existing powers — that are able to be implemented under the Code.

4.3. As shown in Figure 5 below, the Level Playing Field options also escalate from less intrusive measures (for example, disclosure of accounting information under Option 1) to more intrusive measures (for example, separation of Gentailers into different legal entities under Option 4, which may require primary legislation).

Figure 5 – Summary of Level Playing Field options



* FRAND = Fair, reasonable and non-discriminatory.

4.4. There are many possible variations of these options. For example, Cave (2006) outlines various other forms of vertical separation that could be implemented (including creation of a wholesale division, virtual separation, business separation and ownership separation).[32]

4.5. We are comfortable that the four options we have identified are representative of the core Level Playing Field measures that are available. Although we acknowledge the range of possible variants (and implementation options), our preliminary view is that these are second order questions. As such they are best considered when developing a preferred Level Playing Field option(s) in more detail, rather than in this initial assessment.

4.6. Each of the four Level Playing Field options we have focused on are described in more detail below, including high-level discussion of their key features, pros and cons.

4.7. We sought early input from stakeholders to help ensure that the pool of Level Playing Field measures we were considering was comprehensive. We published a request for stakeholder input on 22 October and received 17 responses.[33] Submissions largely reinforced the options identified above, helping confirm that we have identified the most relevant measures. The submissions we received are summarised in Appendix A.

Option 1: Accounting separation

4.8. Accounting separation requires that the financial accounts of a vertically integrated firm's business units (for example, the generation and retail arms of a Gentailer) be kept separate. The intention is to:

(a) ensure that the costs, revenues and profits of each business unit, and any transfers between them, can be clearly identified

(b) enable comparison of prices offered in the wholesale market with the effective prices paid by the vertically integrated firms

(c) help identify conduct issues such as margin squeeze or below-cost pricing.

4.9. Accounting separation is a form of information disclosure regulation. Greater transparency regarding the financial performance of the separate business units would help 'shine a light' on any anti-competitive behaviour. The greater public scrutiny that results from disclosures could be expected to help discipline behaviour, to avoid further regulatory intervention.

4.10. Key features of accounting separation are summarised in Table 1 below.

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32 Cave, M. 'Six Degrees of Separation – Operational Separation as a Remedy in European Telecommunications Regulation' *Communications & strategies*, no. 64, 4th quarter 2006, p. 89.

33 These responses are available on our website: Energy Competition Task Force | Our projects | Electricity Authority

Table 1 – Accounting separation: Key features, pros and cons

Features	
• Separate financial accounts for a Gentailer's internal business units (for example, generation and retail) • Specific cost allocation methodologies and audit requirements could be imposed • A targeted form of accounting separation could focus specifically on ITP calculation / disclosure	
Pros	**Cons**
• Enhances transparency with clear identification of costs, revenues and profits • Enables price comparisons in the wholesale market (that is, between ITPs and other wholesale prices) • Helps identify any conduct issues / discriminatory behaviour • Relatively low implementation cost • Preserves efficiencies from vertical integration	• Information disclosure alone does not directly address risks of discriminatory conduct or low liquidity • Any Gentailer incentives to favour internal business units would remain • By itself, may not be sufficient to foster competition or protect consumer interests

4.11. Gentailers' ITPs are of interest and relevance when considering accounting separation in the current context. ITP is the term used to describe the accounting practice of pricing transactions within businesses or between related parties. In this case, an ITP represents the internal price at which a Gentailer's retail function 'purchases' from its generation function.

4.12. Since 30 November 2021, the Code requires certain gentailers to disclose their ITP figures and methodology and certain retailers to submit their RGM figures to us annually. However, as discussed in Chapter 3, a recent post-implementation review found that the current ITP and RGM reporting has limited usefulness.[34]

4.13. A possible implementation of accounting separation could focus on strengthening the regulatory requirements regarding how ITPs are calculated, to provide a meaningful benchmark to assess whether Gentailers are favouring their own retail/generation business over non-integrated competitors. Stronger regulatory

[34] Electricity Authority 'Internal Transfer Price and Retail Gross Margin post-implementation review' (7 November 2024).

requirements for ITPs could either be implemented with broader accounting separation requirements, or as a targeted solution.

4.14. However, we have concerns about the likely effectiveness of regulating ITPs as a standalone remedy to address concerns about discriminatory behaviour by Gentailers. It is unlikely to be a timely solution, noting particularly the scope for debate about whether different approaches are efficient and/or justified by different circumstances, and the information asymmetry between the Gentailers and other parties (including us). As a standalone remedy it also does not directly impact the pricing and availability of hedges for third parties, instead relying on pressure created by disclosure and analysis to motivate the Gentailers to make pro-competitive changes.

Option 2: Non-discrimination obligations

4.15. Non-discrimination obligations would prevent Gentailers from treating themselves substantially differently from their non-integrated competitors, or from treating different competitors substantially differently.[35]

4.16. The aim would be to prevent anti-competitive conduct by Gentailers, who have incentives to favour their own internal business units (primarily their own retail arms) over other parties. Non-discrimination obligations would promote a level playing field by giving non-integrated retailers and generators access to products (for example, hedge contracts, firming) on substantially the same terms as Gentailers supply themselves internally.

4.17. There are various ways non-discrimination obligations could be implemented, including high-level rules under a principles-based approach, detailed requirements under a prescriptive approach, and market-based requirements.

4.18. Key features of non-discrimination obligations are summarised in Table 2 below.

[35] We have included draft non-discrimination principles in Appendix B, to help enable more informed submissions. The associated guidance set out circumstances where some difference in treatment between a Gentailer's internal business units and non-integrated competitors may be acceptable (for example, prudential requirements). However, different commercial terms must have a cost-based, objectively justifiable reason.

Table 2 – Non-discrimination obligations: Key features, pros and cons

Features	

• Gentailers required to ensure substantially the same treatment between their internal business units and non-integrated retailers/generators (for example, regarding pricing, procedures, information sharing)
• Various implementation options are available, including principles-based rules, detailed (prescriptive) obligations and market-based requirements
• Non-discrimination obligations could be implemented with:
  ○ accounting separation (Option 1) to help identify discriminatory pricing
  ○ a prohibition on Gentailers giving/receiving cross-subsidies between business units.	

Pros	**Cons**
• Promotes a level playing field by giving Gentailers' non-integrated competitors access on same terms as their internal business units • Relatively low-cost method to mitigate risk of discriminatory behaviour • Relatively quick to design and implement (if principles-based) • Preserves some benefits of vertical integration, by not imposing separation requirements • Able to be applied in a graduated manner (from more flexible to more severe), reflecting the circumstances the requirements are responding to	• If principles-based, would be a qualitative standard which leaves room for interpretation (but this could be prescribed in additional detail over time) • Monitoring and enforcement could be challenging (for example, distinguishing anti-competitive intent from legitimate business decisions) • May be difficult to identify discrimination without accounting separation or improved ITP disclosures

4.19. Non-discrimination obligations are common in sectors characterised by large vertically integrated incumbent firms. For example, non-discrimination and equivalence obligations apply in the New Zealand telecommunications sector.[36] The Grocery Industry Competition Act 2023 also includes provisions for wholesale supply of groceries on non-discriminatory terms.[37] However, care needs to be taken when comparing between sectors, because each will have its own characteristics which affect how non-discrimination rules are implemented and applied.

[36] These equivalence and non-discrimination rules are overseen by the Commission, the telecommunications sector regulator. The Commission has published guidance on these rules: Commerce Commission 'Equivalence and non-discrimination – guidance on the Commission's approach for telecommunications regulation' (30 September 2020).

[37] Grocery Industry Competition Act 2023.

4.20. A prohibition on cross-subsidisation between gentailers' generation and retail arms could be coupled with non-discrimination obligations. For example, in the Great Britain electricity sector, the generation licence conditions overseen by Ofgem include separation requirements along with a prohibition of discrimination in selling electricity (condition 17), a prohibition of cross-subsidies (condition 17A), and provisions regarding regulatory accounts (condition 16).[38]

Case study: Great Britain Electricity Generation Licence conditions

Several stakeholders have pointed to the approach in Great Britain (GB) for addressing competition concerns arising from Gentailer vertical integration. For example, independent retailers – including Octopus Energy – have highlighted the Electricity Generation Licence in GB as an example to draw from.[39]

Electricity Generation Licence conditions in GB, overseen by Ofgem, include several forms of level playing field measures.

- Separate legal entities are required for activities in the electricity value chain: generation, transmission, distribution, retail/supply. (A common owner of these licenced entities is allowed).
- *Condition 16 – Regulatory Accounts* requires parent companies to keep and publish separate accounts for each generation and retail/supply business, including accounting records of transfers or allocations between businesses.
- *Condition 17 – Prohibition of Discrimination in Selling Electricity* prohibits generators from selling or offering electricity to any person or business on terms that are materially better or worse than those on which it sells or offers to comparable wholesale purchasers.
- *Condition 17A – Prohibition of Cross-Subsidies* prohibits generators from giving or receiving a cross subsidy from another related business in certain circumstances.

Ofgem's 'Secure and Promote' changes in 2014 also supplemented these conditions with rules around contracting conduct (including standardised credit requirements and timeliness of requirements) and market making arrangements.

We understand that there is limited application of these generation licence conditions currently, because de-integration has occurred naturally in GB as the market has evolved.

We appreciate that we can learn from the GB licence conditions - it is instructive to observe level playing field measures that have been implemented in a comparator jurisdiction.[40] However, we are wary of attempting to directly mirror the GB licence conditions in the New Zealand market because:

- The original GB licence conditions have been in place for a long time. Our understanding is that they: (i) came into effect with deregulation, so no before-and-after comparison can easily be made; and (ii) were not specifically put in place to respond to concerns about access to flexible generation (that is, they are not a case study of whether this remedy will solve issues in the New Zealand market).

38 Licences and licence conditions | Ofgem.

39 Independent retailers 'Critical the Energy Competition Task Force works at pace' (25 September 2024), pages 9–10; and Octopus Energy 'Energy Competition Taskforce – request for level playing field measures' (4 November 2024), page 3.

40 We have drawn from the Secure and Promote licence conditions when developing our proposed approach to implementing non-discrimination obligations (as set out in Appendix B).

- There are a range of differences between the New Zealand and GB markets including in market structure, timing of reforms, resource availability and government intervention. For example, the UK government has a 'flexibility innovation programme' underway to enable large-scale widespread electricity system flexibility. There is a risk of over-attributing market developments in the GB to these licence conditions only.
- The GB licence conditions are not a silver bullet. The GB market continues to face some of the same questions we are considering (for example, hedge market liquidity).

Option 3: Negotiate-arbitrate regulation

4.21. The aim of negotiate-arbitrate regulation is to encourage parties to reach commercial agreement, through negotiation, limiting the need for direct regulatory intervention.

4.22. Negotiate-arbitrate regulation could be introduced by:

(a) imposing an obligation on Gentailers to provide access to hedge contracts on fair, reasonable and non-discriminatory (FRAND) terms — as a guiding principle for commercial negotiations[41]

(b) providing for binding arbitration if commercial negotiations are unsuccessful.

4.23. Although various forms of arbitration could be applied, our preliminary view is that 'final offer arbitration' (also called 'baseball arbitration') would be a suitable model in the current context. Under final offer arbitration, the arbitrator selects one of the parties' offers instead of reaching their own separate decision (that is, there is no middle ground). This incentivises the two parties to put forward their best/most reasonable offers or otherwise risk the arbitrator selecting the other side's proposal. This model would also alleviate information asymmetry issues for the arbitrator.

4.24. Key features of negotiate-arbitrate regulation are summarised in Table 3 below.

[41] Alternative guiding principles could also be considered. For example, non-discrimination obligations considered under Option 2 may be suitable for guiding commercial negations.

Table 3 – Negotiate-arbitrate regulation: Key features, pros and cons

Features	
• Obligation on Gentailers to provide access on fair, reasonable and non-discriminatory terms — to guide commercial negotiations • Binding arbitration available if commercial negotiations unsuccessful • 'Final offer arbitration' model could be used — arbitrator would select one of the parties' proposed terms (no middle ground) • We would appoint a qualified independent expert to be the arbitrator • Strict timeframes could be imposed on the arbitrator's decision making to avoid delays/ongoing harm to competition	
Pros	**Cons**
• Strong incentives to reach a commercial agreement without the need for further regulatory intervention • Incentivises parties to make reasonable offers, otherwise arbitrator will select other side's offer • Relatively low-cost solution to implement • Preserves any benefits of vertical integration	• Relies on qualified and independent arbitrator — may be difficult to find • Regime would need to be well designed to support good decision-making — the arbitrator's role and decision-making criteria would need to be clearly defined • Information asymmetries could create challenges during negotiations/ arbitration (that is, Gentailers have the best information)

4.25. The negotiate-arbitrate model is likely to be well-suited for a sector that provides customised or bespoke services, which make it difficult to regulate standardised access terms and prices. However, challenges may arise where:

(a) inherent uncertainty and information asymmetries make it difficult for the arbitrator to decide on highly material issues (for example, future hydrology risk)

(b) a market has high-frequency trading, potentially leading to a large volume of negotiations being referred for arbitration.

4.26. Negotiate-arbitrate regulation is an option available to the Commission when regulating monopoly businesses under Part 4 of the Commerce Act. There is limited experience with applying negotiate-arbitrate regulation in New Zealand, but it has been applied in overseas — for example, regulation of airports in Australia.

Option 4: Corporate separation with arms-length requirements

4.27. Corporate separation (also called legal separation) would require that Gentailers' retail and generation business units be separately, and independently, managed with their own business strategies and key performance indicators. For example, a Gentailer's generation business would be required to deal with the retail business

on an arm's length commercial basis, as it would when dealing with a non-integrated retailer.

4.28. Key requirements could include:

(a) a Gentailer's generation and retail businesses must operate as distinct companies — separate legal entities, with their own governance arrangements (but they can still be under the same ownership)

(b) each company has separate governance (Board of Directors)

(c) each company has a separate management team, which has key performance indicators (KPIs) based on the performance of the separate entity it is overseeing

(d) separate financial accounts for the generation and retail businesses

(e) arms-length and non-discrimination rules, so that the Gentailers cannot give preference to their related retail companies (that is, they would be required to treat themselves and non-integrated competitors substantially the same).

4.29. Features of corporate separation are summarised in Table 4 below.

Table 4 – Corporate separation: Key features, pros and cons

Features	
• Gentailers' generation and retail arms would be operated as separate legal entities but could be owned by the same parent company. • Arm's length rules would be imposed to govern interactions between the separate generation and retail businesses. These rules may include not favouring internal business units, requirements for independent directors, separate management, restrictions on information sharing, keeping records of transactions between business units etc.	
Pros	**Cons**
• Ensures independence between generation and retail arms • Enhances transparency of the performance of separate business units • Stronger safeguard against discrimination and cross-subsidisation than other Level Playing Field measures considered • Increases regulators and stakeholders' trust and confidence that market structure will drive competitive outcomes	• Most expensive option as structural change to Gentailers' businesses would be required • Likely requires primary legislation • Loses more efficiencies of vertical integration (for example, sharing resources, systems) than any other option • Would require establishing a starting hedge position between the two separate entities • Would take years to implement • Would be costly/difficult to undo, if unsuccessful or no longer required in future • Because ownership is not fully separated, there may still be incentives for Gentailers to favour their related businesses (but this would be mitigated through arm's length rules)

4.30. Corporate separation of Gentailers would likely require primary legislation, given the legislative history, the significance of the policy decision involved and the intervention in property rights it would entail. This has been the case in the past for telecommunications and the separation of distribution from generation and retail.

4.31. Corporate separation with arm's length requirements is applied to electricity distributors under the Code, to separate electricity distribution from certain generation and retailing activities.[42] However, these requirements were initially

[42] Electricity Industry Participation Code 2010, part 6A. Electricity Industry Participation Code 2010.

implemented by way of primary legislation and transferred to the Code via primary legislation in 2022.[43]

(a) Ownership separation between distribution, and generation and retail, was first introduced under the Electricity Industry Reform Act 1998[44] following major policy review and debate. It was relaxed over time (to corporate separation with arms' length rules), again by legislation.

(b) The policy rationale for moving these requirements to the Code was narrowly focused on network access and the need for greater flexibility to regulate distributors and emerging markets.[45]

(c) The question of corporate or structural separation of Gentailers has previously been considered as a matter of policy, but not pursued, and the current Act continues to allow an industry participant to be both a retailer and generator.[46]

4.32. Similar forms of vertical separation have previously been applied in other sectors, including the New Zealand and UK telecommunications sectors as shown in the examples below.

(a) In the UK, British Telecom Group is subject to legal separation for its network (Openreach) and retail (BT) businesses.[47]

(b) Although the New Zealand telecommunications sector is now subject to full structural separation (sometimes called 'ownership separation'), which came about as part of the Government's Ultra-Fast Broadband initiative, a lesser form of vertical separation — called 'operational separation' — previously applied.[48]

4.33. Non-integrated retailers have advocated to introduce corporate separation and arm's length requirements for Gentailers. They consider this option would have several benefits, including encouraging investment in new generation by independent generators, increased competition by independent retailers, and ensuring a liquid hedge market.[49]

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43 Electricity Amendment Act 2022.

44 Electricity Industry Reform Act 1998.

45 MBIE 'Cabinet paper: Progressing the electricity price review's recommendations' (13 February 2020).

46 Options other than corporate or structural separation have been pursued: for example, the virtual and real generation assets swaps in 2011.

47 Ofcom 'Delivering a more independent Openreach' (13 July 2017). Statement: Delivering a more independent Openreach.

48 Operational Separation of Telecom | Beehive.govt.nz. Operational separation of Telecom was also enacted under primary legislation – the Telecommunications Act.

49 Matthews Law letter 'Independent electricity retailers – Request for urgent action in wholesale electricity market and corporate separation' (7 August 2024), para 14.

Level Playing Field options we considered, but have not focused on

Compelled contracting

4.34. One of the potential Level Playing Field measures raised in submissions was 'compelled/directed contracting'. Vector noted that this option would:[50]

> "…leave the gentailers' business structures untouched, but to require them to make a defined portion of their generation available to third parties via hedge markets. This would increase the number of contract market transactions and, in turn, the available price data. There are numerous examples of generators being required to offer a share of their generation – sometimes at a regulated price."

4.35. We considered adding compelled contracting, as described by Vector, as a fifth stand-alone Level Playing Field option, but decided against this. Compelled contracting is an important part of the overall set of regulatory interventions that should be considered, but in our view is more likely to be an effective response to the competition risks we have identified as part of a broader package. We note that:

(a) if partially applied, compelled contracting is not a strong Level Playing Field measure — it doesn't impact the pricing of the Gentailers' internal hedge that still applies to much of the Gentailer retail function volumes

(b) compelled contracting is conceptually very similar to the targeted virtual disaggregation already being considered by the Task Force, which is discussed further in Chapter 7 below (noting that this includes considering options to strengthen the remedy proposed by MDAG).

4.36. We have specifically considered the strongest form of compelled contracting — requiring all Gentailer hedging to occur via a market mechanism — as one of the implementation paths for the non-discrimination Level Playing Field option. This is discussed further in Chapter 6 below.

Structural separation

4.37. We have not considered the strictest form of vertical separation, structural separation. In our view primary legislation would be required for this to be put in place.

4.38. Structural separation would require Gentailers' retail and generation arms to be fully separated into different companies, with different ownership. This would eliminate incentives for discrimination and cross-subsidisation but would be costly and operationally challenging to implement (including establishing a starting hedge position between the two separate entities). While corporate separation would also be costly and challenging, this would be to a lesser degree than structural separation.

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50 Vector 'Request for information on level playing-field measures (Initiative 1D)' (5 November 2024), para 13.

4.39. As noted above, structural separation has been implemented in the New Zealand telecommunications sector, where Telecom NZ was separated into Chorus (the wholesale/network business) and Spark (the retail business).[51]

Questions

Q6. Have we focused on the right Level Playing Field options? Are there other options that we should add or remove to the list in paragraph 4.1?

Q7. Are there any other important factors we should consider when identifying options (see paragraphs 4.2 to 4.5)?

Q8. Are there other key features, pros or cons we should consider in our description of the four Level Playing Field options?

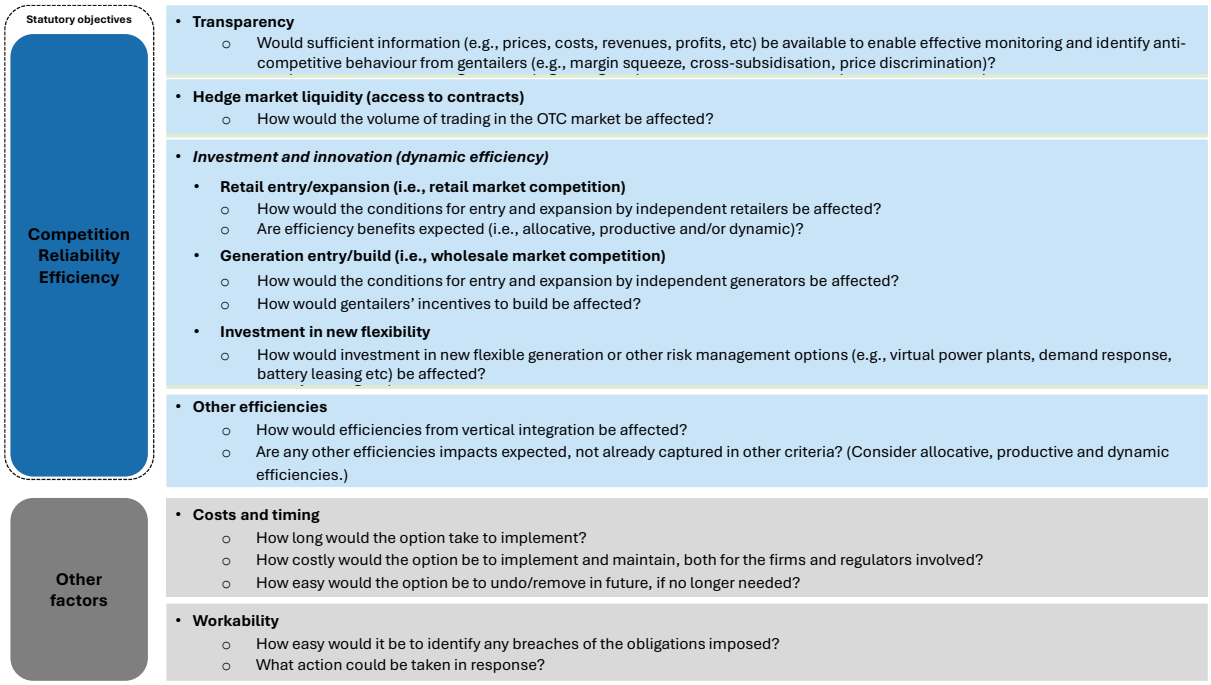
[51] Enacted under the Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011.

5. Our assessment of Level Playing Field options

We have proposed eight criteria when assessing the Level Playing Field options

5.1. The Authority has developed a set of eight criteria for assessing the Level Playing Field options. These proposed criteria are shown in Figure 6 below.

Figure 6 – Proposed criteria for assessing Level Playing Field options



5.2. These criteria have been developed to assist us in assessing the advantages and disadvantages of each Level Playing Field option, in recognition of our main statutory objectives. Each of the eight criteria are directed at assisting us to assess whether, and the extent to which, each of the Level Playing Field options will promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers. We have considered the proportionality of the Level Playing Field measures to the competition issues identified — particularly when compared to other options.

Non-discrimination obligations (Option 2) is our preferred Level Playing Field measure

5.3. Our initial assessment is that mandatory non-discrimination requirements[52] are likely to best meet the above criteria. We consider this option is consistent with our main statutory objectives because it is expected to promote competition in, and the efficient operation of, the industry for the long-term benefit of consumers.

52 That is, requirements set out in the Code.

5.4. Non-discrimination requirements would work well with the standardised flexibility product — a super-peak hedge contract — that has been developed with industry. If that product better addresses the availability of peak demand hedge cover, to promote competition the next logical step would be to ensure that the generation arms of the Gentailers, which control the vast majority of New Zealand's limited supply of flexible generation, are treating all customers in substantially the same way (rather than preferring their own retail arms).

5.5. Non-discrimination requirements would promote a level playing field by giving retailers and generators access to products (for example, hedge contracts) on substantially the same terms as Gentailers supply themselves internally. This would likely provide a substantial competition benefit by:

(a) at minimum, increasing existing and future competing firms' confidence and commitment by reassuring them that they will be competing on an equal footing

(b) addressing any actual competitive impacts of the current scenario where there is little equivalence between the way in which Gentailer retail functions and third parties procure hedging contracts.

5.6. We consider that non-discrimination is the Level Playing Field option that:

(a) Best complements the other levers that we have employed to address identified issues. This includes the standardised flexibility product, which will facilitate trading of shaped hedges (the most immediate issue). Non-discrimination obligations are then targeted at ensuring competing retailers and generators can access these standardised flexibility products on an equal footing. Together they should make a material difference to the promotion of competition.

(b) When combined with the standardised flexibility product, is likely to have a material and faster positive impact on hedge availability, price and even-handedness. That will promote generation and retail competition, which flows through to more choices and more affordable electricity for consumers. Although broad non-discrimination requirements alone may not completely protect against these issues, we expect that codified requirements combined with greater regulatory scrutiny would materially influence Gentailer behaviour. Non-discrimination requirements could also be refined over time, including by introducing substantially more prescription to address any gaps or ongoing issues that are observed.[53]

(c) Is proportionate to the competition issues/risks identified, and the evidence currently before us, particularly when compared to the other available options.

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[53] As described later in this paper, if principles-based non-discrimination obligations were to be implemented in the near term, we would propose continuing work on escalation options (including more prescriptive non-discrimination rules) that could be deployed quickly if needed.

While it would be impactful, principles-based non-discrimination would not completely unwind the current business models of the Gentailers or the benefits of vertical integration. Non-discrimination requirements as a remedy also have the advantage of being flexible, that is, can be escalated to a more severe approach if the evidence and circumstances warrant this. By contrast:

- accounting separation on its own is likely to be too light touch, given it ultimately does not compel even-handed treatment between internal and external customers of the generation arms of the Gentailers
- deeper intervention under corporate separation could add extra cost and disruption to the market, including potentially impacting near-term generation investment by the Gentailers and taking significantly longer to implement, without a better solution to address the concerns identified in the Risk Management Review and ITP/RGM post-implementation review and promote competition in, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

(d) Is most capable of being designed and implemented in a timely way, particularly if a principles-based approach is taken initially.

5.7. However, there would likely be a degree of subjectivity around whether a Gentailer's price or non-price offers are discriminatory. No two retailers or generators have identical businesses, so it may not always be clear-cut whether non-discrimination principles have been breached. This may require the following:

(a) An additional disclosure component to be added to the non-discrimination regime, focussed on Gentailer ITPs. In our view, a more granular breakdown of the nature and extent of Gentailer internal hedging would provide an important benchmark and better allow comparisons of Gentailers' internal and external hedging offers to be made. We note that this requirement imports aspects of accounting separation into our preferred Level Playing Field measure, with a view to increasing the likelihood that it effectively addresses the competition risks we have identified.

(b) Tightening of the principles-based regime over time to clarify and address issues that may arise and impact the workability or outcome of implementation.

5.8. Despite this, we consider that non-discrimination obligations can be an effective remedy where they are well designed to address a clearly targeted regulatory outcome (even-handed hedge access), with appropriate compliance incentives.

5.9. Our preliminary assessment of the four Level Playing Field options is summarised in Table 5 below.

Table 5 – Assessment of Level Playing Field options

	Competition / reliablity / efficiency						*Other factors*	
			Investment and innovation (dynamic efficiency)					
Options	**Transparency (price etc)**	**Hedge market liquidity**	**Retail entry / expansion**	**Generation entry / build**	**Investment in new flexibility**	**Other efficiencies**	**Costs and timing**	**Workability**
Option 1: Accounting separation (or stronger regulatory requirements for ITPs)	• Helps identify price discrimination • Helps identify cross-subsidisation / margin squeeze	• Minimal impact	• Information disclosure regulation helps discipline gentailer behaviour by 'shining a light'	• Minimal impact	• Minimal impact	• Retains efficiencies of vertical integration	• Requires detailed implementation for ITP requirements and requires rigorous monitoring and disclosure • Gentailers will incur some costs preparing separate accounts	• Breaches able to be identified, but actions in response unlikely to achieve substantive change
Option 2: Non-discrimination obligations (assumes princples-based)	• Doesn't fully address issues with ITPs • Would be implemented with disclosure and reporting obligations	• Ensures gentailers provide hedges on substantially the same terms • Expect increased volumes to third parties at more competitive prices	• Limited access to hedge products is a key barrier to entry/ expansion currently • Non-discrimination obligations help independents gain access	• Independent generators could have improved access to firming contracts • Unlikely to materially improve investment incentives for gentailers	• Gentailer retail arms expected to face stronger incentives to invest in flexibility, due to reduced ability to hedge internally	• Some lost efficiencies if gentailers no longer able to fully hedge internally	• Principles-based approach relatively quick to design and implement (but more prescriptive rules would take time) • Gentailers will incur some systems costs to ensure compliance	• Ongoing uncertainty about whether behaviour is discriminatory (if principles-based) • But this could be tightened with more prescriptive rules over time
Option 3: Negotiate-arbitrate regulation	• Doesn't fully address issues with ITPs • Abritration is less transparent	• Helps ensure gentailers provide hedges on substantially the same terms • Expect increased volumes to third parties at more competitive prices	• Limited access to hedge products is a key barrier to entry/ expansion currently • Non-discrimination obligations (embedded in FRAND) and option of arbitration help independents gain access	• Independent generators could have improved access to firming contracts • Unlikely to materially improve investment incentives for gentailers	• Gentailer retail arms expected to face stronger incentives to invest in flexibility, due to reduced ability to hedge internally	• Some lost efficiencies if gentailers no longer able to fully hedge internally	• Would take longer to implement than option 2 - need to design arbitration model • Arbitration model could be costly if used regularly (and depending on decisions)	• Simplifies process for resolving disputes • Issue-by-issue arbirtration process likely slow and legalistic
Option 4: Corporate separation with arm's length requirements	• Separate legal entities would need separate financial accounts • Transfers between separate entities would be clearly identified + arm's length	• Separate legal entities would need to trade rather than internally hedging • Risk that separate generation/retail arms prefer trading with each other (best natural fit)	• Arm's length rules designed to improve access to hedge products	• Separate retail arms, looking for best package of inputs, may open up PPAs or other sales opportunities for new generators • Increased investor confidence if gentailers more tightly controlled	• Gentailer retail arms expected to face stronger incentives to invest in flexibility, due to reduced ability to hedge internally	• Lost efficiencies of vertical integration due to separation	• Significant costs associated with separation into two entities (incl. systems change to meet arm's length requirements) • Would likely take years to design and implement	• Would likely require primary legislation • Challenges in identifying breaches of arm's length rules

	Very positive	Positive	Weak positive	Neutral	Weak negative	Negative	Very negative
Key:							

5.10. While we have not sought to specifically weight the different criteria in the table, we consider the columns headed *Hedge market liquidity*, *Retail entry/expansion* and *Generation Entry/Build* most closely align with promoting competition via the price, liquidity and even-handedness outcomes for hedges that we are seeking. A Level Playing Field option that particularly promotes those criteria and can be implemented quickly with relatively low cost and disruption will likely be fit for purpose.

5.11. A summary of our preliminary views on the other three Level Playing Field options is included in Table 6 below.

Table 6 – Summary of initial assessment against criteria for other Level Playing Field options

Level Playing Field option	Summary of initial assessment against criteria
Option 1: Accounting separation (or stronger regulatory requirements for ITPs)	• A clearer approach to Gentailer transfer pricing that better promotes competition is an important part of any level playing field intervention. • Appears less likely to make a material difference in the near term by itself as information disclosure 'shine a light' type regulation, compared to options that directly prevent discriminatory behaviour. • It is unlikely to be a timely solution, noting particularly the scope for debate about whether different approaches are efficient and/or justified by different circumstances, and the information asymmetry between the Gentailers and other parties (including us).
Option 3: Negotiate-arbitrate regulation	• Potentially has similar benefits to Option 2 assuming that effective non-discrimination obligations are adopted as guiding principles for commercial negotiations and decisions by the arbitrator (either through FRAND, or similar). This would provide a clear process for resolving disputes. • Any negotiate-arbitrate regime would need to be well designed to enable the arbitrator, even assuming they had experience with electricity derivatives, to overcome inevitable information advantage held by the hedge supplier, especially where competition issues are overlaid with scarcity, or the uncertainty inherent in judgements about (say) appropriate levels of hydro storage. • It is also not clear that an arbitration regime, with its inevitable transaction specific procedure and cost, would be well suited to improving outcomes for a regularly repeated process like seeking hedge cover.
Option 4: Corporate separation with arm's length requirements	• Separation would promote transparency (through separate accounts for generation and retail). • Incentives for Gentailers to discriminate would be significantly reduced through separation and arm's length rules. For example, we expect that management teams of

	each company would have KPIs based on the performance of the separate legal entities they are overseeing. • However, it is unclear whether corporate separation is proportionate to the concerns identified in the Risk Management Review and ITP/RGM post-implementation review. This option would also likely add extra cost and disruption to the market, and take significantly longer to implement, without clear additional benefits, given the significant costs and structural change involved (which would be difficult to reverse). For example, there are likely to be significant systems costs to adapt to operating separate entities and ensure compliance with arm's length rules. These costs are likely to be greater in the New Zealand electricity sector, where there are four large Gentailers, than in other sectors where vertical separation has been applied to a monopoly business (for example, fixed-line telecommunications). • Would likely take a long time to implement (based on telecommunications sector experience). It is unclear whether separation would make a material difference to competition during that implementation period. • It is also plausible that the uncertainty from separation would negatively impact on Gentailers' investment in new generation — while we are promoting more generation competition, continued investment by the Gentailers remains important to security of supply in the face of increasing demand.

5.12. Any Level Playing Field measure runs some risk of a short-term increase in retail prices, to the extent that Gentailers may not be currently passing through the full extent of wholesale price increases over recent years. That is the trade-off for longer term competition benefits. We consider that non-discrimination obligations run less of a risk of this outcome than a stronger intervention such as corporate separation, because each Gentailer would ultimately still be one business (so would not have the same incentive for double marginalisation, or similar).

Questions

Q9. Have we identified the right criteria for assessing Level Playing Field options (Figure 6)? Is there anything we should add or remove?

Q10. Do you agree with our application of the assessment criteria (Table 5)? Are changes needed to the colour coding or reasoning?

Q11. Are there any other material benefits or risks that should be considered (but are currently not) in our assessment of options?

Q12. Do you agree with our selection of non-discrimination obligations as our preferred Level Playing Field measure? Why/why not?

6. Roadmap for implementing non-discrimination obligations

6.1. This chapter considers the design of the Authority's preferred Level Playing Field measure (non-discrimination obligations) in more detail.

6.2. As discussed in paragraph 3.51 above, our current view is that there are good reasons to consider introducing a proportionate Level Playing Field measure in addition to the standardised flexibility product and PPA initiatives to address the competition risks in relation to hedging/firming that we have identified.

6.3. Our current view is that a clear implementation roadmap of non-discrimination obligations, alongside the more targeted standardised flexibility product initiative, would best promote the price, liquidity and even-handedness outcomes we are seeking. This roadmap allows for relatively quick initial implementation of non-discrimination rules, which could be tightened over time if needed, and provides clarity about a future pathway for stronger regulatory intervention in future if the risk of competition issues persists.

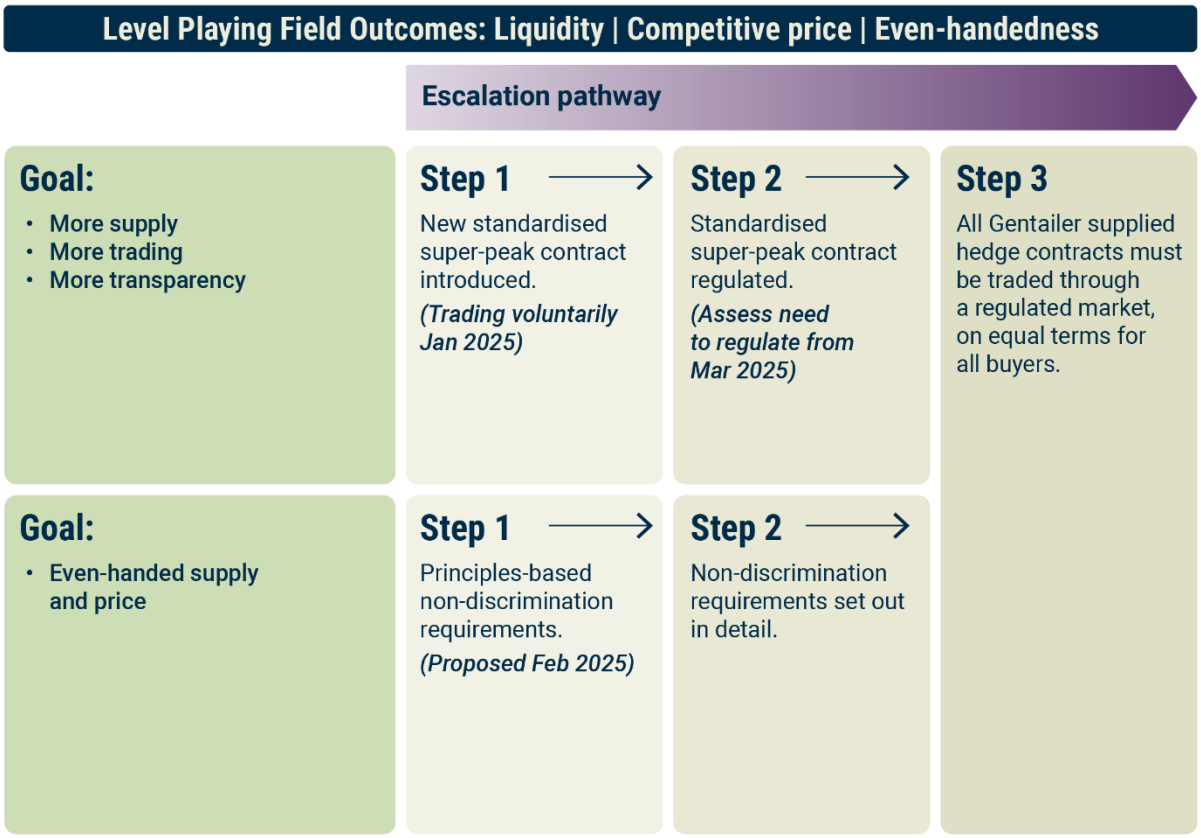
6.4. Our proposed roadmap for implementing non-discrimination is shown in Figure 7 below, within the wider context of the Task Force Package One measures. This applies to all Gentailers' hedge contracts and equivalent financial instruments, including the ITPs. The three steps are as follows.

(a) Step 1: Principles-based non-discrimination requirements, including more detailed ITP design principles

(b) Step 2: Non-discrimination requirements prescribed in detail

(c) Step 3: Mandatory trading of Gentailer hedges.

Figure 7 – Market performance roadmap (Task Force Package One)



6.5. Although it is proposed that the principles-based non-discrimination regime (Step 1) would be mandatory under the Code, in some cases there would likely be more than one valid way that Gentailers could comply. Therefore, we consider escalation options may be needed in case Gentailers are not complying with the intent of the non-discrimination principles. If Step 1 was to be implemented in the near term, we would intend to continue working on the Step 2 and Step 3 escalations so that they could be implemented relatively quickly, if appropriate, in future.

Scope of non-discrimination obligations

6.6. Our current view is that it would be more effective for any non-discrimination obligations to cover all hedge contracts (and equivalent financial instruments), including the following.[54]

(a) Super-peak hedge contracts and internal trades (to Gentailer retail arms and related parties). This is where a specific competition risk has already been identified in the Risk Management Review.

(b) Baseload and peak hedge contracts. The Risk Management Review assessment of baseload and peak hedges was that they are likely to be competitively priced to date, which is supported by the ASX market making

[54] We have focused on these categories of hedge contracts for simplicity, noting that there is a wide range of potential bespoke OTC hedges.

requirement. However, now that we have identified a competition risk relating to super-peak hedges that needs to be responded to, we cannot rule out competition concerns relating to other hedges, especially arising as the Gentailers redesign their internal hedges.

6.7. A narrow non-discrimination regime, focused on one category of hedge contracts, could leave opportunities for discriminatory behaviour for the remaining hedge products. For example, if non-discrimination obligations were applied to super-peak hedge contracts only, Gentailers would retain the ability — and perhaps greater incentives — to discriminate when providing baseload and peak hedge contracts in future.

6.8. We consider that a broader approach, covering all hedge contracts, would therefore be more effective, significantly reducing the risk of competition issues arising for other categories of hedge products. It is not clear to us that there would be significant downside to extending any non-discrimination requirements to baseload and peak hedge products, but we welcome feedback on this point.

6.9. We expect that non-discrimination obligations targeted at hedge contracts, including key terms and conditions like credit/prudential requirements, would be well matched to the outcomes we are seeking to achieve. It is not immediately clear that there are other significant interactions between Gentailers and non-integrated generators or retailers that would materially benefit from having similar requirements applied to them.

6.10. Our current view is that to comply with non-discrimination rules Gentailers may need to (for example):

(a) offer a set of risk management contracts that represent the current terms of (implicit) trade between their generation and retail divisions

(b) offer some amount of each of those contracts for sale (on the same terms) to third parties at current prices that do not discriminate against those parties (noting that there is price volatility of hedge contracts over time, so non-discrimination does not mean that a hedge sold today would be priced the same as a hedge sold a year ago).

6.11. We are interested in stakeholders' views on the products to which any non-discrimination obligations should apply considering current evidence, including from the Risk Management Review.

(a) This includes whether all hedge contracts should be captured, or the obligations should be focused on super-peak hedges only. If submitters consider that there would be a significant downside to applying non-discrimination requirements to all hedges, it would be helpful if they could explain this downside in detail and provide evidence.

(b) This also includes whether there are other interactions between Gentailers and their competitors which would benefit from non-discrimination obligations.

Step 1: Principles-based non-discrimination obligations

6.12. Step 1 would introduce principles-based non-discrimination obligations for Gentailers into the Code, covering all hedge contracts (and equivalent financial instruments). We prefer this approach initially, compared to a more prescribed regime, for the reasons set out below.

(a) We expect that a principles-based approach would be materially faster to implement than detailed rules. Timely implementation is important given the issues identified in the Risk Management Review issues paper and ITP/RGM post-implementation review.[55]

(b) However, non-discrimination principles could be expanded and refined over time if the initial implementation does not generate satisfactory outcomes — including by moving to a more prescriptive approach under Step 2.

(c) A principles-based approach would require each Gentailer to come up with their own implementation of the non-discrimination principles. Outcomes across the Gentailers would likely not be uniform initially but could be tuned over time reflecting the most successful aspects of the various implementations.

(d) We expect non-discrimination principles would result in immediate changes in behaviour that would promote competition. For example, we expect a positive impact on liquidity as Gentailers would no longer be able to allocate hedge volumes to their own business units first, so will likely need to offer at least an extra increment of hedging to third parties (discussed further below under 'Implications of Package One initiatives for shaped hedge liquidity and flexibility investment' at paragraph 6.35).

(e) By being tailored to the circumstances of each Gentailer, we expect that an initial principles-based approach would carry a lower risk of regulatory error than immediately prescribing detailed rules.

6.13. Given the discretion available within a principles-based regime, a substantial monitoring and reporting regime would be required to incentivise and demonstrate compliance, including the following.

(a) regular self-reporting by Gentailers, setting out in detail how they have complied with the principles, and any instances of non-compliance

(b) requiring all hedges 'sold' to Gentailers' internal retail arms (regardless of the formality of this transaction) to be disclosed through hedge disclosure

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55 Our experience is that it takes significant time to develop the detail of a prescriptive approach to regulation, given the need to develop detailed rules which are technically robust and workable. This generally requires a lengthy engagement process with market participants and other stakeholders.

obligations or otherwise, including a granular breakdown of baseload, peak and super-peak hedges

(c) where a Gentailer does not provide a conforming response to a request for hedge cover, a requirement for the Gentailer to explain the reasons why

(d) external audit or Director certification requirements.

6.14. As well as monitoring compliance with any new regulatory requirements, we would also monitor the broader outcomes observed in the market, such as wholesale and retail prices.

6.15. Draft non-discrimination principles (and associated guidance) are included in Appendix B as an indication of our current thinking regarding how Step 1 could be implemented. For the avoidance of doubt, we are not currently consulting on amending the Code to introduce these principles. Rather, we are including Appendix B to set out our early thinking and enable more informed submissions on this options paper. We would welcome your feedback on any aspect of these principles or the guidance that sits underneath them.

Interaction with ITP disclosure requirements

6.16. As discussed in the ITP/RGM post-implementation review, there was consensus from all parties who provided feedback that the current ITPs are not a useful measure for any assessment that is seeking to better understand competition in the retail electricity market. This is because:[56]

(a) the Gentailer ITPs are primarily for accounting purposes

(b) the Gentailers variously said that ITPs:

- are used as one input — alongside other inputs — for decision-making purposes and to inform mass-market prices
- are used as an indicator to assess general trends in the cost of energy but are not used as the definitive cost of energy
- are not used as a price point to sell to third parties.

6.17. Given these concerns, we have considered whether non-discrimination requirements would be effective without first strengthening the ITP requirements (to assist with comparing internal pricing practices with those adopted for third

[56] Electricity Authority 'Internal Transfer Price and Retail Gross Margin post-implementation review' (7 November 2024).

parties).[57] In other words, meaningful ITPs would provide a clearer basis for assessing offers to non-integrated retailers and generators.

6.18. Our current thinking is as follows.

(a) More robust ITPs would be valuable — an important benchmark for any robust non-discrimination obligations.

(b) A new, robust ITP methodology will need to be informed by the implicit internal hedging strategy of Gentailers, since these hedges (and their value) determine the actual ITPs.

(c) The timely implementation of a principles-based non-discrimination regime, with adequate guardrails, will put the onus on Gentailers to demonstrate how their hedge offers (including pricing) to non-integrated retailers/generators are 'substantially the same' as what they offer themselves internally. This is the same information that will be needed to derive an accurate ITP. So, the non-discrimination regime will itself advance work on more robust ITPs.

(d) These guardrails are likely to include requirements for Gentailers to disclose to us how they consider the relative costs of their generation and retail businesses, by explaining the nature and extent of their internal hedging in a granular way (for baseload, peak, super-peak, etc). This would provide us with a better information base against which offers non-integrated competitors could be compared with. In other words, we consider that a successful principles-based non-discrimination regime is likely to include elements of disclosure akin to accounting separation (Level Playing Field Option 1, discussed in Chapter 4).

(e) To eliminate any doubt, we expect that any requirement on the Gentailers to disclose their internal hedging in a more granular way would apply to all hedges regardless of the scope of any non-discrimination requirements (see discussion above at paragraph 6.6 to 6.11). This greater transparency would assist our ongoing monitoring, that is, better allow us to detect any further competition concerns earlier.

(f) Our preference at this point would also be for Gentailers' internal hedging arrangements to be publicly disclosed, noting some details may be commercially sensitive so should be protected. Amongst other things this would contribute to establishing a better forward price for shape/flexibility, which would be valuable in terms of promoting more investment in flexibility.

6.19. Therefore, we are proposing that Gentailers must establish an economically meaningful portfolio of internal transfer prices based on market traded hedges

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[57] For example, ITPs could be strengthened to ensure that they: (i) are representative of Gentailers' retail price setting practices, and (ii) represent the current cost of buying wholesale electricity (rather than in some cases being backward looking).

adjusted for internal requirements (for example, volume, shape, duration) — see the draft non-discrimination principles in Appendix B.

6.20. One of the key concerns underlying independent retailers' complaints to the Commission and us is that Gentailer approaches to pricing hedge contracts for those retailers appear to be discriminatory compared to their internal pricing.[58]

6.21. Where that is the case (for example where a Gentailer explicitly retains the ability to make discretionary adjustments to their ITPs), we would expect as part of the roll out of any non-discrimination regime to be actively setting the expectation with Gentailers that they transparently reset their ITP methodologies, or adjust the basis upon which they price external hedges (in either case, a material shift).

6.22. We expect that this approach would result in a material shift in the right direction, that could then be refined through increased prescription, if needed.

Retail pricing

6.23. To eliminate any doubt, it is proposed that any non-discrimination regime would apply only to hedging, as a key input to electricity retail businesses, and specifically would not be intended to bind or limit the ways in which Gentailers may choose to compete in the retail market (including their price or non-price offers).

6.24. This reflects our intention to promote competition at a retail level by:

(a) ensuring that non-integrated competitors can secure supply of a key input — hedge contracts — on substantially the same terms as Gentailers' internal business units

(b) allowing vigorous, flexible and innovative competition by all retailers.[59]

Step 2: Prescribed non-discrimination requirements

6.25. The second step, if triggered, would be to introduce more detailed (prescriptive) rules governing Gentailers' interactions with buyers of hedge products. The aim would be to remove (or at least significantly reduce) the room for discretion that would exist under principles-based rules.[60]

6.26. Examples of key access terms that could be prescribed in more detail include:

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58 For example, Contact effectively uses an historic price (a three-year average of ASX settlement prices) for its ITP; Mercury explicitly retains a discretion to manually adjust its ITP if it deems the price outlook to be unreliable or volatile.

59 Noting that the existing protections in the Commerce Act 1986 would still also apply to any retail level competition concerns, for example, margin squeeze.

60 We note that in the telecommunications sector, the Commission has published over 80 pages of guidance regarding the approach to equivalence and non-discrimination. Commerce Commission 'Equivalence and non-discrimination – guidance on the Commission's approach for telecommunications regulation' (30 September 2020).

(a) strengthening the framework for ITPs by ensuring that a common methodology is applied across the Gentailers, limiting the scope for subjective adjustments

(b) developing more detailed rules that specifically address other key access terms (for example, prudential requirements, prioritisation when allocating hedge capacity internally vs externally)

(c) developing more detailed regulatory accounting requirements (accounting separation), to enhance information disclosure regarding the financial performance of Gentailers' separate business units, as a method of testing the effectiveness of the non-discrimination requirements.

6.27. We expect industry would have a key role to play in developing any prescribed non-discrimination rules — both in ensuring the rules capture all material aspects of hedge trading where discrimination is possible, and in ensuring the rules are workable and practical. They must also have the intended impact (levelling the playing field) without creating layers of compliance cost and inefficiency. Our intention at this point would be to wait until after the early disclosures from Gentailers under the principles-based regime (if it is implemented) before consulting on:

(a) whether more prescriptive rules are needed

(b) the drafting of these prescriptive rules.

6.28. This would give us and the industry the benefit of learning from the approaches taken by the Gentailers to comply with the principles when developing more prescriptive rules.

Step 3: Mandatory trading of Gentailer hedges via a common platform

6.29. The third step of our proposed roadmap, if triggered, would be requiring Gentailers to sell and purchase all their hedging via a market platform. This is the most severe form of non-discrimination requirements, effectively preventing Gentailers from internally hedging, that is a full vertical disaggregation in favour of them selling and buying through a market mechanism specifically designed to prevent discrimination. This option has been suggested in various ways by other market participants for some time.

6.30. To implement this option in a way that genuinely achieves a non-discrimination outcome would require careful design to address any Gentailer scale advantage. There are a range of options that would need to be carefully considered, as shown in the following examples.

(a) One option would be to require that purchases be made in 'atomised' units, so Gentailers buy the same product as (say) non-integrated retailers, at the same price point, but just in vastly larger quantities.

(b) Another option would be to introduce trading rules that prevent Gentailers from trading with themselves through the platform.

6.31. Requiring mandatory trading of all Gentailer hedges is a strong option for addressing competition concerns regarding Gentailer vertical integration. Well-designed trading arrangements would eliminate discrimination relating to hedges. This would be expected to have a significant impact on hedge access and liquidity, producing robust market-based forward prices that better enable investment in flexibility resources.

6.32. However, there may also be downsides. These requirements would place a significant restriction on how Gentailers arrange their businesses, which would for example lead to Gentailers facing higher transaction costs,[61] which would likely pass through to consumers. The prudential security requirements of this structure may to some extent be a barrier to entry for participants with less robust balance sheets. We expect that there may also be other significant costs, albeit less direct. For example, a firm that cannot manage its aggregate financial risk in the way it considers optimal may be less able or willing to fund the same extent of generation investment through its separated generation business.

6.33. Any transition to a mandatory trading regime would need to be carefully managed, particularly with how Gentailers build their initial external hedge book. We appreciate that it would be unhelpful to confidence in the sector, and likely costly (for no real benefit), if introducing this requirement effectively forced Gentailers on to a 'cliff edge' where half or all their customer book was suddenly unhedged. If this option was implemented, we would ensure that the transition was well thought through, with substantial sector engagement and input.

6.34. Appendix C includes a high-level outline of mandatory trading of Gentailer hedges, providing more detail on our current thinking regarding how this option could be implemented. We expect that mandatory trading via a common pool would likely take a minimum of 12-18 months to implement and would be technically complex.[62]

Implications of Package One initiatives for shaped hedge liquidity and flexibility investment

6.35. We expect that the Package One initiatives as proposed will in aggregate have a substantial positive impact on shaped hedge liquidity and create more even (and therefore better) incentives for investment in flexibility. In doing so, they will promote competition in, and the efficient operation of, the electricity industry for the long-term benefit of consumers. We explain how the various proposed initiatives contribute to this impact below.

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61 As their natural hedge would need to be contractually replicated in a (likely) more costly form (for example, exchange trading costs, trading and clearing fees and interest on margin requirements; additional Gentailer trading staff to separate buy and sell side activities).

62 Recent ASX experience introducing a super-peak product in Australia confirms this.

Standardised flexibility product and PPAs

6.36. These two initiatives directly address a shaped hedge/firming availability concern.

6.37. While the first implementation of these initiatives has been voluntary trading of an industry co-designed super-peak hedge, we will not hesitate to act if we are not satisfied with the trading volumes or pricing of this product. In this case 'acting' may involve a regulated requirement on the Gentailers, including minimum volumes, to offer this super-peak hedge.

6.38. Any regulated requirement to firm PPAs would also likely have a minimum available volume requirement attached to it. We would want to be satisfied that any restriction on offered volumes across these two products (super-peak hedge and PPA firming) was justified solely by scarcity, and did not represent any economic withholding by the Gentailers.

Principles-based non-discrimination requirements should increase externally offered volumes

6.39. As noted above, principles-based (and prescribed) non-discrimination requirements would mean that Gentailers are no longer able to allocate uncontracted[63] hedge volumes to their own retail function in preference to third parties. Effectively at each point in time when selling hedges, Gentailers' generation functions would need to ensure that they were being even-handed in their allocation between all their customers (internal and external).

6.40. What this means in practice is that where fuel scarcity results in less supply of shaped hedges than the aggregate demand, Gentailers would no longer be able to prioritise allocation of available shaped hedges to their own retail functions as they are currently able to. Instead, they would be required to make those hedges available to all potential buyers, which should incrementally increase the potential volumes available to third parties.

6.41. To give a stylised example, let's say that for a given future quarter A:

(a) Gentailer X reasonably assesses in the current period that its generation function will have 100 units of uncontracted shaped hedges available only

(b) in the same period Gentailer X's retail function is seeking to purchase 90 new units of shaped quarter A hedges to support its retail commitments

(c) in the same period third parties (independent retailers and generators, industrials) are seeking to purchase 20 units of shaped quarter A hedges in aggregate to support their commitments and planned use.

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63 "Uncontracted" means hedge volumes that a Gentailer does not have binding contractual arrangements for.

6.42. Under the current scenario (without non-discrimination obligations), we anticipate Gentailer X would supply the full 90 units of shaped quarter A hedges sought by its own retail function, and to offer the remaining 10 units to third parties.

6.43. If non-discrimination obligations were in place, we would expect Gentailer X to offer its uncontracted shaped quarter A hedges differently. All other things being equal, a valid non-discriminatory approach would be to offer them proportionately to internal and external customers, that is, 82 units to its retail function, and 18 units to third parties. This would provide an extra increment of the available hedges to third parties than under the current scenario.

6.44. We appreciate that this stylised example is simplistic — used to illustrate a point, not suggest exactly how a non-discrimination obligation would play out in the market. Were this obligation to be applied to Gentailer hedge allocation in practice, it would for example need to:

(a) consider the flexible generation portfolios across the Gentailers

(b) consider existing commitments

(c) apply appropriately across different time periods

(d) balance dynamically adjusting to circumstances (for example, changing fuel availability) and a more pragmatic approach that provides greater certainty (for example, a less variable minimum volume requirement, as is the case with current market making obligations)

(e) market to all parties about the expected ongoing availability of Gentailer supplied hedges.

6.45. We note two further important points.

(a) Non-discrimination obligations would only require Gentailers to be even-handed between their own retail arms and third parties seeking shaped hedge cover on a broadly like-for-like basis. For example, hedge prices differ over time as fuel conditions change (more or less gas is available; hydro lake levels rise or fall). A like-for-like obligation means third parties seeking hedge cover should get a similar price for future quarter A hedges to what the Gentailers were trading internally for similar hedges around the same time. It does not mean that third parties effectively get a most favoured nation clause, that is, access to the best historic price or an average price.

(b) Non-discrimination obligations cannot, by themselves, create new hedge volumes. In a period of expected scarcity, where a Gentailer has already committed all of their flexible capacity to contracted hedges for future quarter A, then for that quarter the cupboard is bare, that is, there is no expectation that the Gentailer will nonetheless offer extra hedges if requested by a third party.

6.46. We expect that implementing a requirement on the Gentailers to be even-handed when allocating uncontracted hedge volumes between customers will have some complexity. We are interested in any initial views stakeholders have regarding how we might operationalise this requirement.[64]

6.47. This stylised example also has implications for investment in broader flexibility and risk management options, for example, batteries or demand response. We know from our Risk Management Review that other flexibility options (when combined with baseload hedges) are potential substitutes for shaped hedges but are currently only starting to be deployed in the New Zealand market, that is, further development and investment is needed.

6.48. Under either scenario (with or without non-discrimination obligations) third parties have incentives to invest further in flexibility, as in neither case are they able to contract for the full volume of shaped hedges they are seeking. We have seen this playing out in the market.[65]

Implications for Gentailers

6.49. As indicated by the stylised example above, there is an impact on Gentailer retail functions of non-discrimination requirements applying to how Gentailers allocate hedges. Gentailers would move from being able to assume they can rely on any uncontracted hedge volumes in their own generation portfolio to manage their wholesale price risk through internal hedging, to instead being in a scenario where those uncontracted volumes are allocated even-handedly, so are less likely to be able to meet all of their retail arm needs.

6.50. We acknowledge that this change may have implications for the Gentailer business model, with one of the key benefits of vertical integration being reduced and their retail business consequentially losing some level of certainty about the durability of a key input. That is complicated further by differences between Gentailers and the flexible generation resources they own now and in the future (noting ongoing discussion about the potential retirement of thermal resources).

6.51. Our proposal reflects a view that it is no longer tenable for Gentailers to continue preferring self-supply of informal internal hedge arrangements backed by flexible generation as they currently do; that those shaped hedges are too critical an input for it to be left solely to Gentailers' discretion to allocate them as and when they prefer. We currently consider that the costs incurred by Gentailers in complying with non-discrimination principles are likely to be outweighed by benefits to consumers arising from greater competition, particularly over the longer-term.

6.52. Navigating the most effective way through this change, if it is implemented after consultation, will be important for all parties — Gentailers and their investors, the

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64 For example, do parties have a view on whether some kind of regular trading event or auction would be a useful mechanism?

65 Electricity Authority 'Reviewing risk management options for electricity retailers – issues paper' (7 November 2024), paragraphs 5.22–5.33.

sector and ultimately all electricity consumers. We understand that a range of issues and trade-offs will need to be worked through as a necessary consequence of taking a more even-handed approach to accessing the benefits of flexible generation capacity. That includes establishing an initial internal hedge book by the Gentailers, which will have relatively long-lasting impacts. We would welcome feedback from all parties on what they consider the key issues trade-offs to be, how they might play out and potential solutions. We are also interested in any feedback from submitters about other options for increasing traded volumes of hedge contracts.

6.53. We note that we would expect this change to increase the incentives on Gentailer retail functions to invest in other sources of flexibility, similar to the incentives that other retailers already have.[66] We do not have a view on what that investment should look like, including whether it involves in-house development, purchase of new assets, or procurement from third parties. But we consider that all parties having strong incentives to invest in increasing the total pool of available flexibility is critical.

6.54. Finally, this proposal would not seek to interfere with contracted hedge trades. If this proposal is progressed, we would consider how to manage the transition period as part of any code development.

Mandatory trading of Gentailer hedges removes any liquidity concerns

6.55. Mandatory trading of Gentailer hedges is the third step on the proposed roadmap for introducing non-discrimination requirements. It would require by far the most significant change of the options we are proposing, and would have the most profound effect on liquidity, that is, all hedges sold by the Gentailers would need to trade through a market with specified trading rules. A key purpose of the rules would be to ensure that Gentailers are both active sellers and buyers, compared with being able to effectively bypass the market through a small number of very large transactions. We have set out an indicative outline of this mandatory trading in Appendix C to assist submitters with understanding what this regulatory option may include.

6.56. We consider that this an important option to have on the table — so all parties understand the consequences if there is not enough improvement in liquidity at earlier points on the roadmap. Market participants (particularly the Gentailers) can elect to act in a way that makes this option unnecessary.

Trigger for mandatory trading

6.57. We have considered potential triggers for implementing the strongest form of regulation proposed — mandatory trading of Gentailer hedges. We appreciate that

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66 We acknowledge that Gentailers are already making some investments in flexibility, for example, Contact's Stratford battery; flexibility built into supply contracts for the Tiwai Pt aluminium smelter and New Zealand Steel's new Electric Arc Furnace. But we consider that non-discrimination requirements would lead to a material increase in the incentives to make those investments.

participants and investors would benefit from clarity about what might drive this increased level of intervention. An indicative trigger we are considering is a two-step test as explained below.

(a) Is there evidence that the existing non-discrimination obligations are failing in eliminating discrimination?

(b) Are there reasonable grounds for believing that the benefits of mandatory trading (that is, the gains over time arising from more competition) exceed the costs?

6.58. We would welcome your feedback on how we might develop this test, including the costs that should and should not be considered, or other potential trigger options.

Other measures

6.59. For completeness, we note that other Level Playing Field measures (such as negotiate-arbitrate regulation or corporate separation) could also be considered as escalations if non-discrimination obligations did not drive sufficient change.

Questions

Q13. What are your views on our proposed roadmap for the implementation of non-discrimination obligations?

Q14. Which products should any non-discrimination obligations apply to? Should all hedge contracts be captured, or should the rules be focused on super-peak hedges only? Are there are other interactions between Gentailers and their competitors which would benefit from non-discrimination rules?

Q15. Do you have any feedback on the indicative draft non-discrimination principles (and guidance) set out in Appendix B? Without limiting your feedback, we would be particularly interested in your views on the following questions:

a. Have we got the level of detail/prescription right? For example, do you consider that the principles and guidance will lead to economically meaningful Gentailer ITPs being put in place? What would be the costs and benefits of instead applying a more prescriptive ITP methodology?

b. How far should the allowance in the principles for different treatment where there is a “cost-based, objectively justifiable reason” extend? Do you agree with the guidance that this allowance should not be extended to volume (at paragraph 13 of Appendix B)?

Q16. Do you agree that escalation options are needed if principles-based non-discrimination obligations are implemented initially? Why/why not?

Q17. Are prescribed non-discrimination requirements and mandatory trading of Gentailer hedges via a common platform suitable escalations given the liquidity, competitive pricing and even-handedness outcomes we are seeking? Why/why not? What alternatives would you suggest (if any)?

Q18. What costs and benefits are likely to be involved in setting more prescriptive regulatory accounting rules which detail how ITPs should be calculated? What would be appropriate triggers for introducing more prescriptive requirements for ITPs?

Q19. Do you have any views on how the non-discrimination requirements should best be implemented to ensure that Gentailers are no longer able to allocate uncontracted hedge volumes to their own retail function in preference to third parties? What are the key issues and trade-offs?

Q20. Do you have any views on the triggers for implementing the stronger regulation proposed in our roadmap?

7. Our current thinking on virtual disaggregation

Considering virtual disaggregation was part of the Task Force work programme

7.1. In its published September 2024 work programme, the Task Force committed to preparing an outline of virtual disaggregation of the flexible generation base. This option for regulatory intervention was recommended by MDAG in its final report *Price discovery in a renewables-based electricity system* in 2023.[67]

7.2. This option would require Gentailers to offer a minimum volume of their flexible generation base to buyers in the form of risk management contracts. As proposed by MDAG, virtual disaggregation was a further escalation from the regulated standardised flexibility product it recommended (which is also being considered under the Task Force work programme) to address any enduring (residual) market power concerns related to flexible supply by Gentailers.

7.3. MDAG saw virtual disaggregation as a targeted structural solution to address competition concerns stemming from:

(a) a reduction in the share of flexible or controllable generation relative to the intermittent generation base (that is, weather dependent wind and solar)

(b) increased concentration of flexible generation in the hands of a few generators (for example, those who control specific large hydro lakes, as more thermal generation exits) who may have the means and incentives to restrict the supply and raise prices of flexibility contracts to above competitive levels.

7.4. The published Task Force work programme set out virtual disaggregation as one of the backstop options, along with Level Playing Field measures, if previous measures aimed at increasing the supply of firming contracts in the market do not produce the intended uplift in competition.[68]

What has changed, and how virtual disaggregation now fits into the Task Force programme

7.5. We are still considering virtual disaggregation, however our thinking around backstops has developed since August. As noted in the roadmap in Figure 7 above, we are now considering introducing non-discrimination obligations for Gentailer hedge contracts in the near term (rather than as a backstop).

7.6. Our preferred Level Playing Field option of comprehensive non-discrimination obligations is a broader access solution that:

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67 MDAG 'Price discovery in a renewables-based electricity system' (December 2023).

68 Energy Competition Task Force | Our projects | Electricity Authority.

(a) has a disaggregation component — we expect that to demonstrate compliance with non-discrimination obligations Gentailers will need to offer third party access to each type of hedge it (implicitly) uses internally, on non-discriminatory terms

(b) the escalation option of mandatory trading of all Gentailer hedge contracts is a very strong implementation of virtual disaggregation

(c) if implemented, is an alternative, broader structural solution to address risks to competition in flexibility services, this option is likely to subsume MDAG's more targeted virtual disaggregation recommendation.

7.7. We still conceptually agree with MDAG's 2023 framework that led to a very targeted virtual disaggregation approach (seeking to control market power attached to specific plant and fuel sources, for example, Lake Pukaki) and all other things being equal, flexible supply in the market could evolve to a point where that type of very targeted remedy is the best answer.

7.8. But our thinking, and the evidence and circumstances we are responding to, have evolved since then. We consider that our proposed approach to implementing non-discrimination obligations (as set out in the roadmap in Figure 7) will address the underlying issue that originally led to MDAG recommending virtual disaggregation — that includes the following.

(a) Requirements on Gentailers to trade minimum volumes → *Regulated Standardised Flexibility Product*.[69]

(b) A significant enough change to how hedges are traded to remove any concerns about Gentailer control of pricing → *Mandatory Trading of Gentailer Hedges*.

7.9. We nonetheless consider that virtual disaggregation is an important potential remedy, with the potential to increase competition in the supply of flexible peak period generation that would be complementary to Level Playing Field outcomes. We welcome any feedback, including on variants of virtual disaggregation that stakeholders consider would be effective in addressing competition risks.

7.10. We have included an outline of a MDAG-consistent approach to implementing virtual disaggregation as Appendix D. By doing so we intend to better enable stakeholders to provide feedback on this options paper by providing more information. While that outline is quite detailed for an option that is not currently preferred, we considered that it was helpful to set out more of our earlier thinking than less. We thank the Electricity Authority Advisory Group (EEAG) for their input and assistance in helping us develop this outline.

[69] The Authority Board will initially consider minimum trading volumes in March.

Questions

Q21. Does our proposed approach to implementing non-discrimination obligations (as set out in the roadmap in Figure 7) sufficiently address the underlying issue that originally led to MDAG recommending virtual disaggregation?

Q22. Do you have any views on whether virtual disaggregation provides a useful response to the competition risks we have identified (relative to the proposed roadmap) and, if it does, how it should be best applied?

Appendix A Summary of responses to request for early input

The Authority has been engaging with industry and industry experts during the Task Force's investigative process. We received 17 responses to our October 2024 request for early input on Level Playing Field measures.[70]

Responses were received from a range of stakeholders — including gentailers, non-integrated retailers and generators, and consumer groups. Copies of the submissions are available on the Task Force web page.

Key themes raised in submissions were as follows.

- A recurring issue raised by several respondents (including Mercury Energy[71], Nova Energy[72] and ERANZ[73]) was the lack of clear problem statement, or definition of 'level playing field measures' as intended by us.
- Some respondents, for example Meridian Energy[74] and Lodestone Energy[75], consider the New Zealand electricity market is well-designed and can deliver the right outcomes. They question the need for measures to level the playing field.
- Benefits of vertical integration between electricity generation and retail activities were mentioned by some respondents, including Meridian Energy, Nova Energy and ERANZ.
- Mercury Energy expressed concerns that the work on Level Playing Field measures raises the risk that a 'solution ends up searching for a problem, which may have unintended consequences'.[76]
- Other submissions, such as Consumer NZ[77] and the joint submission from independent retailers (2degrees, Electric Kiwi, Flick Electric, Octopus Energy and Pulse Energy)[78], consider that competition in the electricity sector is not delivering expected benefits for consumers. Independent retailers noted that measures to promote competition/create a level playing field are a 'core and orthodox part of

70 Energy Competition Task Force - request for level playing field measures | Electricity Authority.

71 Mercury 'Energy Competition Task Force - request for level playing field measures' (5 November 2024).

72 Nova Energy 'Energy Competition Task Force – request for level playing field measures (5 November 2024).

73 ERANZ 'Submission: Request for input on 'level playing field measures'' (5 November 2024).

74 Meridian Energy 'Request for feedback on level playing field measures' (5 November 2024), p. 5.

75 Lodestone Energy 'Re: Level playing field work programme' (5 November 2024), p. 2.

76 Mercury 'Energy Competition Task Force - request for level playing field measures' (5 November 2024), p. 1.

77 Consumer New Zealand 'Energy competition task force – request for level playing field measures' (5 November 2024).

78 Independent retailers 'Level playing field measures critical for promotion of effective competition' (5 November 2024).

regulation in infrastructure sectors' and highlighted the importance of the Task Force working at pace.[79]

- A wide range of possible Level Playing Field measures were suggested, particularly in submissions from independent retailers, Octopus Energy[80], Paua to the People[81], MEUG[82], Consumer New Zealand, Energy Link[83], emhTrade[84] and Vector[85]. These measures include the following.
    - Greater vertical separation between generation and retail — accounting, corporate and ownership separation of the large, incumbent gentailers.
    - Accounting rules, including separate financial reporting for generation and retail and stronger ITP disclosure requirements.
    - Price squeeze (subsidy-free) testing requirements and/or a prohibition on cross-subsidisation between generation and retail activities.
    - Wholesale access rules — including arms-length rules, non-discrimination and equivalence of inputs requirements.
    - Hedge market reform, including access to flexibility products, standard mass market customer shaped hedge products and longer-term products.
    - Compelled/directed contracting — requiring all gentailers to offer a defined portion of their generation to third parties via hedge markets (that is, a central buying pool).
    - More comprehensive monitoring of conduct and performance of the market.
    - Other less direct options such as addressing consumer apathy and barriers to switching (for example, with mass switching trials), retailer reliability obligations, horizontal separation, underwriting new investment.
- Some respondents (including Meridian Energy, Octopus Energy, Nova Energy and ERANZ) emphasised the importance of carefully designing and implementing Level Playing Field measures, along with clear triggers for any fallback measures.
- Some respondents (including Nova Energy, Contact Energy[86], Octopus Energy and Vector) referenced various reports and studies for us to consider when investigating level playing field measures.

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79 Independent retailers 'Level playing field measures critical for promotion of effective competition' (5 November 2024).

80 Octopus Energy 'Energy Competition Task Force – request for level playing field measures (4 November 2024).

81 Paua to the People 'Level playing field measures' (22 October 2024).

82 MEUG 'Energy Competition Task Force – request for input on initiative 1D' (10 November 2024).

83 Energy Link 'Level playing field' (31 October 2024).

84 emhTrade 'Level playing field measures' (7 November 2024).

85 Vector 'Request for information on level playing-field measures (Initiative 1D)' (5 November 2024).

86 Contact Energy 'Energy Competition Task Force- request for level playing field measures' (5 November 2024).

Appendix B Draft non-discrimination principles

This appendix sets out our initial thinking on a set of principles-based non-discrimination obligations. We envisage these principles (and the associated record keeping and reporting requirements) being introduced as mandatory requirements under the Code, subject to feedback from stakeholders.

To eliminate any doubt, we are not currently consulting on proposed Code amendments to introduce non-discrimination obligations, or how any such requirements might interact with existing processes, for example, the OTC Code of Conduct. Rather, we are providing this drafting to give stakeholders a better understanding of our current thinking, to enable more informed submissions.

Draft non-discrimination principles

1. **Principle 1:** A **gentailer** must not discriminate against **buyers** in favour of its own **internal business units,** or between **buyers,** for the supply of (and in relation to the price and non-price terms of) **risk management contracts** without a cost-based, objectively justifiable reason.

2. **Principle 2:** A **gentailer** must establish an economically meaningful portfolio of internal transfer prices that reflects its internally traded hedges to demonstrate it has met its non-discrimination obligations.

3. **Principle 3**: Credit terms and collateral arrangements must reflect an objective assessment of the risk of trading with a **buyer**.

4. **Principle 4:** A **gentailer** must ensure that any **commercial information** relating to **risk management contracts** made available to its **internal business units** is also made available to any **buyers**.

5. **Principle 5:** A **gentailer** must protect **buyer confidential information** and not disclose this information to any **internal business units** that compete with the **buyer**.

6. **Principle 6**: A **gentailer** must establish, maintain, keep and disclose records that demonstrate its compliance with these non-discrimination principles.

Draft record keeping and reporting requirements to support the non-discrimination principles

7. A **gentailer** is required to establish, maintain and keep records that demonstrate how it meets the **non-discrimination principles**. Those records must include:

    a. the details of all internal **risk management contracts** including duration, shape, volume and value

    b. the specification of the internal accounting procedures relied on, including (without limitation) any that track the nature and extent of transactions between its **internal business units**

    c. the specification of any **cost allocation methodology** relied on

d. the total risk capacity of the **gentailer** to offer risk management contracts as determined under relevant delegation policies

e. the identification and quantification of any cross-subsidy given (either expressly or implicitly) to any **internal business unit**.

8. **Gentailers** are required to:

a. disclose any material breach of the **non-discrimination principles** to the Authority in sufficient detail to reasonably inform the Authority of the nature, cause and extent of the breach, as soon as is reasonably possible (but in any event before 20 working days) after the **gentailer** becomes aware of the breach

b. disclose any non-material breach of the **non-discrimination principles** to the Authority that the **gentailer** is aware of in sufficient detail to reasonably inform the Authority of the nature, cause and extent of the breach, within 10 working days of the end of each quarter including the first quarter (or part thereof) following the **commencement date**

c. provide an annual report to the Authority before 45 working days following the end of each **gentailer** financial year, including the first **gentailer** financial year (or part thereof) following the **commencement date**, which demonstrates how that gentailer has met the **non-discrimination principles**.

9. The annual report referred to in paragraph 8(c) must include certification by the Board of the **gentailer** on behalf the **gentailer** that, to the best of the directors' knowledge after making all reasonable inquiries, the **gentailer** has complied with the **non-discrimination principles** during the relevant **gentailer** financial year (except for any breaches that have been reported to the Authority or are reported with the certificate).

10. An interim version of the report referred to in paragraph 8(c), demonstrating how the **gentailer** has met the **non-discrimination principles** during the first six months following the **commencement date,** must also be provided to the Authority before 20 working days after the end of the six-month period.

11. Public versions of the reports referred to in paragraph 8(c) and paragraph 10 must also be made available on the **gentailer's** website within 5 working days of delivery of the reports to the Authority. The public versions of these reports may require redaction of commercially sensitive information (for example, some details of internal risk management contracts may be commercially sensitive).

Draft guidance

We have prepared draft guidance regarding Principles 1–5. This guidance is intended to provide greater clarity regarding what is likely to be required to ensure compliance with the principles.

Guidance on pricing and volume allocation

12. A **gentailer** is required to deal or offer to deal with **buyers** on substantially the same price and non-price terms and conditions (including quality, reliability and timeliness of service) as those made available (either expressly or implicitly) to:

a. the **gentailer's internal business units**

b. other **buyers**.

13. When applying principles 1 and 3, consideration should not be given to volume but may be given to other circumstances of trade including (without limitation) load factors, conditions of interruptibility, plant commitments, prudential requirements, time of contracting, and duration of the relevant agreement.

14. To the extent any circumstances of trade referred to above are reflected in commercial terms agreed with a **buyer** that are different to those agreed (either expressly or implicitly) with an **internal business unit** or another **buyer**, those different commercial terms should be objectively justifiable based solely on cost efficiencies for the **gentailer**.

15. A **Gentailer** should:

    a. establish an economically meaningful portfolio of internal transfer prices in a form able to be used to demonstrate compliance with the **non-discrimination principles**. These internal transfer prices should be based on observable market rates for comparable risk management contracts, including baseload, peak and super-peak contracts (such as the standardised flexibility product) adjusted for the internal requirements of the gentailer (based on factors identified in paragraph 13)

    b. establish and keep records of the volume and value of risk management contracts that it internally supplies to its retail division

    c. to the extent that as of **commencement date** a **gentailer** has not previously formally established internal **risk management contracts** and internal transfer prices, it should establish an initial position based on internally documented energy pricing and volume commitments based on documented internal policies that have been approved consistent with internal delegations and policies

    d. allocate its uncontracted **risk management contract** capacity on a non-discriminatory basis, such that the **gentailer** is unable to prioritise supplying its **internal business units** over **buyers**

    e. offer some of each type of **risk management contract** identified in paragraph 15(b) to **buyers** on non-discriminatory terms taking into account the circumstances of trade referred to in paragraph 13 above.

16. A **gentailer's** quotes to **buyers** for any **risk management contract** should not be materially more or less than the corresponding internal price offered (either expressly or implicitly) to the **gentailer's internal business units** for that type of **risk management contract**, although the quotes may include the following matters (which should be itemised separately).

    a. An objectively justifiable price adjustment to reflect any cost differences of the type referenced in paragraph 13

    b. At cost, any fees (for example, wholesale market trading or legal fees) incurred by the **gentailer** in trading the relevant type of **risk management contract**

17. For the avoidance of doubt, the Authority considers that any cross-subsidy referred to in paragraph 7.e that results in an **internal business unit** not being commercially viable on a standalone basis would breach the **non-discrimination principles**.

Guidance on prudential arrangements

18. The credit terms and collateral arrangements offered by a **gentailer** should be a reasonable reflection of the risks of trading with the **buyer**. For this purpose, a **gentailer** should:

    a. assess the credit worthiness of the **buyer** by reference to a range of relevant information, including information submitted by the **buyer**

    b. follow an established process for assessing credit worthiness

    c. consider, and where appropriate, discuss a range of credit options with the **buyer**

    d. ensure that the credit terms and collateral arrangements offered reflect the outcome of the assessment, consideration and discussion under paragraphs 18(a) to 18(b).

    Additionally, the **gentailer** should also be able to demonstrate to the Authority that it has done so.

19. The **gentailer** should process credit applications and conduct reviews in a timely, efficient and transparent manner. This includes:

    a. providing an indication of when a decision might reasonably be made, subject to the applicant satisfying all reasonable information requirements in a timely manner

    b. proactively notifying the applicant of any progress, including delays, issues or final decisions, when they become known.

20. The **gentailer** should submit to the **buyer**, with its offer, the basis for its credit decision.

Guidance on commercial information

21. A **gentailer** should ensure that any **commercial information** relating to **risk management contracts** made available to an **internal business unit** or to any buyer is made to all **buyers** on a non-discriminatory basis.

Guidance on confidentiality

22. In relation to the supply of **risk management contracts** by **gentailers** to **buyers**:

    a. a **gentailer** should not disclose to an **internal business unit** information the **gentailer** has obtained through its dealings with a **buyer** where the disclosure would, or would be likely to, provide an advantage to the **internal business unit**

    b. a **gentailer** should keep all **buyer confidential information** in confidence and should not disclose **buyer confidential information** to any third party other than as necessary for the provision of **risk management contracts** to that **buyer**

c. a **gentailer** should not use **buyer confidential information** for sales or marketing purposes.

d. A **gentailer** should make and enforce internal rules and policies to ensure compliance with the obligation in this paragraph 22.

e. A disclosure of **buyer confidential information** will not constitute a breach of the **non-discrimination principles** where it is:

   i. in confidence, to an emergency organisation that reasonably needs that information

   ii. properly made pursuant to a relevant legal or regulatory obligation

   iii. to the Authority

   iv. properly and reasonably made to a court.

f. A disclosure or use of **buyer confidential information** will not constitute a breach of these **non-discrimination principles** where and to the extent that such disclosure or use is authorised by the **buyer**.

Definitions

Drafting note: The drafting below is indicative only. If the Authority decides to amend the Code to introduce principle-based non-discrimination obligations, we will refine these definitions, including testing alignment with existing defined terms in the Code.

Authority means the Electricity Authority Te Mana Hiko.

buyer means a person who is—

a. specified as the buyer in a **risk management contract** with a **gentailer**;
b. has otherwise obtained, or is obtaining, a **risk management contract** from a **gentailer**; or
c. has indicated to a **gentailer** a desire to obtain **risk management contracts** from the **gentailer,**

and includes non-integrated retailers, non-integrated generators, or other **gentailers** but does not include a **gentailer's** own **internal business units**.

buyer confidential information means any information that:

a. a **buyer** provides to a **gentailer** in relation to the provision of **risk management contracts**; or
b. a **gentailer** otherwise holds or obtains in relation to the provision of **risk management contracts** to a **buyer**,

that is by its nature confidential or proprietary, is disclosed in confidence or which a **gentailer** knows or ought reasonably to know is confidential to that **buyer**, or that concerns a person that is, or intends to become, a customer of that **buyer**; but does not include:

c. information that was publicly available at the time of receipt, or that becomes publicly available other than as a result of a breach of confidentiality
d. information that was obtained bona fide by a **gentailer** from another person who is in lawful possession of the information and who did not acquire the information directly or indirectly from the **buyer** under an obligation of confidence; and
e. information, or types of information, that a **buyer** agrees is not **buyer confidential information**.

commencement date means the date the **non-discrimination principles** come into force.

commercial information means information that is:

a. confidential to a **gentailer**; and

b. relates to the following matters regarding **risk management contracts**:

   (i) product development;

   (ii) pricing;

   (iii) marketing strategy and intelligence;

   (iv) product launch and/or trading dates;

   (v) costs; and

   (vi) projected sales volumes;

but does not include:

c. any information that is not current and which has been superseded by identifiable new information or is more than 18 months old; or

d. any information, or types of information, that the **gentailer** and the **Authority** agree in writing is not commercial information.

cost allocation methodology means the approach used by a **gentailer** to allocate or attribute costs to its **internal business units**. Any cost allocation methodology used should be consistent with the accounting-based allocation approach (ABAA), which requires operating costs and asset values to be allocated based on causal factors or based on proxy factors where causal-based allocators are not available.

gentailer means the four large generator-retailers, Genesis Energy, Contact Energy, Meridian Energy and Mercury Energy.

internal business units means the separate functions of a **gentailer's** business (including, for example, generation, retail and other business units), even where these functions are not clearly separated in the organisation structure, including functions undertaken by any interconnected bodies corporate (within the meaning in the Commerce Act 1986) of the **gentailer**.

non-discrimination principles means Principles 1 to 6.

risk management contract means any risk management contract, including for baseload, peak and super-peak hedges. For the avoidance of doubt, risk management contracts includes internal hedges provided (either expressly or implicitly) within a **gentailer's** business.

Appendix C High-level outline of mandatory trading of Gentailer hedges

Set out below is a high-level outline of how mandatory trading of Gentailer hedge contracts might work, including some key questions that would need to be answered. This outline is indicative only, and intended to assist submitters with understanding what this regulatory option may include, to assist in providing feedback to us. It does not currently represent a preferred Authority design.

The principle and basic structure

All hedges[87] sold by the four large Gentailers would be mandated to be traded through a designated market on defined trading terms. This creates a deeper and more comprehensive market for hedges with supply and demand for all participants, including independent generators, to sell into and buy from. Financial participants would also be able to trade.

Trading would primarily be exchange-based, with standardised shaped and baseload products. We would expect:

- the super-peak contract recently introduced under the standardised flexibility product initiative to be one of the traded products
- this to become the exchange for trading baseload hedges
- longer term hedges (strips) to be offered, for example, of 10 years duration.[88]

Trading of bespoke products over the counter would be possible within the overall market (potentially via a bulletin board) with exchange-based trades providing a reference price.

Contract parameters

- Defined trading terms, combined with the requirement to sell all Gentailer supplied hedges via this market, aims to ensure that the opportunity for Gentailers to discriminate when selling hedges is removed.[89] These terms could include all individual trades being for a set size, similar to the 0.1MW traded on the ASX as baseload.
- The Authority would consider whether any exchange traded products on the exchange should be market-made during the initial detailed design.
- Wash trades[90] would need to be in accordance with market integrity rules/legislation.

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87 Including firming contracts or equivalent instruments.

88 This would better allow retailers with larger customer books to manage their price risk, and generators to have revenue certainty, including when they are seeking to invest (may effectively resolve the underlying concern around enabling new intermittent generators to enter into PPAs that led to Task Force Initiative 1A).

89 Particularly we are seeking to effectively remove volume discounts from the market, noting that the Gentailers would, for a period at least, be by far the largest buyers.

90 Trades within the same party, for example, Gentailer X's generation function selling to Gentailer X's retail function.

- Prudential requirements calibrated to appropriately balance.
    - The interests of the exchange in having appropriate financial security.
    - With the value of allowing more smaller participants and new entrants to access these hedges, for example, ensuring contract prices do not unnecessarily include a credit risk premium.

Transition

If this option was to progress, we would expect to phase in this mandatory trading requirement. That includes:

- peak and super peak products first (as baseload is already exchange traded)
- add volume by increments over defined time periods.

What this would mean for the Gentailers

- Gentailers would continue to buy and sell on the spot market, so retain their physical hedge.
- The generation functions of the four large Gentailers would sell hedge contracts on this market, with mandatory products and minimum volumes determined by regulation.
- To maintain a balanced portfolio, the Gentailers' retail functions would buy hedges. The counterparty for each hedge for exchange trades (which are blind) might be any Gentailer or other generator.
- The converse could also occur in the market — the Gentailers' generation functions could also buy hedges and the Gentailers' retail functions could also sell hedges.

Appendix D Outline of approach for targeted virtual disaggregation

Context for this outline

D.1. The Authority is publishing an outline of targeted Virtual Disaggregation of the flexible generation base, referred to below as the mandatory supply of firming (MSOF).

D.2. Our intention is to provide industry with information about how this backstop measure could be implemented. The approach outlined below to MSOF is not our preferred backstop measure, reflecting the evolution in our thinking set out in Chapter 7 of this options paper. But it remains a relevant part of the broader discussion on measures to address competition in the electricity sector.

D.3. MSOF is one of the measures considered by the Energy Competition Task Force to increase investment and competition in the electricity market. The measure is a targeted response to address competition concerns. It aims to improve the availability of, and access to, flexibility contracts to buyers of wholesale electricity including independent generators and retailers, and industrial consumers. This outline builds on recommendations from the Market Development Advisory Group (MDAG) in its December 2023 report, 'Price discovery in a renewables-based electricity system'.

D.4. Consistent with MDAG's proposal, MSOF is a backstop measure, to be considered only if previous actions to improve competition in the supply of flexibility products are not sufficiently effective. These prior measures include the development and voluntary trading of standardised flexibility products, followed — if necessary — by regulating these products (that is, Task Force Initiative 1B).

D.5. This outline describes the problem that MSOF seeks to address, along with the key design parameters and implementation process. It seeks to provide information to help stakeholders assess MSOF's continued relevance and value compared to other backstop measures being considered by the Task Force.

Problem definition

Consumers will pay higher prices if market power is exercised in relation to flexible generation

D.6. Competition in the supply of generation drives innovation, improves efficiency, and ensures access to reliable electricity at the least cost for consumers.

D.7. As the generation mix evolves and thermal generation exits, the need for flexible resources to provide continuous 'firm' supply will grow. Access to flexibility (that is, firming) products will also become more important to enable retailers to manage the financial risks of providing consumers with price certainty against volatile wholesale prices.

D.8. Over time, the share of flexible hydro and remaining thermal generation with medium- to long-duration storage is expected to decline relative to the intermittent generation base. Control over these sources of flexible generation will also become more concentrated amongst a few parties. This could lead to thinning of competition in the supply of flexibility, and an increased ability for those parties to exercise market power.

D.9. Improvements in technology, falling hardware prices and increased availability of batteries are expected to ameliorate potential competition issues in the provision of short duration (hours to a day or two) flexibility. However, the provision of longer duration flexibility (flexible supply providing cover for periods of a week or more) remains an area of concern.

D.10. Developing new sources of medium- to long-duration flexible generation in New Zealand is challenging for a range of reasons including consenting, availability of appropriate sites, scale economies and high costs (including increasing carbon costs). In addition, the control of flexible supply resources in New Zealand's electricity market is already concentrated among a small number of large generators.

D.11. Where the control of flexible supply is concentrated in a few large generators, these entities may have the means and the incentive to withhold or overprice hedge products, particularly for longer duration flexibility, that are sought by competing generators and retailers — this is the competition concern that MDAG was focussed on. These actions could also increase risk and the cost of capital, deterring entry and expansion in the market.

D.12. A weakening of competition would ultimately lead to consumers paying higher average prices for electricity.

How to address this problem

Implementing measures to strengthen competition

D.13. The Task Force is actively pursuing measures to improve competition in the electricity market. This includes industry co-design of standardised flexibility products for voluntary trading and putting in place regulated terms for those standardised flexibility products if necessary.

D.14. While voluntary trading and, if needed, regulated terms can help alleviate competition concerns, addressing structural market power in medium- to long-duration flexibility may require additional measures. The Task Force considered potential backstop measures, such as virtual disaggregation of flexible generation base, to address persistent market power issues.

MSOF is a targeted measure to address market power if earlier interventions are not effective

D.15. MDAG evaluated physical disaggregation as an option to address underlying market structural power but concluded it was impractical due to significant operational and ownership changes required, such as river-chain management restructuring. MSOF is expected to achieve similar outcomes with considerably less market disruption.

D.16. MSOF directly targets market power by requiring relevant generators to offer a specified volume of financial products (firming contracts) that are linked to their generation supply capability. This approach focuses on addressing market power at its source.

D.17. MSOF, as described in this outline, might share some similarities with regulated terms for standardised flexibility products as both require the relevant generator(s) to offer a specified volume of firming contracts. However, there are two key differences that set this measure apart.

(a) **Price setting**: unlike regulated terms for standardised flexibility products, where resource owners set prices, MSOF relies on a buyer-driven price discovery process. Buyers submit bids based on their willingness to pay, fostering a market-driven price discovery. A reserve price may be applied to manage the seller's financial risk.

(b) **Volume of offered resources**: The volume of flexibility resources offered through MSOF is set specifically to address concentrated market power among dominant generators. This volume is distinct from that used for regulation of standardised flexibility products, which is primarily designed for price discovery and liquidity.

D.18. It is important to note that MSOF is not intended to detect or mitigate the exercise of market power in the spot market. Trading conduct rules for the spot market are in place for this mitigation. We regularly monitor spot market offers against these rules, publishing weekly reports and investigating further any periods of high spot prices that appear inconsistent with underlying conditions.

D.19. However, this measure deters the exercise of market power in the spot market. By requiring generators to pre-sell, a significant volume of their supply through futures contracts — priced through buyer bids — the potential gains from any over-pricing of spot market offers are significantly reduced.

What informed our thinking

D.20. The proposed outline draws from MDAG's comprehensive December 2023 report, and industry feedback to it, alongside further research, analysis, and investigation of international developments and comparable examples within New Zealand.

Submissions to MDAG

D.21. In its earlier options paper[91], MDAG consulted on a range of measures to strengthen competition in providing shaped products, including MSOF.

D.22. Many industry submissions[92] highlighted the need for a careful, measured approach to regulation. They stressed the importance of avoiding premature interventions and instead focusing on evidence-based solutions. Some favoured exploring less intrusive options first to address competition concerns without disrupting market dynamics. While submitters recognised this measure as a promising measure to address concentrated market power, they highlighted the importance of assessing its necessity and timing to prevent unintended consequences. Appendix D1 provides a summary of these submissions.

D.23. We have considered this feedback and MDAG's recommendations in developing this outline with a view to minimising risks to investment and innovation.

International and domestic examples

D.24. In addition to considering industry submissions to the MDAG options paper, we also reviewed examples of where mandatory offer requirements had been applied in New Zealand and overseas.

D.25. Domestically, similar measures have been successfully applied in sectors such as dairy, telecommunications and electricity. Mandatory offer requirements in these cases have prevented the exercise of market power by ensuring the relevant parties cannot withhold supply or artificially inflate prices.

D.26. Mandatory offer requirements have been explored and implemented in several countries, primarily as antitrust measures. Whereas the proposal for MSOF differs by focusing on offer requirements as a measure to curtail market power at its source, the international examples still provide valuable lessons for designing and implementing similar measures here. In particular, we recognise the risk of policy failure when the mechanism lacks sufficient safeguards, and the value of the mechanism being flexible to adapt to market conditions.

D.27. A summary of relevant examples and lessons learned for international and domestic experience is attached in Appendix D2.

D.28. These international and domestic insights have guided the development of our outline for MSOF.

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91 Price discovery in a renewables-based electricity system: OPTIONS PAPER 2022.

92 Price discovery in a renewables-based electricity system | Our consultations | Our projects | Electricity Authority.

Design parameters

D.29. The table below summarises our proposed approach to the key design parameters of MSOF. Some of these elements can be specified in more detail in advance of the requirements being implemented, whereas other aspects of the design might need to be determined at the time based on prevailing market information and conditions.

Table D1 – Summary of the design parameters

Design parameter	Description	Proposed approach
Scope of the measure	Determines which generators with flexible generation this measure would apply to.	Generators will be within scope of the measure, if their contribution to overall concentration in the flexibility market exceeds a threshold set with reference to the HHI index. The threshold will be calculated closer to the time that Code provisions are implemented.
Commencement process	The process steps for assessing the supply of flexibility products and communicating the Authority's assessment and any decision to trigger MSOF.	Continuous monitoring and assessment of the supply of flexibility products with programmed formal stocktakes every 6 months to inform the trigger test.
Trigger test	Informs the Authority's decision to commence MSOF.	An assessment of competition in the supply of flexibility products based on the level of open interest (for which a threshold will be set) supplemented by a set of indicators to enable a nuanced analysis and judgement of market conditions.
Form of regulated contract	The type(s) of flexibility products that relevant generators will be required to offer	A standardised flexibility product. The number and type of product(s) will be confirmed at the time of a trigger event.
Offer mechanism and auction design	The form of auction / tender process and any auction design rules.	A centralised auction with progressive release of a set volume of flexibility products. A regulated reserve price will apply. No restrictions on participation. Secondary trading allowed. The reserve price will be determined at the time of a trigger event.
Volume requirements	How much energy each relevant generator is required to offer in the form of flexibility products.	Volume to be offered will be based on generator-specific characteristics including existing contractual commitments (excl. internal trades) and market dynamics (for example, entry and exit). The volume will be calculated at the time of a trigger event.
Termination process (ref. duration of offer obligation)	Process for removing the offer requirements on the relevant generators.	The requirement to offer the regulated contacts will be phased out after a certain time period subject to the generator continuing to meet regulated volume requirements for flexibility products on a voluntary basis.

Scope

D.30. We propose that generators whose control over flexible generation capacity is above a specific market concentration threshold will be within scope of this measure (the relevant generators)[93].

[93] For clarity while some demand-side participation, such as by large industrial users, can provide medium-term flexibility, their primary business is not supplying services to the electricity market. Consequently, decisions by these participants not to offer flexibility products are not considered an exercise of market power and mandatory supply of firming would not apply to these participants.

D.31. The market concentration threshold will be measured using the Herfindahl-Hirschman Index (HHI) indicator. HHI is a tool for assessing market concentration with higher total scores indicating higher levels of concentration and scope for market power.

D.32. Being a relevant generator does not automatically trigger the requirement to offer additional flexibility products through MSOF. This will be determined through the steps set out below.

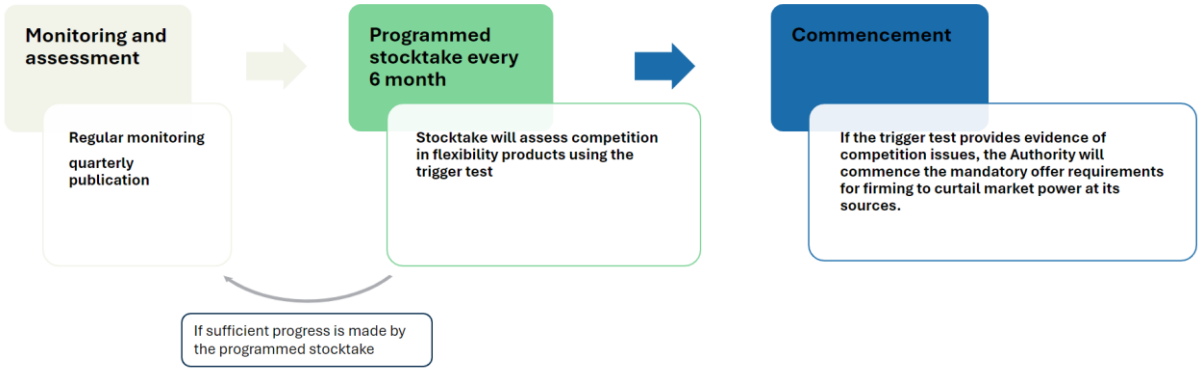
Commencement process

D.33. Our proposed commencement process broadly follows MDAG's suggested approach. This involves continuous monitoring and assessment of the supply of flexibility products, along with regular scheduled stocktakes to formally assess liquidity and competition in the provision of standardised flexibility products.

D.34. MDAG recommended that the scheduled stocktakes occur at 12 monthly intervals, and that the first stocktake assess liquidity in the supply of flexibility products to inform whether to introduce regulated terms.

D.35. We are proposing to shorten the intervals between stocktakes to 6 months to enable a timelier response to any emerging concerns about liquidity and competition in the supply of flexibility products. Our proposed approach is illustrated in Figure D1.

Figure D1 – Proposed commencement process



D.36. Based on continuous monitoring, we will publish a quarterly dashboard to help better understand market dynamics for the supply of flexibility products. The dashboard will serve as the cornerstone of the monitoring process, offering stakeholders a transparent view of market conditions, tracking milestones, and identifying risks to competition.

D.37. The programmed stocktakes will review progress in the supply of flexibility products and assess any factors that could be hindering liquidity and competition. This assessment will consider a range of factors described in the trigger test section.

D.38. We will separately consult on a proposal to collect additional information on the supply of flexibility products, including from Request for Proposals (RFPs) that do

not result in trades. This expanded dataset will provide deeper insights into competition risks and high-demand-outcome scenarios, leveraging methodologies from spot market conduct analysis to improve accuracy and reliability.

D.39. If we determine that MSOF is necessary, it will commence the implementation process based on the following steps.

(a) Notify the market with a public statement detailing its decision to implement MSOF

(b) Determine selection of generators, generator volume requirement, reserve price setting, and prudential requirements depending on the contract type

(c) Direct the relevant generator(s) on the start date, contract types and other operational details for offering firming contracts.

Trigger test

D.40. MDAG advised that there should be a clear trigger test to minimise dynamic efficiency risks (for example, chilling investment incentives)[94] while ensuring that decisions are evidence-based and well-targeted.

D.41. The trigger test forms a critical part of the overall design of this measure, and we have carefully considered how well its design meets the following criteria.

(a) **A clear and robust trigger test** to minimise any risks to dynamic (investment) efficiency.

(b) **The 'least regrets' approach** to minimise false positives (unnecessary interventions) to avoid premature actions that could harm market dynamics.

(c) **A 'scaffolding' of pro-competition measures** by giving time and space to less disruptive pro-competition measures to take effect, ensuring they are not undermined before they have a chance to address the identified issues.

D.42. MSOF aims to replicate the effects of physical disaggregation without introducing structural changes to the market. Given that this measure is nonetheless a significant regulatory intervention, we consider that it is appropriate to not rely on a single indicator.

D.43. For this reason, the proposed trigger test considers open interest alongside other indicators to inform the assessment of the state of competition in the market for flexibility products.[95] The test will set a threshold for open interest to signal what good outcomes look like while other indicators provide subjective assessment to allow for nuanced and informed decision-making.

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94 For example, if the trigger mechanism is based on a set of qualitative indicators, generators may be discouraged from making otherwise economic and efficient decisions to invest in new technologies/generation resources (for example, to address capacity shortfalls) due to uncertainty of future market settings and the possibility of regulatory re-structuring.

95 Price discovery in a renewables-based electricity system: Final Recommendations PAPER 2023 - recommendation 12 – competition dashboard.

Leading indicator with threshold

D.44. We propose establishing a leading indicator with a threshold that best represents the health of the flexibility market. We have considered two options: open interest or volume-traded (for example, rolling average).

D.45. While both indicators are useful, we propose open interest as the preferred option for setting the threshold.

(a) **Open interest** refers to the volume of active, outstanding contracts that have been traded but not yet closed. It is a direct indicator of the perceived value of flexibility products in the market, reflecting the level of hedge coverage, particularly for non-vertically integrated generators and retailers.

(b) **Volume traded** counts all contracts transacted in the market and is commonly used as an indicator of market liquidity and product availability. However, it is not a good indicator of hedge cover.

Table D2 – Assessment of indicators for setting a threshold

Indicators	Advantages	Limitations
Open interest	A direct measure of market activity and product value More meaningful for assessing non-gentailers' hedge cover Has been used as a trigger in similar forms of regulations such as EnergyHedge in New Zealand (2010) and Hydro Tasmania's wholesale electricity contracts regulation in Tasmania	Does not include all traded contracts
Volume traded	Provides an indication of market activity and liquidity Useful once the product is developed and actively traded	An increase in traded volume does not necessarily reflect a corresponding increase in hedge cover, which is more indicative of the perceived value of the product

D.46. We propose setting the open interest threshold for the stocktake as a percentage of average physical demand for flexibility products from participants other than the gentailers. This will be adjusted for any supply capacity constraints. We consider this approach preserves incentives for all participants to develop and invest in other risk management options such as demand response and batteries. This open interest threshold will be reviewed and updated to account for new entrants.

D.47. The threshold will also account for the shape of flexibility products required by the industry, ensuring alignment with the needs and capabilities of market participants.

D.48. Other indicators, such as volume traded or price, will also provide complementary insights. However, they are less suitable for setting a threshold because they are

influenced by numerous external variables, making it harder to benchmark. That said, we acknowledge the importance of ongoing monitoring of hedge prices to better understand market dynamics.

D.49. Table D3 illustrate examples of how open interest have been applied in similar contexts in New Zealand and overseas.

Table D3 – Case studies on open interest as the trigger test[96]

EnergyHedge/ASX in New Zealand (2010)

3,000 GWh of 'unmatched open interest' (that is, contracts without matching offsetting contracts) was set as the definition of 'satisfactory market liquidity' to be achieved within 12 months to 1 June 2011. It should be noted however that the current case is different in two ways.

- The 2010 back stop was for mandatory market making. In the current case, MSOF is being used as the backstop intervention, if previous measures are not successful.
- MSOF is targeted to address competition concerns in medium- to long-duration flexibility. In 2010, the open interest backstop was being used to encourage development of a liquid electricity hedge market.

96 http://www.beehive.govt.nz/sites/default/files/Improving%20competition%20and%20restraining%20electricity%20price%20increases.pdf
https://www.economicregulator.tas.gov.au/Documents/23%20887%20%20Attachment%201%20-%20Regulation%20of%20Hydro%20Tasmania%20s%20wholesale%20electricity%20contract%20pricing%20activities%20-%20Framework%20Information%20Paper.pdf

Hydro Tasmania's wholesale electricity contracts regulation

In Hydro Tasmania's regulatory framework, open interest is used as market conduct test to determine if Hydro Tasmania is fulfilling its obligations to provide adequate contract volumes to the market, as required under the regulatory framework.

It is also used as a liquidity metric to determine whether market-based financial products, such as ASX-listed peak futures, can reliably serve as a pricing benchmark. When the threshold is met, it indicates sufficient liquidity in the financial contracts market, allowing market-derived prices to be used as a reference. If the threshold is not met, Hydro Tasmania, is required to revert to alternative pricing methodologies, such as historical price averages, to ensure that wholesale contract prices remain reflective of the underlying market conditions.

Supplementary indicators to assess competition

D.50. While there are benefits from having a leading indicator in the trigger test (for example, using a threshold to assess open interest), a degree of judgement is required to make a robust assessment of competition in the supply of flexibility products.

D.51. For this reason, the trigger test will also include additional indicators to inform our judgement about the state of competition. The complete set of proposed indicators for the trigger test are listed in Table D4.

Table D4 – Trigger test indicators

Indicator	Description
Liquidity	Whether different flexibility products are being traded? Whether the volume of flexibility products being offered and traded is increasing?
Participant types	Who is selling flexibility products? Who is buying flexibility products (for example, new entrants, or existing entrants who were previously not trading in flexibility products)?
Participant number	How many participants are buying and selling flexibility products?
Price	Whether pricing of flexibility products is consistent with competition?
Market conduct	Offer rates received to requests to buy flexibility products, and trade rates relative to requests Net pivotal supplier analysis
Dynamic efficiency	Dynamic efficiency indicators (for example, ASX prices vs LCOE)

D.52. Interpreting these indicators requires judgment, and we are doing further work to define what good competition looks like. Our understanding will evolve as the market for standardised flexibility products develops. See following examples.

(a) **Price** — the price of shaped hedge contracts offers a key signal of market performance. Prices reflect various factors like physical demand, supply constraints and risk premiums and indicate the extent to which competition is occurring in the market. For example, contract prices near the levelised cost of energy (LCOE) could indicate competitive pricing. However, determining a competitive value is challenging, especially in a developing market with limited historical data. Price trends should be considered within the context of the perceived market risk.

(b) **Number of participants** — the number of active participants in the flexibility contract market can provide insights to market liquidity and competition. For example, even if the open interest threshold is met, having only two participants would suggest limited competition. This needs to be considered in the context of broader market dynamics.

(c) **Type of participants** — understanding the mix of market participants, such as new entrant retailers or wind and solar developers, is critical. The goal of MSOF is to ensure the benefits of medium- to long-duration flexibility are appropriately accessed by a broader range of participants. A growing presence of newer entrants in the flexibility contract market would signal progress toward this goal.

(d) **Price transparency** — the availability of pricing information is essential for price discovery and fostering competition in the flexible contracts market. Transparent pricing allows participants to understand market dynamics (for example, seasonal volatility trends) and negotiate effectively.

(e) **Market concentration** — evaluating changes in the concentration of medium- to long-duration flexibility resources over time is necessary to understand the evolving competitive landscape. For instance, competition could improve if new generators capable of offering medium- to long-duration flexibility enter the market. Reduced concentration in flexibility supply options would indicate progress and could lessen the need for MSOF.

Form of regulated contracts

D.53. The form of regulated contracts would need to be specified at the time of a trigger event. This section sets out the elements that need to be considered. This may require energy market simulation modelling[7], and/or analysis of requests for contracts and responses to those requests.

D.54. Flexibility products refer to hedge contracts that provide buyers and sellers of electricity with protection against high spot prices at specific times. These products will become increasingly important as the share of intermittent generation from wind and solar increases relative to the flexible generation base.

D.55. Such products have a ‘shape’, which defines the specific times during which they apply (as opposed to flat baseload products, which apply equally to all trading periods).

D.56. MDAG undertook preliminary analysis to identify the types of shaped products that might offer the most efficient hedges for wind and solar generators, or retailers

contracted with them. Their analysis suggested that these products would evolve over time as the proportion of intermittent supply increases[97].

D.57. Our risk management review found that non-integrated retailers use a portfolio of risk management options, including baseload hedges, but that super-peak contracts has been the most requested and the most traded type of product in the over-the-counter market over the time-period of the study.[98]

D.58. In addition to determining the form of the product and its parameters (that is, the times covered or 'shape', and any cap level or 'strike price'), the following elements need to be defined for each product.

(a) **Duration**: The length of the contract (for example, month, quarter, six-month)

(b) **Contract period**: The timeframe to which the contract applies (for example, Q2 2027)

(c) **Magnitude**: The energy or volume in MWh

(d) **Reference price:** The energy price reference point (for example, at Benmore or Ōtāhuhu).

D.59. We consider limiting the number or types of products being traded to further enhance competition. It is anticipated that the Task Force's standardised flexibility product initiative will contribute to the development of flexibility products that can either be directly incorporated or further refined for application in MSOF.

D.60. If we proceed to implement this measure, the final design of regulated contracts will be developed through consultation. The contract type and its characteristics will be determined based on prevailing market information at the time and might change over time. Therefore, at this point we consider that it will likely be more effective for this information to be documented outside the Code.

Dispatch rights as an alternative to flexibility products

D.61. An alternative to the requirement to offer specified flexibility products but without ownership transfer is to give the buyer the call rights over specific flexible generation assets, granting them the ability to request generation when needed. Ownership of the underlying assets remains with the original generator, but some level of operational control transfers during the contracted periods. This approach presents a significant intervention, as it effectively shifts control of flexible capacity to external parties.

D.62. The key advantage of this model is its potential to directly address market power. By transferring an element of operational control, it creates a strong incentive for large generators to avoid triggering this mechanism.

D.63. However, there are notable drawbacks. The bilateral nature of these contracts introduces significant counterparty risk, as they are not supported by a centralised

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97 Price discovery in a renewables-based electricity system: Final Recommendations PAPER 2023 – Appendix B.

98 Reviewing_risk_management_options_for_electricity_retailers__issues_paper.pdf.

clearinghouse. This could make them less reliable and increase uncertainty for participants.

D.64. Additionally, transferring dispatch rights to multiple buyers could reduce overall operational efficiency of the system, as generators lose the ability to optimise the performance of their portfolio. For example, this could result in multiple parties calling on the same asset at the same time, creating significant design complexity.

D.65. We do not prefer this option due to the significant operational risk. While it offers a strong mechanism to mitigate market power, the potential drawbacks — such as risks to system efficiency, operational reliability, and counterparty trust — outweigh its potential benefits.

Volume requirements

D.66. The volume requirement is a methodology that will need to be developed before a trigger event. We propose setting total volume requirements as a percentage of the demand for shaped products to maintain incentives for investment in other flexible risk management options such as demand response and batteries.

D.67. Volume requirements for relevant generator(s) would then be calculated after the trigger event. This calculation will be informed by generator-specific characteristics, and market entry and exit.

D.68. If we implement MSOF, the final design of the volume offer requirements will be developed through consultation. To reflect changes in market entry, exit and generator capability, the methodology should be reviewed and updated annually.

Generator-specific characteristics

D.69. Generation specific characteristics will be used to reflect the relative capability of different generators to physically back the standardised flexibility products. This will consider their ability to generate at specific times over a medium- to long-term duration. Generators with a greater capability for this are naturally positioned to supply greater volume of flexibility products, making their obligations higher compared to providers with less capability.

D.70. The volume requirement will consider:

(a) existing contractual commitments of each generator to avoid auctioning capacity that has already been sold

(b) how to best preserve incentives for refurbishment and investment to increase the flexible generation capability of existing assets.

D.71. Internal trades will not count as pre-existing commitments for the purposes of setting volume requirements. This means the relevant generators may be buyers and sellers of flexibility products.

Market dynamics

D.72. Changes in the broader market also influence the overall supply-demand balance for flexibility products. We propose to consider the following factors in determining volume requirements.

(a) **Market entry**: the entry of new providers of medium- to long-duration flexibility increases competition and improves product availability. This reduces the volume requirements placed on existing generators.

(b) **Market exit**: Conversely, if flexibility providers exit the market, the obligations on remaining generators may increase to maintain adequate supply and market stability.

Offer/release mechanism

D.73. The offer mechanism would also need to be specified at the time of a trigger event. This section sets out our proposed methodology and the elements that need to be considered.

D.74. MDAG suggested that:

(a) relevant participants be required to progressively offer contracts via some form of auction or tender mechanism, and that the auction / tender rules be designed to promote robust price discovery

(b) the frequency of offers should balance timely price discovery with reducing transactions costs. Based on current information, they advised that quarterly offers may provide a reasonable balance. However, this timing should be revisited when the final design is determined, based on updated market information

(c) contracts be offered 3–4 years before the relevant contract period, noting that final decisions should be based on the best available prevailing information.

D.75. Our proposed approach to the offer/ release mechanism is set out below.

Centralised clearing-price auction

D.76. There are several methods for selling, purchasing, and trading standardised flexibility products, each with its advantages and challenges. For example, over-the-counter (OTC) trading offers simplicity but tends to have lower liquidity and less effective price discovery. On the other hand, a full auction can establish a national clearing price based on the intersection of bids and offers, promoting more transparent price discovery.

D.77. If MSOF is implemented, it is likely that only a small number of generators with medium to long duration flexibility will be required to offer standardised flexibility contract(s) through this offer process. Therefore, effective price discovery will largely depend on strong competition from the ‘demand side’.

D.78. While such demand is expected to grow rapidly in the coming years, it is essential that the trading mechanism be designed to maximise liquidity from the outset. The system should encourage active participation, ensuring that price discovery remains efficient and transparent.

D.79. We propose an offering mechanism that will use a centralised clearing-price auction, to foster competition among buyers. This auction format will encourage purchasers to compete against each other to set clearing prices, like the method used in the financial transmission rights (FTR) auctions, which are well-known in the

industry. However, our proposed approach will be simpler, relying on the equivalent of a robust spreadsheet system with a web interface rather than complex bespoke software.

D.80. Potential options for managing the centralised auction could include:

(a) a requirement for relevant generator(s) to use or establish a trading platform (for example, NZX)

(b) us managing the process

(c) a new market service provider, potentially using the FTR Manager framework as a model.

Auction parameters

D.81. Liquidity is crucial for effective price discovery, especially when few generators may be required to offer contracts. Therefore, our proposed auction parameters prioritise price discovery, liquidity and competition.

D.82. We propose opening the auction to all market participants including physical and non-physical to enhance price discovery and liquidity. Financial traders focus on the cash value of contracts, while independent intermittent generators, new entrants, and retailers prioritise the hedge value to ensure they can procure the necessary volume at a competitive price.

D.83. We do not propose excluding gentailers from participating in the auction as they are also legitimate buyers of flexibility. We will investigate auction rules to ensure fair access for all participants such as setting smaller contract sizes, for example, 0.1 MW to better enable smaller-scale entrants to bid.

D.84. Relevant generators will be required to offer set volumes of contracts at a reserve price, but we propose no further restrictions on market participants' offering or bidding for flexibility products.

D.85. To support price discovery, we propose progressive release of volume, either within a single auction or across a sequence of auctions. This is a common feature in auction designs, especially in emerging markets where the market is still discovering value and price (an illustration of progressive release is provided by the FTR calendar[99]). This progressive release of volume also supports the expected increase in demand for these contracts in coming years.

D.86. Liquidity can also be improved through secondary trading of contracts. Sold contracts should be transferable via OTC trades or potentially reintroduced into future auctions. This would function similarly to the assignment and reconfiguration aspects of the FTR regime, offering flexibility in how the contracts can be traded.

D.87. We propose that a 3-year horizon would be appropriate and aligns well with ASX-traded baseload futures.

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99 Financial Transmission Rights calendar.

D.88. If we proceed to implement MSOF, the final design of the trading mechanism — along with parameters such as reserve prices — will be developed through consultation.

Reserve price

D.89. MDAG envisaged that prices for the regulated contracts would be set via the auction or tender process itself. However, there may be justification for a reserve price to limit financial risks for sellers. If reserve prices are used, they should be set by us to prevent sellers from using inflated reserve prices to withhold supply from the market.

D.90. We agree with MDAG's observation that reserve prices set by us will be essential to avoid this withholding risk. The reserve price would ensure that prices remain within competitive limits, better ensuring that the flexible capacity is efficiently valued while this aspect of the market is still developing.

D.91. We propose that the reserve price be based on two key components.

(a) **Base price**: This will be informed by the baseload future prices from the ASX baseload futures, or its successors.

(b) **Multiplier**: The multiplier will be used to adjust the base price based on several factors.

i. **Type of contract**: The multiplier will vary based on the type of contract (for example, super-peak or cap) and the specifics such as strike prices, trading periods covered, and/or number of caps covered.

ii. **Observed price of flexibility products**: The multiplier will reflect the pricing of similar products in the market prior to the implementation of MSOF. This will be especially relevant to those products developed through voluntary trading or regulated terms/market making. Determining the relevant premiums over baseload that would logically form part of the reserve price requires an equivalent (to the ASX baseload curve) for future flexibility products.

iii. **Future price volatility**: Increasing reliance on solar and wind generation is expected to make the system more sensitive to weather conditions, resulting in more volatile spot prices. Therefore, the multiplier must account for how price volatility is expected to evolve over time.

D.92. Given the expected increasing price volatility in the electricity market, particularly with greater reliance on solar and wind generation, we acknowledge the need for latitude in determining the reserve price (noting that it is a price floor only). As these contracts will have horizons of years ahead, the multiplier will need to account for evolving market conditions. Historical price trends may not provide reliable guidance for future pricing. As such, electricity market modelling will be needed to assess future price volatility and adjust the multiplier accordingly. This modelling will consider factors such as weather variations and hydrological changes (for example, dry year).

D.93. The methodology for determining the reserve price will need to be developed. This methodology will incorporate input from market observation of trading in shaped

products and modelling. We anticipate that the methodology will be revised periodically (for example, annually) to reflect evolving market conditions and to ensure that the reserve price remains fair and effective.

D.94. If we proceed to implement MSOF, the final design of the reserve price will be developed through consultation and will be determined based on prevailing market information at the time and might change over time.

Termination process

D.95. It is important to have a clear termination process for offer requirements to ensure the measure is applied only for as long as is necessary, maintaining market confidence and avoiding undue regulatory burdens. Having a clear termination process encourages the development of competitive and efficient market conditions, as participants are motivated to exit the offer requirements.

D.96. The termination process should be specified in advance of a trigger event. This section provides our proposed approach. The final design of the termination process will be developed through consultation.

D.97. We consider a **phased termination** is appropriate as this allows the offer requirements to be gradually phased out. The practical method for this phased termination could involve scaling down the volume offer requirements over time. This could be done by reducing the offer requirements each year, eventually eliminating them once competition in flexibility products is deemed strong enough to sustain itself without the need for regulatory enforcement. This gradual ramp-down would give the market time to adjust while ensuring that competitive conditions are met before the intervention is fully removed.

Appendix D1 Summary of feedback on targeted virtual disaggregation

SUBMITTER	SUBMISSION ON VIRTUAL DISAGGREGATION OPTION
ERANZ	One recommendation ERANZ does not support is 'D7 – Virtual disaggregation of flexible generation base'. The case for beginning to investigate virtual disaggregation has not been made. So far, the problem definition is theoretical, not an observed problem present in the current market. The Authority's recent in-depth review of wholesale market performance did not conclude there was a demonstrable problem requiring action. If work begins this year, it may become outdated quickly, as possible market developments such as the government green-lighting Lake Onslow, the development of large grid-scale batteries, and proliferation of distributed energy resources ('DER') may offer better solutions. Starting work on a solution prematurely may create an environment where sector leaders wait for this chosen solution, rather than continuing to consider and analyse superior alternatives. Economic analysis ERANZ commission in 2021 from TDB Advisory demonstrated the economic efficiency of vertically integrated 'gentailers'. Therefore, the costs of virtually breaking up gentailers are more than just transactions costs – there are real and lasting economic inefficiencies which are borne by consumers. ERANZ recommends MDAG and the Authority instead continue to monitor the market as it evolves. If there is evidence of a problem occurring, this can be tackled on its merits at the time.
GENESIS	Genesis agrees that measures to address market power and/or strengthen competition should focus on conduct measures in the first instance. The risks associated with structural interventions are high, which sets a high bar for taking this approach. We do not support commencing work on structural solutions in the absence of an identified present competition concern. If and when work on targeted structural interventions is to be carried out, Genesis agrees that it should focus on allocation of assets/resources in the generation sector rather than separation of wholesale and retail functions.
HAAST	While we consider MDAG should explore options such as virtual asset swaps, the Options Paper does not provide a fully balanced qualitative assessment of the potential benefits of structural reform. Unsubstantiated weight is put on issues such as that breaking-up ownership of run of the river systems could result in 'coordination difficulties'.
MERCURY	Commencing measure D7 at a high level in 2024 as proposed, before a competition issue is clearly identified raises the risk of adverse unintended outcomes. A key concern noted above is that a high-level solution for D7 that is not properly informed might distort incentives and reduce the level of investment in innovative flexible energy storage, generation and demand-side flexibility, going forward, which would have a detrimental impact on economic efficiency. Mercury's concern, however, is that a high-level solution to D7 would skew demand for flexible energy supply to generators that have been determined to have significant market power. As already noted, the Authority has recently concluded that current changes in spot prices appear to be explained mostly by underlying demand and supply factors the market. Therefore, it may be premature to set the date of 2024 for a high-level specification of D7.

MERIDIAN	Although the details are not clear, MDAG seems to have in mind only Meridian and Mercury as potential providers of these products. It is not clear why that would be the case rather than requiring all generators to sell a volume of contracts proportionate to their flexible generation base, particularly given the modelling assumed Genesis and Contact would have more or less the same market share of flexible hydro and thermal capacity as Mercury.
VECTOR	We also believe consideration of virtual disaggregation (D7) should be in MDAG's recommended set of options for immediate further investigation, rather than being partially supported. We agree with MDAG that 'reallocating rights to that longer term storage is likely to more effectively target the issue while avoiding the complexities of asset transfers'. Intervention of this nature is not unusual in competitive markets overseas (for example, electricity, telco), and could go some way to ensuring there is a level playing field between the parties who own flexible generation and those who do not.
BEC	To protect public confidence, we agree with MDAG that focusing on conduct-based measures are preferred over the structural measures analysed. Structural changes, for instance in the form of disaggregation, come with significant costs and consequences, while at the same time being largely disruptive. If any structural changes do take place, based on the premise of shrinking anti-competitive behaviour, there must be substantive evidence that the problem exists – or at least the extent of the problem justifies the significant intervention. The Authority's recent paper on competition in the wholesale market, expressed the lack of definitive evidence to confidently justify the claim that elevated prices were due to anti-competitive behaviour
CONTACT	If thermal assets, or some substitute, stay in the market for much longer than assumed then some of the more radical changes recommended by MDAG may not be necessary, and may even be harmful to the market. For example, standardised shape products could stifle market innovation and incentivise the wrong type of capacity. Similarly virtual asset swaps may cause more disruption than they solve if market power does not become a problem.
ENERGY RESOURCE AOTEAROA	In general, we support measures that reduce barriers (informational, etc) to active participation in competitive market-based solutions. More stringent interventions – such as requiring retailers to provide incentive tariffs for DSF (option C3), or virtual disaggregation of flexible generation (option D7) — should be pursued only once they meet a high evidentiary threshold for both a problem and the merits of the solution. We caution against the mere floating of potential significant interventions could have a chilling effect on investment.
ENTRUST	In submission to the Electricity Price Review we commented that the biggest improvements in competition over the past decade were driven by the Ministerial Inquiry into the Electricity Industry's asset swap reforms. We provided evidence that the physical and virtual asset swaps reduced market concentration in different parts of the country; particularly in the South Island where the physical asset swap between Meridian and Genesis occurred.

Appendix D2 International and domestic examples

International case studies

Australia: Tasmania's Generator Performance Standards Mechanism[100]

Tasmania introduced mandatory offer requirements as part of a broader market reform to limit the market power of Hydro Tasmania, which held a dominant position in flexible generation. Under the mechanism, Hydro Tasmania was required to offer a portion of its generation capacity to the market through structured contracts (for example, 'regulated contracts') at a price linked to external market benchmarks, reducing its ability to exercise market power during peak demand periods. This helped create a more competitive environment without physically breaking up Hydro Tasmania's assets

Hydro Tasmania is required to offer regulated contracts for each of the eight forward quarters, if Open Interest in Victorian Baseload Swaps is more than 100 MW in each quarter. In each of the eight forward quarters in which the test is met, Hydro Tasmania will be required to offer the full range of regulated Tasmanian contract products in that quarter. If the test is not met in a particular quarter, Hydro Tasmania will not be required to offer regulated contracts in that quarter until the test is met.

United States: Texas ERCOT Virtual generation disaggregation [101]

The market in Texas uses a form of mandatory offer requirements by requiring vertically integrated utilities to offer certain generation contracts, such as 'capacity release' programs, to independent retailers. While not a strict form of virtual disaggregation, these programs create a more competitive environment by forcing dominant players to make generation capacity available to smaller players through regulated contract arrangements. This was a response to concerns that incumbents were using their control of generation to limit competition in retail markets.

The ERCOT market is one of the most competitive electricity markets in the United States. The design of the ERCOT market is net-pool and energy-only with both day-ahead and real-time markets. In contrast to other competitive markets in the United States, the ERCOT market does not have a capacity market mechanism.

ERCOT placed a 20% restriction on the market shares of participants as part of industry restructuring and implements a 5% lower bound on market shares, below which firms are not considered to be able to exercise market power. ERCOT also limits prices in its market dispatch for generators that are subject to non-competitive constraints. This is defined by a Herfindahl-Hirschman Index (HHI) exceeding 2,000 for those generators on the import side of the constraint.

ERCOT requires legal separation of businesses involved in retail and generation. This stems from the unbundling approach ERCOT took to its energy market restructuring reforms and

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100 Regulation of Hydro Tasmania's wholesale electricity contracts pricing activities in Tasmania, Framework information paper, June 2023 https://www.economicregulator.tas.gov.au/Documents/Wholesale Instrument Framework August 2013.pdf

101 Houston Kemp 'International review of market power mitigation measures in electricity markets' (May 2018).

provides greater transparency with regards to the operations at each level of the supply chain.

Deregulation in the Texan energy sector began in 1999 with the vertical separation of monopoly utility firms and the opening up of the market to competition. The previous system of vertically integrated utilities was unbundled into retail providers, generators and distribution and transmission firms. Currently, gentailing plays a minor role in the Texas market. Only the two largest firms operating in the market, TXU and NRG energy have interests in both the generation and retail markets

In addition to these structural regulations, significant behavioural regulations are also in place. These include:

(a) bid mitigation (which is a process of bid price capping, explained in greater detail below) to ensure prices are not increased due to limited competition when the transmission network is constrained

(b) prohibitions on activities by market participants that:

  i. adversely affect customers through unfair, misleading, or deceptive practices

  ii. materially reduce the competitiveness of the market

  iii. disregard the effect on the reliability of the system

  iv. interfere with the efficient operation of the market

(c) the option for market participants to enter a voluntary market power mitigation plan to reduce regulatory risk of future actions against them

(d) a condition that firms with less than 5% generation market share are ruled, a priori, not to have ERCOT wide market power.

United States: California[102] [103]

The California Assembly Bill (AB) 1890, the Electric Utility Industry Restructuring Act, was enacted in 1996 with the goal of breaking up the vertical structure of the industry and creating a competitive electricity market, with the intent of lowering the cost of electricity for retail consumers. The three incumbent suppliers had to divest large parts of their power plant assets to reduce market concentration. A trading market was created via two related markets: the California Power Exchange (CalPX) and the CAISO balancing market.

CalPX was intended to act as the primary market for wholesale electricity. It operated as a day-ahead market in which hourly demand and supply bids were submitted for the next day's trades, and an equilibrium price was set by the interaction between the supply and demand schedules. CAISO received information about the planned supply schedule and the expected load and checked for any strains to the transmission system. In addition, CAISO ran a real-time balancing market to match actual realised load with available power supply. The California wholesale market system worked smoothly for its first two years of operation with prices in CalPX averaging about $US33/MWh compared to retail rates of $US65/MWh.

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102 Californias Electricity Crisis.pdf.

103 California Electric Energy Crisis - Provisions of AB 1890.

The potentially positive effects of the disaggregation on market prices and consumer benefits were not sustained due to an inconsistency in the reform package. The market became unbalanced after price spikes of over $US500/MWh in 2000, leading to a collapse of the entire system.

The market changes of the late 1990s in CalPX reduced the HHI-index from 2700 in 1995 to 960 in 1999, theoretically an optimal outcome in competition policy terms. Market share of two key incumbents reduced to around 20%.

The Californian experience shows that a single focus on policy measurements on the wholesale market is insufficient to generate a competitive electricity market.

CAISO now applies pivotal supplier tests. As noted above, firms that fail the test have their offers capped to restrict the ability of generators to influence short term prices.

France [104] [105]

EDF, France's national integrated utility and one of the largest state-owned energy companies globally, produces, transmits, and distributes about 95% of the electricity used in France, primarily through nuclear generation.

In 2001, the European Commission (EC) required EDF to sell 6% of its generation capacity (6 GW) to promote competition in the French electricity market. Of this, 5 GW was offered as Virtual Power Plant (VPP) contracts, and 1 GW through back-to-back agreements linked to existing cogeneration PPAs. The VPP contracts included 4 GW of baseload and 1 GW of peak-load capacity, with durations ranging from three months to three years.

By 2006, the EC adjusted these requirements, allowing EDF to replace 1 GW of PPA-linked capacity with 400 MW of baseload capacity due to low market demand for the original offering. This adjustment maintained the competitive objective while responding to market realities.

This virtual disaggregation was a condition for EDF's acquisition of a joint controlling stake in Energie Baden-Württemberg AG (EnBW), Germany's fourth-largest electricity utility. The EC sought to mitigate competition concerns, as this acquisition would give EDF joint control over a competitor positioned to enter the French market. Rather than requiring physical disaggregation, which could disrupt EDF's economies of scale and its strong performance in nuclear safety and security, the EC opted for a virtual disaggregation framework to preserve consumer benefits.

The VPP contracts were structured as option contracts for energy. Buyers paid an option premium determined through auction and could exercise the option if the electricity spot price exceeded the strike price, which approximated the variable cost of production. EDF conducted quarterly VPP auctions starting in 2001, offering six baseload products with durations of 3 to 48 months and five peak-load products. Prices for these contracts were pre-determined by EDF before each auction.

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104 ec.europa.eu/competition/mergers/cases1/202209/M_1853_8193681_120_8.pdf.

105 Microsoft Word - RG-MD&A DEC 07 - avec chiffres - ANGLAIS 06032008 18h.doc.

In 2007, following allegations that EDF abused its dominant market position, France's Competition Council required EDF to auction an additional 1,500 MW of electricity to alternative suppliers at competitive prices, enabling them to challenge EDF in the deregulated mass market.

A public consultation in 2006 highlighted the positive impact of VPPs on competition in the French electricity market. VPPs significantly increased the volume of energy available in forward markets, enabling new entrants to secure reliable supplies and compete effectively. This mechanism also enhanced market liquidity, improving price signals and supporting the development of a competitive wholesale electricity market.

Spain [106]

In 2005, the Spanish government published the White Paper on the Electricity Market, outlining strategies to reduce market concentration and enhance competition and efficiency. A key focus of these reforms was promoting forward contracting in the wholesale electricity market. One innovative measure introduced was Virtual Power Plant (VPP) auctions, referred to in Spain as Emisiones Primarias de Energía (EPEs). Spain was the first European country to adopt VPP auctions as a regulatory measure to improve competition, rather than as a remedy for antitrust violations.

The regulator mandated VPP auctions for Endesa and Iberdrola, the two dominant utilities that together controlled approximately 80% of Spain's electricity generation capacity. The White Paper set a goal of reducing their market dominance to ensure no operator controlled more than 19% of baseload capacity or 22% during peak demand periods. The Spanish Electricity Law empowered the government to require dominant operators to auction up to 20% of their generation capacity.

For Endesa, the total energy auctioned was less than 6% of its capacity, while for Iberdrola, it was less than 5%. The auctioned capacity was divided into five lots, with the first auction held in June 2007 and subsequent auctions conducted quarterly until June 2008. The products offered in these auctions were option contracts: one for peak hours and another for 24/7 availability, with durations of 3, 6 and 12 months.

The Netherlands [16]

Nuon, a major Dutch energy utility, holds a significant share of the local electricity and gas retail market. In 2003, Nuon notified the Dutch Competition Authority (NMa) about its acquisition of Reliant Energy, a move that would have bolstered Nuon's dominant position in the wholesale market. The acquisition would increase its generation capacity from 900 MW to 4.4 GW. To address competition concerns, the NMa required Nuon to sell part of its generation capacity through a virtual power plant (VPP) auction as a condition for approving the acquisition.

As part of the approval process, Nuon was required to conduct a series of VPP auctions, selling 900 MW per year for five years, which represented 20% of its total generation capacity. These auctions would involve single product durations. In 2004, Nuon transferred 800 MW of its capacity to Eneco, which the NMa concluded was an acceptable solution to address competition concerns. Following this transfer, the NMa reduced the required auction

106 World Bank Document, Electricity Auctions, An Overview of Efficient Practices.

quantity for 2005 to 200 MW and relieved Nuon of its auction obligations starting in January 2006.

To facilitate the auction process, Nuon hired an auction manager to provide expert advice on product and contract design, develop the auction process, customise its electronic trading platform, and manage the overall auction operations.

Domestic case studies

Dairy Industry Restructuring Act (DIRA)[107]

DIRA was introduced to facilitate the creation of Fonterra, New Zealand's dominant dairy cooperative, while maintaining fair competition in the dairy industry. The Act set specific regulations to limit Fonterra's market dominance by requiring the cooperative to share a portion of the raw milk it collected from farmers with independent processors (IPs) at regulated prices. This was done to ensure smaller competitors could enter the market and compete on fair terms.

Key provisions of DIRA include the following.

- **Free entry and exit**: Fonterra is required to accept milk from any farmer, while suppliers are allowed to freely exit the cooperative. This ensures flexibility and access to the market for farmers and reduces barriers to entry for other players.
- **Supplier flexibility**: Shareholding farmers can allocate up to 20% of their production to independent processors without having to fully leave Fonterra, fostering competition and enabling IPs to source milk.
- **Non-discrimination**: Fonterra is prohibited from discriminating between suppliers in similar circumstances, which ensures fair treatment and a level playing field for all market participants.
- **Contestable supply**: At least 33% of the milk solids produced within 160 km of any location must be open to competition. This ensures that independent processors have access to sufficient supply to compete with Fonterra.
- **Obligation to supply IPs**: Fonterra is required to supply up to 250 million litres of raw milk annually to IPs at regulated prices, enabling them to compete effectively against the cooperative. These prices were set by the government to ensure that IPs could secure milk at fair rates, which helped them to remain competitive and enter the market without being undercut by Fonterra's prices.

Deregulation process

A crucial aspect of DIRA's implementation was the de-regulation process. DIRA includes mechanisms for periodic review of market conditions to determine whether continued regulation is necessary. Deregulation is triggered if Fonterra's market share drops below a specified threshold (for example, 80% of the total milk supply). Evidence of increased competition in the market, such as the growth of IPs and robust trading activity, supports the

107 Review of Dairy Industry restructuring Act 2001.

removal of regulatory obligations. Once the industry demonstrates sustained competition and efficiency, the government may reduce or remove certain regulatory requirements.

In 2005, following an assessment of market conditions, the government adjusted the regulatory framework, reducing the extent of the obligations on Fonterra. The Act allowed for the gradual removal of mandatory milk supply and auctioning requirements as the industry matured and competition became more robust. This de-regulation process ensured that while Fonterra's market share remained significant, the barriers for other companies to enter and compete had been sufficiently lowered.

Regulated price

The government set the prices at which Fonterra was required to sell milk to IPs to prevent price manipulation and ensure fair competition. The regulated price is calculated based on the costs that would be incurred by an efficient processor in a competitive market. Regulated prices are reviewed and adjusted periodically to account for changing market conditions, such as fluctuations in global dairy prices, shifts in production costs, and variations in currency exchange rates, effecting export values.

Fonterra uses a farm gate milk price model to calculate the regulated price. The Commission regularly monitors compliance with the pricing rules. It requires Fonterra to disclose its cost assumptions, price calculations, and financial data to regulators.

Separation of Telecom NZ and telco regulation[108] [109]

In 2008, Telecom NZ was functionally separated by a Ministerial Determination under the Telecommunications Act 2001. This move was aimed at promoting competition and improving access to broadband-based services in New Zealand. The functional (also called 'operational') separation included the following elements.

- **Three separate business units**: Telecom NZ was divided into:
  - an arm's-length fixed network business (Access Network Services)
  - one or more wholesale units operating independently
  - retail service units operating separately from the network and wholesale functions.
- **Independent oversight**: An independent oversight group was established to monitor compliance with the separation requirements.
- **Equivalence of supply**: Telecom NZ had to ensure transparency and non-discriminatory access to its network for all service providers.

This functional separation mirrored the model used for British Telecom and was intended to foster investment in New Zealand's telecommunications sector while increasing competition and access to new and improved broadband services.

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108 Operational Separation of Telecom | Beehive.govt.nz.

109 Telecom Separation Undertakings.

In 2011, Telecom NZ underwent structural separation, splitting into two independently owned and listed companies, Chorus Ltd which was focused on fixed infrastructure and Telecom NZ (later rebranded as Spark) which operated as the retail service provider.

The decision to move from functional to structural separation was driven by the government's Ultra-Fast Broadband (UFB) initiative, introduced in 2009. The UFB plan sought to deliver fibre-to-the-home (FTTH) to 87% of the population by 2022, largely funded through public investment. Telecom NZ faced two critical considerations.

1. **Eligibility to bid for UFB funding**: To participate in the UFB programme, telecom operators had to operate exclusively as infrastructure service providers and not offer retail services. Structural separation was therefore necessary for Telecom NZ to compete in the UFB tender process.
2. **Relief from functional separation challenges**: Functional separation had created significant operational challenges for Telecom NZ, including higher compliance cost, complex IT overhauls and inefficiencies in consumer services due to regulatory constraints.

Structural separation offered a way to simplify operations and remove these functional separation undertakings, making Telecom NZ's business more efficient.

The UFB plan incorporated both incentives and obligations.

- **Incentives**: Telecom NZ could access substantial government funding for FTTH deployment by participating in the UFB initiative. This aligned with the company's strategic goal of expanding its fibre infrastructure.
- **Obligations**: Participation required structural separation, meaning Telecom NZ had to split its infrastructure and retail businesses entirely.

The move from functional to structural separation encouraged investment in next-generation infrastructure, levelling the playing field for retail service providers to enhance competition. The shift marked a significant milestone in the deregulation of the telecommunications market, balancing government intervention with market-driven innovation.

Separation of ECNZ[110] [111]

In the late 1990s, New Zealand implemented mandatory offer requirements as part of the initial steps to break up the Electricity Corporation of New Zealand (ECNZ), the state-owned enterprise that controlled most of the country's electricity generation. This breakup aimed to create competition in the electricity market by dividing ECNZ's assets and compelling new, smaller entities to enter the market.

ECNZ was split into multiple companies, primarily Genesis Energy, Meridian Energy and Mighty River Power (now Mercury). This restructuring reduced ECNZ's dominance, increasing competition in generation and supporting a more competitive market structure.

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110 Chronology of New Zealand Electricity Reform.

111 Kalderimis, Daniel --- 'Pure Ideology: the 'Ownership Split' of Power Companies in the 1998 Electricity Reforms' [2000] VUWLawRw 20; (2000) 31(2) Victoria University of Wellington Law Review 255.

With the separation of ECNZ into competing entities, concerns emerged about market power and the potential for companies to withhold offers or submit high-priced offers to manipulate the market. To address these concerns, the government introduced mandatory offer requirements. These required generators to submit transparent offers for available generation capacity in the wholesale market, detailing the quantity of electricity they could produce and the prices at which it would be sold.

By mandating these offers, the government aimed to prevent market manipulation by ensuring transparency and that companies could not simply withhold generation capacity to drive up prices. It helped prevent potential anti-competitive behaviour, supporting a more level playing field in the restructured market.

Appendix E Format for submissions

Submitter	

Questions	Comments
Problem definition — competition concerns from Gentailer vertical integration	
Q1. What are the benefits of vertical integration between generation and retail? Do you have any evidence to better specify and quantify these benefits? In particular, we are interested in benefits that would be realised by New Zealand's electricity consumers.	
Q2. Do you agree with our description of the competition concerns that can arise from the combination of Gentailer vertical integration and market power? Why/why not? Do you have any evidence to better specify and quantify the competition risks of vertical integration?	
Q3. To what extent does vertical integration of smaller gentailers, such as Nova and Pulse, raise competition concerns? Should these smaller gentailers be subject to any proposed Level Playing Field measures?	
Q4. Are there other specific areas (other than access to hedges) where Gentailer market power and vertical integration are causing competition concerns?	
Q5. Do you agree with our preliminary view that the evidence indicates there may be good reasons to introduce a proportionate Level Playing Field measure to address the competition risks in relation to hedging/firming? Why/why not?	

Level Playing Field options we have identified	
Q6. Have we focused on the right Level Playing Field options? Are there other options that we should add or remove to the list in paragraph 4.1?	
Q7. Are there any other important factors we should consider when identifying options (see paragraphs 4.2 to 4.5)?	
Q8. Are there other key features, pros or cons we should consider in our description of the four Level Playing Field options?	
Our assessment of Level Playing Field options	
Q9. Have we identified the right criteria for assessing Level Playing Field options (Figure 6)? Is there anything we should add or remove?	
Q10. Do you agree with our application of the assessment criteria (Table 5)? Are changes needed to the colour coding or reasoning?	
Q11. Are there any other material benefits or risks that should be considered (but are currently not) in our assessment of options?	
Q12. Do you agree with our selection of non-discrimination obligations as our preferred Level Playing Field measure? Why/why not?	
Roadmap for implementing non-discrimination obligations	
Q13. What are your views on our proposed roadmap for the implementation of non-discrimination obligations?	

Q14. Which products should any non-discrimination obligations apply to? Should all hedge contracts be captured, or should the rules be focused on super-peak hedges only? Are there are other interactions between Gentailers and their competitors which would benefit from non-discrimination rules?	
Q15. Do you have any feedback on the indicative draft non-discrimination principles (and guidance) set out in Appendix B? Without limiting your feedback, we would be particularly interested in your views on the following questions: a. Have we got the level of detail/prescription right? For example, do you consider that the principles and guidance will lead to economically meaningful Gentailer ITPs being put in place? What would be the costs and benefits of instead applying a more prescriptive ITP methodology? b. How far should the allowance in the principles for different treatment where there is a "cost-based, objectively justifiable reason" extend? Do you agree with the guidance that this allowance should not be extended to volume (at paragraph 13 of Appendix B)?	
Q16. Do you agree that escalation options are needed if principles-based non-discrimination obligations are implemented initially? Why/why not?	
Q17. Are prescribed non-discrimination requirements and mandatory trading of Gentailer hedges via a common platform suitable escalations given the liquidity, competitive pricing and even-handedness outcomes we are seeking? Why/why not? What alternatives would you suggest (if any)?	

Q18. What costs and benefits are likely to be involved in setting more prescriptive regulatory accounting rules which detail how ITPs should be calculated? What would be appropriate triggers for introducing more prescriptive requirements for ITPs?	
Q19. Do you have any views on how the non-discrimination requirements should best be implemented to ensure that Gentailers are no longer able to allocate uncontracted hedge volumes to their own retail function in preference to third parties? What are the key issues and trade-offs?	
Q20. Do you have any views on the triggers for implementing the stronger regulation proposed in our roadmap?	
Our current thinking on virtual disaggregation	
Q21. Does our proposed approach to implementing non-discrimination obligations (as set out in the roadmap in Figure 7) sufficiently address the underlying issue that originally led to MDAG recommending virtual disaggregation?	
Q22. Do you have any views on whether virtual disaggregation provides a useful response to the competition risks we have identified (relative to the proposed roadmap) and, if it does, how it should be best applied?	