2 November 2023

Electricity Market Measures submissions
Ministry of Business, Innovation & Employment
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New Zealand

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SUBMISSION ON THE DOCUMENT: MEASURES FOR TRANSITION TO AN EXPANDED AND HIGHLY RENEWABLE ELECTRICITY SYSTEM

The Electricity Retailers' Association of New Zealand ('ERANZ') welcomes the opportunity to provide feedback on the Ministry of Business, Innovation and Employment's document 'Measures for Transition to an Expanded and Highly Renewable Electricity System' from August 2023.

ERANZ is the industry association representing companies that sell electricity to Kiwi households and businesses. Our members supply almost 90 per cent of New Zealand's electricity. We work for a competitive, fair, and sustainable electricity market that benefits consumers.

Executive summary

The current Energy Strategy workstream is well intentioned but can probably achieve most of its objectives in a more streamlined form by focusing on key issues.

New Zealand's electricity sector is well-suited to lead the country's decarbonisation effort due to its competitive market and a foundation of renewable energy generation sources, which will help achieve our net zero targets while ensuring economic stability and energy affordability. ERANZ endorses adding "economic development" as a fourth pillar to the energy strategy to promote New Zealand's long-term economic interests and wellbeing.

The Energy Strategy is valuable whole-of-government work that can consider all factors driving household energy bills. ERANZ acknowledges that the transition to a low emissions economy within the electricity sector will entail costs across generation, transmission and distribution. Therefore, collaboration on common goals between the government and industry will ensure that consumers are well-served with choice, investments are as efficient as possible, and risks are identified and mitigated. ERANZ underscores the necessity of clear communication to consumers regarding the impacts of this transition. Collaboration aims to minimise the total economic burden on consumers while fostering transparency about the trade-offs among all stakeholders.

The Energy Sector Framework is a positive example of the industry's collaboration efforts. ERANZ is

a member and endorses the Framework's separate submission on this MBIE document.

New Zealand's energy transition

Addressing climate change requires internationally coordinated action, and ERANZ supports New Zealand's commitment to achieving net-zero by 2050.

To enable net-zero, ERANZ supports the government development of the New Zealand Energy Strategy to assist the transition to a low-emissions economy, address strategic challenges in the energy sector, and signal pathways away from fossil fuels.

ERANZ strongly supports incorporating "economic development" as a fourth pillar in the Energy Strategy. While the traditional energy trilemma of affordability, sustainability, and reliability is an incredibly useful way to think about trade-offs, we believe that adding economic development as a fourth dimension is an important consideration to protect and enhance New Zealand's long-term economic interests.

New Zealand's electricity sector is well-poised to lead the charge in decarbonising our economy thanks to a combination of strategic factors. The country's previous market reforms have created a robust and dynamic electricity market that encourages innovation and competition - this competitive landscape has led to real average residential electricity bills remaining flat over the past 15 years. Furthermore, New Zealand's strong renewable energy foundation, primarily derived from hydro, wind, and geothermal sources, forms a solid base for a greener future. These existing renewable resources and the sector's commitment to a significant pipeline of new generation construction provide a strong starting point for industries to lower their emissions by electrifying. Together, these factors position New Zealand well for achieving our ambitious decarbonisation goals while ensuring economic stability and long-term energy affordability.

The 'energy wallet' idea shows the promising potential of transitioning from costly fossil fuels to renewable electricity. Conceptually, this shift offers a substantial financial benefit to consumers who redirect funds from fossil fuels towards more sustainable and cost-effective electricity sources. However, carefully managing the associated costs is the key to a successful transition. Ensuring affordability during the transition period and addressing any potential challenges will be crucial.

Any Resource Management Act reforms must be ambitious and actively promote renewable electricity generation. Reforms should favour projects that reduce emissions, remove unnecessary burdens, and provide long-term certainty. New Zealand can attract the necessary investment to harness our abundant natural resources by fostering an environment that incentivises and expedites renewable electricity generation.

Once considered a potential energy storage solution, Lake Onslow now appears to be a dead-end. The prohibitive expense associated with its development and the enormous opportunity cost incurred through forgone abatements elsewhere in the energy system is raising serious concerns in the industry. While the initial promise of Lake Onslow was enticing, it is increasingly evident that alternative, more cost-effective solutions must be explored instead.

Retailers wholeheartedly support the development of the Equitable Transitions Strategy to ensure that all New Zealanders can reap the benefits of transitioning to predominantly renewable electricity. This strategy will align with the industry's commitment to fairness and inclusivity,

ensuring that vulnerable households are not left behind as we move towards cleaner and more efficient energy sources.

Chapter 1

New Zealand's electricity market is an example of international success when benchmarked against international standards. The paper remarks:

> *"The World Energy Council's annual assessment, which produces the 'Trilemma Index' considers energy security, equity and environmental sustainability. The latest World Energy Council annual assessment (2022) ranks New Zealand at 8th.... New Zealand has consistently remained within the top 10 countries since 2012."*

We should take pride in the electricity system's performance and the value it delivers to all New Zealanders. Its robustness, efficiency, and reliability set a global standard and ensure that Kiwis enjoy a dependable and cost-effective energy supply.

MBIE's Quarterly electricity generation and consumption data series show the renewable share of electricity generation hit 90.7% in the four-quarter moving average in June 2023 – only four quarters have recorded a higher percentage share since the data series began in 1974.

This accomplishment is a testament to all participants' dedication and reinforces the nation's ability to provide consumers with a sustainable world-class electricity system. But more must continue to be done. The paper cites the Electricity Authority:

> *"Significant investment in new renewable electricity generation has been consented and is in the pipeline. There is about 2,600 GWh/year of new renewable electricity generation expected to be online between now and 2026."*

ERANZ agrees with MBIE's identification of firming as a critical challenge for New Zealand as the role of fossil fuel generated electricity declines. Firming solutions involve finding cost-effective and sustainable ways to ensure a consistent power supply, even when the sun isn't shining and the wind isn't blowing. Innovative solutions, such as advanced energy storage technologies and smart grid management, are crucial to overcoming this challenge while maintaining our commitment to decarbonise.

The market has always managed dry-year risk and it can continue to be managed by the market. In the medium term, through gas generation, and in the longer term, through alternatives such as industrial demand response, increased renewable spill, and green peaking. The ETS will drive these outcomes over timeframes that achieve New Zealand's emissions reduction goals. Dry year risk will only become an immediate concern if there is potential for government policy settings to force gas out of the system prematurely.

Independent retailers have, and can continue to, access wholesale supply in an equivalent way to vertically integrated gentailers. However, further market development is welcome to provide new and innovative products, services and pricing to underpin competition and support retailers entering the market should they wish.

Electricity generators are fully exposed to the ETS. A functioning ETS will price emissions efficiently and send a price signal to reduce emissions. ERANZ supports this and encourages the government to make policy decisions consistent with supporting long-term confidence in the ETS so that participants and consumers make rational and long-lasting investments in new plant and equipment to reduce emissions further.

Chapter 2

New Zealand's market settings are working well so far. The principal objective of policymakers should be to maintain market confidence in the government's regulatory settings. The paper cites a range of indicators from the Authority, Concept Consulting, and Boston Consulting Group, showing the pipeline of renewable electricity projects is substantial and able to meet our medium-term needs.

Currently, many of the regulatory and market uncertainties identified in the paper come from government policy decisions such as the future of fossil gas supplies, the NZ Battery Project, ETS settings, RMA reform, and the Energy Strategy itself.

Beyond regulatory settings, the paper correctly foresees increased wholesale electricity price volatility resulting from greater use of intermittent generation sources. Decision-makers need to understand volatility is not a sign of market failure in itself and sends useful price signals about the value of flexible resources. It is the role of retailers to stand between the wholesale market and end customers to manage this volatility and provide innovate products and services that enable customers choice in how they meet their energy needs.

Therefore, political leaders should communicate effectively to the public on the system's integrity when required. In addition, policymakers should continue to develop the market for risk management products so participants can manage price risk effectively. Already large gentailers provide a market-making service for electricity futures and cover the costs of this service themselves. They also trade shaped hedge products bilaterally with smaller retailers. Members support ongoing work by the Electricity Authority to improve the transparency of hedge markets and have worked collaboratively with a range of hedge market participants to develop a code of conduct for interactions in the over-the-counter hedge market.

Overall, there is no need for further government support of renewable generation because of the healthy pipeline of developing projects. Instead, the government should focus on having permissive planning laws, a functioning and well-regulated wholesale market, and allow the market to supply the diversity required.

Chapter 3

ERANZ agrees with the paper that the existing 'energy-only' market coupled with ETS price signals will drive investment in new renewable generation. There is no proposal to build new fossil-fuelled baseload electricity generation in New Zealand because the market understands the overall direction of travel.

There continues to be ongoing discussion around how to maintain security of supply through the transition which is a key risk the sector, government and regulators will need to work collaboratively to address. Transpower has raised concerns around the need to invest in flexible

capacity including batteries, demand response or thermal peaking units to maintain security and for consideration of market incentives or enhancements to support this outcome[1].

ERANZ supports consideration of how market settings might evolve to support capacity assurance through the transition. As any reforms can carry risk of undermining performance of the existing energy only market it will be important that the sector, government, and regulators work collectively to first clearly define the problem definition before understanding options. While NZ can learn from approaches being considered in overseas jurisdictions careful consideration is required as to the applicability, effectiveness, and ability to be implemented in NZ.

ERANZ supports as a priority the finalisation of the government's proposed gas transition plan which must address the issues with New Zealand's existing fossil-fuelled firming capacity. It will not remain economical to operate in the long-term, perhaps before its usefulness to New Zealand's overall energy system is exhausted – therefore, the ability to raise adequate revenue to justify its ongoing maintenance and operations will become more challenging. This issue requires the government to maintain a watching brief.

Similarly, there is concern about gas availability, mainly if Methanex exits the market. In this scenario, there appear to be few options to secure a flexible gas supply. In turn, this heightens the dry year risk for New Zealand overall.

Chapter 5

ERANZ supports market research and development of large-scale flexibility. The paper notes:

> *"Large-scale flexibility can provide an economic alternative to new generation investment and play a significant role in reducing peak demand and in providing firming."*

> *"... in the future the energy system will utilise significant volumes of large-scale flexibility from industrial, commercial and, in coming decades, residential sources."*

ERANZ supports the regulatory system's role in facilitating and promoting both small and large-scale flexibility markets. These markets will be pivotal in enhancing the reliability of our energy system by addressing the intermittent nature of renewable generation. By encouraging flexibility and adaptability in the electricity market, we can also offset the need for some additional generation.

To aid this development, the implementation of real-time pricing is positive. Real-time pricing in the wholesale electricity market offers a dual advantage: it empowers larger, sophisticated customers with real-time price signals that enable them to make informed decisions about when to use electricity, potentially reducing costs. Additionally, real-time pricing supports demand response programmes, where flexibility providers can coordinate voluntary demand reductions during peak periods, contributing to transmission and grid stability.

ERANZ encourages providing further information, education and contract products to aid the uptake of real-time demand response. The paper notes existing examples from Enel X and Contact Energy where flexibility is increasing in scale and, therefore, usefulness to the overall system.

[1] https://businessdesk.co.nz/article/energy/escaping-electricity-blackouts-in-2024-will-need-investment-now-transpower

Chapter 6

The MBIE issue paper discusses recent work by the Electricity Authority and its advisory group on the potential for an increase in the concentration of flexible generation in future as thermal generation retires. This is a hypothetical problem to be monitored and addressed if required in future. The extent of increased concentration will be dependent on a range of factors including the entry of new sources of flexible generation and demand response. ERANZ considers the existing work of the Electricity Authority to be comprehensive and agrees with the Authority's decision paper on promoting competition through the transition that "the best approach to promoting wholesale market competition in the transition is to focus on proactive monitoring of trading conduct, enabling a greater and faster supply response, and promoting more demand flexibility and participation." The Electricity Authority as the expert regulator should continue to monitor the evolution of the market and competition through the transition.

There is no evidence of competition issues in the market today. The Electricity Authority has spent two years assessing the evidence through its review of competition in the wholesale market. ERANZ agrees with the conclusions that:

- The electricity market has served consumers well.
- Proactive trading conduct monitoring and enforcement, and promoting entry by new generation and more flexible demand and demand-side participation are currently the best ways to mitigate risks from market power in the transition.
- Structural reform options are currently not justified by the available evidence; would be costly and may not be efficient, effective, or timely; and by increasing uncertainty, they would also likely stymie much needed investment in generation.

In terms of structural reforms, we note that ERANZ previously commissioned economic analysis showing vertical integration benefits consumers.[2]

New Zealand's electricity system is working well for consumers, as discussed in the introduction to this submission. ERANZ cautions against overreaching regulatory interventions that could threaten our international reputation for a vibrant and competitive electricity market just as it enters a transformational phase requiring billions of dollars of private sector investment.

Chapter 7

Transpower's national grid system is serving consumers well. However, like generation, transitioning to a low-carbon economy through increased consumption of predominantly renewable electricity will require investment.

ERANZ agrees with the key challenge highlighted in the paper:

> *"A key challenge is to ensure regulation enables sufficient investment where current and future demand exists, while managing the risks of over-investment where there is insufficient demand. … The risks and the consequences of under-investment are now higher than before, due to our need to decarbonise the economy."*

[2] See Appendix A.

Large-scale investments in transmission capacity through Transpower's RCP4 programme are warranted to give consumers confidence that switching to renewable electricity is reliable and secure. New Zealand needs to ensure grid performance in the future. The paper sums this up:

> *"An electrified future will increase New Zealand's dependence on a resilient national grid for uninterrupted, reliable electricity supply."*

However, these upgrades will cost consumers, so the government will have a role in ensuring vulnerable consumers can continue consuming the necessary amounts of electricity they need affordably. The extent of any required safeguards is not yet known, but this is an area where policymakers should focus their attention, whether through the Equitable Transitions Strategy or another similar workstream.

Chapter 8

Electricity distribution networks play as important a role as the national transmission grid and face similar challenges through decarbonisation. ERANZ supports strengthening the regulatory system by including decarbonisation alongside current objectives.

ERANZ supports distributors investing in new infrastructure capacity to meet demand as the economy electrifies. Timely and appropriate expenditure is critical to ensuring consumers can swap fossil fuels for renewable electricity with confidence that the supply will be available when needed. ERANZ supports considering how a 'financability test' might work for distributors to calculate whether their cashflows are sufficient to fund their infrastructure roadmaps. In addition, infrastructure investments should be partnered with auxiliary investments in demand response and flexibility to benefit customers with the least-cost options to add capacity.

As with the transmission grid, increased investment leads to increased revenue recovery from consumers. The ongoing regulatory oversight of the Commerce Commission is critical to ensure investment is balanced and necessary. In addition, given the current transformation of the electricity system, it is worth reconsidering the role benchmarking could play in sharing best practices and evaluating how distributors negotiate the transition. Part 4 of the Commerce Act prohibits the Commission from using comparative benchmarking to evaluate prices and quality standards. Reintroducing this would incentivise efficiency.

However, there are two large industry-wide issues the Ministry's document does not address that will significantly impact consumers and drive industry decision-making over the coming years.

Firstly, current distribution regulatory settings have already baked in coming price increases over the medium term as distributors and transmission asset owners account for recent jumps in interest rates - driven higher by inflation. These Commerce Commission regulated regimes typically operate without much attention as interest rates have been historically low; however, the recent economic turbulence means these asset owners can increase prices from 2025-2030 to recoup their cost of capital.

Secondly, government policymakers are ratcheting up expectations of resilience and continuity of supply, particularly in the face of natural disasters like Cyclone Gabrielle. Climate change makes weather-related natural hazards like storms and flooding worse and more frequent. Additionally, the public and decision-makers are increasing their expectations of how quickly asset owners will

restore supply following outages. The Department of Prime Minister and Cabinet recently consulted on "Strengthening the resilience of Aotearoa New Zealand's critical infrastructure system". Resilience is essential, but asking the sector to do more risks significantly increasing costs on consumers. Instead, the incoming government could make available some of Budget 2023's $6 billion 'National Resilience Plan' for electricity infrastructure. By retaining some of this budget allocation, it can be used to partly defray resilience costs in the electricity system.

Overall, the aggregate impact on consumers' bills needs regulatory and whole-of-government consideration, including through the Equitable Transitions Strategy, lest consumers lose trust in the broader electricity market. Policymakers need to be aware of how their decisions, individually and in aggregate, impact consumers and to communicate this clearly to them. Explicit public signalling of cost increases and smoothing costs over time may help limit consumer price shocks.

Pricing signals by distributors can provide signals to optimise consumption to use network capacity efficiently. Consumers can choose plans that expose them to the advantages of these pricing structures and change their behaviour accordingly.

However, ultimately, retailers must have the right to control their own pricing plans. Consumers have a range of pricing preferences, and retailers have a direct relationship with them to reflect their preferences through a choice of plans. Any requirement for mandatory or compulsory "pass-through" of distributor charges to consumers will mean retail innovation is limited, and some consumers are negatively impacted. For example, retailers offer a range of pricing plans that suit different customer needs that do not have a time-of-use component: "smoothed" plans across the year, flat rate plans, and pre-pay. Often, these types of plans suit more vulnerable consumers who value bill predictability. Additionally, time-of-use pricing might not suit consumers who cannot maintain the habits required to shift much of their consumption into off-peak hours.

This issue has been considered by policymakers at the Authority previously, and ERANZ commissioned an independent economic analysis from TDB Advisory in 2021, which shows retailer's control over their pricing plans delivers benefits to consumers, this is attached as Appendix B. TDB Advisory's independent reports concludes:

> *"Our analysis finds that the effectiveness of transparent distribution price signalling does not depend on a mandated pass-through to end-consumers of distribution prices by the retail sector. Sufficient market response can come from the proportion of the retail market that is most willing to respond to such price signals without requiring the price signals to be conveyed directly to all consumers."*

Chapter 10

ERANZ fully supports the expansion of distributed flexibility in our energy landscape. Embracing distributed flexibility enables a more resilient, efficient, and responsive energy system, empowering consumers and promoting the integration of renewable energy sources.

To further develop and expand flexibility offerings, we advocate for establishing communications and data standards to enable the seamless operation of flexibility services. Standardisation enhances the interoperability of various systems and ensures the efficient exchange of data critical for system management.

As discussed in previous consultations with the Authority, distributors can potentially find more efficient solutions to capacity constraints by investigating non-network solutions. There is additional value to be realised for both networks and consumers from resources that can reduce network peak capacity and help avoid future network investments. Where flexibility can deliver benefits, distributors should test this with alternative providers in the market to ensure the optimum solution is selected. In our experience, many networks do not have the capability to value flexibility and offer commercial terms to procure it and reward it. This may be due to the scale and resources of smaller distribution companies. ERANZ supports the concept of Distribution System Operators (DSOs) that aggregate up the task of contracting and dispatching flexibility resources for network management purposes, e.g. there could be four DSOs (UNI, LNI, USI, LSI). Ownership of networks need not be affected.

If networks can value flexibility, then the owners of flexible resources (or aggregators) can decide how to optimise consumer benefits across the range of market mechanisms and contracts available (both with retailers and networks).

No additional measures are currently necessary to support time-of-use retail tariffs, as a wide variety of such options are already available in the market. The existing diversity of time-of-use retail tariffs provides consumers with ample choices, enabling them to select the plan that best aligns with their energy consumption patterns and preferences. This choice fosters a competitive and consumer-centric energy market, allowing customers to manage their electricity costs effectively while promoting efficient energy use. In the longer term, time-of-use plans may also compete with managed appliance tariffs where a retailer or aggregator contracts for control over a consumer appliance, such as an EV charger, within parameters set by the consumer and in exchange for lower total energy costs.

ERANZ strongly cautions against the assumption that time-of-use retail plans are a straightforward means for vulnerable consumers to save money on their electricity bills. While these plans offer potential cost savings, they require significant behaviour changes to maximise their benefits. If these behavioural adjustments are not well-understood or maintained over time, consumers may find themselves financially worse off. Vulnerable consumers, in particular, may encounter challenges in adapting to fluctuating usage patterns and could face unexpected cost increases. Any government promotion of time-of-use plans must be accompanied by comprehensive education to ensure that consumers fully grasp the implications and potential benefits, mitigating any associated risks.

Chapter 11

Cost-reflective pricing is a model that minimises market distortions within the energy sector. This approach ensures that prices accurately represent electricity production costs, encouraging efficient resource allocation and innovation. However, if specific segments of consumers encounter difficulties in paying these fair prices, the solution should not come in the form of market-distorting interventions.

Instead, addressing affordability concerns should primarily involve government-implemented welfare mechanisms and targeted assistance programmes. These programmes can provide the necessary support to ensure that vulnerable or disadvantaged consumers can access the essential energy services they need without undermining the integrity of the energy market. This balanced approach allows us to uphold the principles of fairness, efficiency, and sustainability in the energy sector while addressing social equity concerns separately.

Conclusion

ERANZ would like to thank the Ministry for its ongoing efforts to develop the policy settings required to decarbonise New Zealand. We are happy to provide any further information on this submission as needed.

ERANZ looks forward to engaging with officials further as the Ministry progresses with its Energy Strategy and policies to transition New Zealand to net-zero emissions.

Yours sincerely