Submission by

to the

Electricity Authority

on the

Promoting competition in the wholesale electricity market in the transition toward 100% renewable electricity

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PROMOTING COMPETITION IN THE WHOLESALE ELECTRICITY MARKET IN THE TRANSITION TOWARD 100% RENEWABLE ELECTRCITY – SUBMISSION BY BUSINESSNZ ENERGY COUNCIL

INTRODUCTION & EXECUTIVE SUMMARY

1. BusinessNZ Energy Council (BEC)[1] welcomes the opportunity to provide feedback to the Electricity Authority (referred to as 'The Authority") on *Promoting competition in the wholesale electricity market in the transition toward 100% renewable electricity* (Referred to as "The Paper").

2. The BEC believes a sustainable, affordable, and secure energy system is vital for a competitive economy. Electricity is a key input to the production of goods and services for businesses. We support a market-based framework where generators and retailers compete vigorously and businesses and residential consumers trade in a way that enables them to manage their risks at efficient prices.

3. The Authority has an important role to play to ensure the wholesale electricity market operates competitively and efficiently for the long-term benefit of consumers. BEC would like to acknowledge the significant time and effort the Authority has committed to conducting this review.

4. The wholesale electricity market has performed relatively well, with retail prices remaining flat since 2013. However, prices for large users have increased materially. This is a considerable concern for large users, and New Zealand's economic competitiveness.

5. BEC is pleased to see the Authority recognising several impediments to new generation. BEC is also pleased the Authority has outlined several constructive and sensible recommendations to reduce these impediments.

6. BEC agrees with the Authority that there is no conclusive evidence to suggest there are competitive issues to be addressed. We acknowledge wholesale electricity prices have been higher over the last three years and agree underlying supply and demand conditions have been a contributing factor. Significant structural changes aimed at addressing competition will spell uncertainty and delay new generation.

7. However, there remain considerable concerns about flexible capacity. BEC acknowledges that New Zealand's energy-only market will likely need to evolve to ensure sufficient investment in flexible capacity as New Zealand experiences more renewable penetration. This evolution of the energy-only market may need to occur faster than anticipated. If the energy-only market does develop, we should learn from our previous mistakes and the challenges faced by many countries around the world when it comes to ensuring enough capacity at the least cost to consumers.

8. In this submission, we outline problems with firming and the lack of incentives to maintain current flexible thermal capacity, combined with the lack of incentives to build fast-start flexible capacity in the future. BEC is open to investigating possible mechanisms to deal with these significant problems. Such investigations should be rigorous and consider all possible unintended consequences and the trade-offs New Zealand is willing to bear. This may not directly sit within this paper, but it fits within the scope of the Authority's wider work and MDAG's investigations into price discovery in a 100% renewable market.

9. Members have been consulted in preparing this submission. Given the diversity of our membership, some members will have specific issues they wish to comment on in more detail. We have encouraged members to make their own submissions raising those issues specific to their areas of interest. There is no information obtained in this submission that is confidential.

[1] Background information on the BusinessNZ Energy Council is attached as Appendix One.

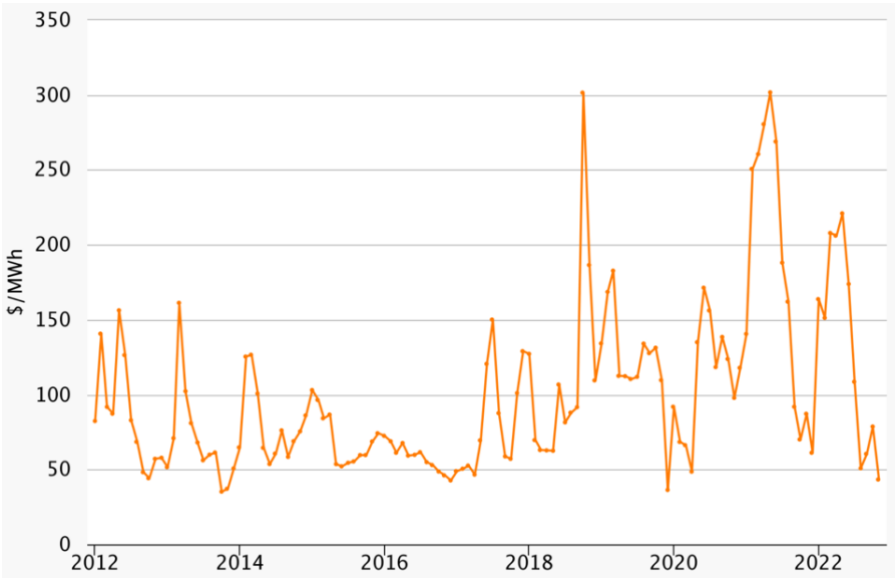
Higher wholesale prices

10. BEC acknowledges there have been higher electricity prices in the wholesale electricity market over the last four years, as shown in Figure 1. The consequence of higher prices has manifested in different ways. Among other factors, retailers have hedged sufficiently, shielding residential consumers against higher and more volatile spot prices. As a result, retail prices have remained flat, with prices slightly decreasing by around 3% in real terms since 2013.[2]

11. According to our World Energy Council Energy Trilemma Index[3] results, New Zealand ranks 15th out of 127 countries in terms of energy equity, a measure of access to and affordability of energy. Compared with the baseline year of 2000, our equity score has declined only slightly over the last 20 years, with no significant changes since 2013.

12. On the flipside, higher prices have been felt by other users, in particular medium to large users of electricity amongst the business community. The last three years have been challenging for New Zealand's businesses. COVID-19 forced businesses to be continually dynamic in the face of uncertainty. Supply disruptions and cost inflation have pushed prices up for raw materials, labour, fuel, and transport, limiting potential production. Labour shortages have limited capabilities. Higher electricity prices provide additional costs for businesses facing these significant challenges.

Figure 1: New Zealand wholesale prices 2012 - 2022



13. Energy, including electricity affordability, is crucial. It ensures businesses can afford to operate and produce in New Zealand. For many industrial energy users, the price of energy is either their first or second largest cost of operating. Persistent high prices damage New Zealand's competitiveness, with firms competing against overseas products domestically, and for exporters, unable to compete at lower prices internationally. We recognise that high electricity prices put New Zealand firms at risk of substantially curtailing production, relocating overseas, or shutting down completely. Currently, this threatens New Zealand's wider societal objectives, for example, growing the country's economic well-being, securing supply-chain resilience and ensuring local employment, to name only a few.

[2] Ministry of Business, Innovation and Energy (2022) *Energy Prices*

[3] World Energy Council (2022) Energy Trilemma Index

Price signals

14. Notwithstanding the impact of higher prices, prices themselves provide a powerful signal. Like all markets, the signal varies, fluctuating between high and low prices. This signal is fundamental to balancing demand and providing sufficient supply and doing so efficiently while minimising cost to consumers. For these signals to work, they must be transparent and accurately depict underlying conditions. BEC is pleased the Authority has not recommended any fundamental changes to the wholesale market that would distort prices, and downplay scarcity, such as price caps. Regulating prices mutes investment signals. These signals are needed, especially as New Zealand decarbonises its economy.

15. BEC, in collaboration with 60 partners across business, government and academia has developed a New Zealand specific model (TIMES-NZ), exploring two possible future energy scenarios: Kea (cohesive) where climate change is prioritised as the most pressing issue, and Tūī (individualist) where climate change is one of many pressing issues. According to our modelling, electricity generation is likely set to increase substantially as demand for clean energy for the industrial, commercial, and residential sectors grows.

16. In our model, Kea and Tui show electricity demand could increase from 144PJ in 2018 (40TWh), to 270PJ in 2050 (75TWh). This demand is likely to be met by large increases in wind and solar generation. Higher prices send valuable signals that more supply is needed and will ensure generation is delivered, unless other barriers remain in the way.

17. On the other hand, with more renewable penetration, prices will continue to become more volatile. In July and August 2022, increased hydro-storage, and high wind levels, saw spot prices fall to nearly $0/MWh.[4] The next month prices spiked up to $1,750/MWh due to low wind generation during peak hours. Severe volatility could weaken signals as more uncertainty persists. This increases the risk of heavy-handed interventions in response to high volatility and of possible blackouts.

Wholesale market structure

18. BEC agrees with the Authority's conclusion that several supply and demand factors have contributed to higher wholesale prices over the observed period of January 2019 to June 2021. These included, at the time, low hydro inflows, periods of low wind generation and gas supply interruptions. However, problems with flexible capacity persist (further information pg6.)

19. BEC agrees with the Authority that this observation period does not conclude any definitive evidence that the increase in wholesale prices was solely due to uncertain gas supply or issues with competitive behaviour in the market. We note wholesale prices have reduced over 2022 due to underlying changes to supply conditions arising from this year's record wet winter, increasing hydro-levels to 151% of the historical average during the quarter.[5] This shows the power of supply and demand conditions that inevitably set prices.

20. The BEC supports the Authority's first statutory objective of promoting competition. Competition is a vital ingredient of an efficient and dynamic energy system. It provides strong incentives to find and remove inefficiencies, increase innovation, ensure security of supply, and set prices close to the cost of supply, benefiting all consumers in the long-term.

21. As the Authority mentioned in its paper, the long-run marginal cost of supply (LRMC) and the cost of new supply have consistently moved in line together overtime. It is only until around the year 2020 that these two variables decoupled. The Authority noted that this relationship overtime showed competition had been present and disciplined. To explain why this relationship may have decoupled, two possible reasons were suggested: anti-competitive practices exercised by incumbents or impediments remaining to new generation, for example, technical limitations of replacing costly thermal generation. BEC believes the latter is one likely cause that may explain this gap.

[4] The Electricity Authority (2022) *Market Performance Quarterly Review,* July-September 2022

[5] Ibid, p3

22. Until alternatives to gas peakers and coal become commercially viable, the marginal cost of thermal, currently setting high prices, seems likely to continue to impact forward prices for electricity. Increasing carbon prices – which have risen by 81% since 2021 (figure 1) – and the higher running costs of thermal, are likely factors for why forward prices remain well above the LRMC, as the market has priced these costs into the future. Forward prices could also indicate the uncertainty of firming, or for that matter, concerns around the lack of flexible firming into the future. Therefore, the gap between the cost of new supply and forward prices may not be indicative of anti-competitive behaviour, but instead a consequence of the transition itself among policy uncertainty, barriers to investment and lengthy consenting.

23. Restructuring the wholesale market based on the claim of anti-competitive behaviour requires substantive evidence that a problem with competition exists. The BEC believes strongly in evidence-based policy, and any changes require solid evidence. If the problem does exist, it is important to observe the extent of the problem, and whether intervention is justified compared with the counterfactual, observing all the possible trade-offs with making significant changes. We are pleased the Authority has thoughtfully acknowledged the trade-offs that apply.

24. The Authority has rightly acknowledged that markets are not perfect, and competition is not static, but instead dynamic. Changing the wholesale market structure significantly to address competition may seem desirable. However, the BEC believes we must first outline our objectives, clarify what we want the energy system to look like and acknowledge the outcomes we wish to achieve — followed by a set of actions and a timeline for their implementation. This sits within the Energy Strategy, the work currently underway by MDAG and the Gas Transition Plan.

25. Ad hoc changes aimed at competition, without thoughtful consideration of the unintended consequences, may cause more harm to the prospect of decarbonising New Zealand's energy system. Structural changes take considerable time, while unleashing uncertainty. BEC agrees with the Authority that this would likely increase the option value of gentailers to 'wait-and-see,' slowing the development of what Concept Consulting has estimated to be around 6,200GWh/year of new generation that will be needed by 2025.

26. As noted within the paper, overseas investors make up a material share of the generation projects in the pipeline and being actively pursued, close to 77%. Uncertainty arising from significant structural change aimed at competition will likely scare these investors, creating a chilling effect on investment. We are pleased the Authority has noted several recommendations to reduce the barriers to overseas investment (further information on pg11-12.)

27. The market has also experienced many new entrants, like Loadstone Energy, that is rolling out 229MW of solar capacity. Other newcomers, like Kea Energy, are seeking consents to build a 160MW solar project. Helios energy has secured the right to lease 165ha to build 115 MW of solar capacity. Many more companies outside the large gentailers are doing the same.

28. We agree with the Authority that competition will likely improve as more Distributed Energy Resources (DER) accelerate within New Zealand. The work done by the Authority through Real Time Pricing (RTP), enabling smaller players to participate in the wholesale market, could enhance competition and benefit consumers, possibly lowering costs and providing more choice. Additionally, the RTP enables more innovation, especially improving price signals for the demand side.

29. Demand response through flexibility services also provides significant opportunities to improve participation and competition. The use of service providers controlling batteries and energy resources by shifting or reducing demand is likely to improve grid reliability, reduce the need for thermal generation during peak hours, and subsequently reduce the cost electricity consumers face. The work of FlexForum, Ara Arke, and the wider public and private sectors in flexibility services is incredibly valuable, and BEC looks forward to this promising opportunity.

30. The Authority also raised the possible weakening of competition in the transition to 100% renewable electricity. With more renewable penetration, during periods of low winds and increased cloud coverage, competition could weaken as stored hydro would be the primary fuel source. This is because the ownership of reservoirs is concentrated. To consider this possibility, several assumptions have to be made, in particular, whether flexible generation will enter the market and to what extent. We believe answering this question of competition in the future sits within the work of MDAG's project on *price discovery in the New Zealand wholesale electricity market under 100% renewable electricity supply*. BEC looks forward to reading the project's observations and conclusions.

Firming uncertainty

31. Despite the BEC opposing significant structural change aimed at competition due to a lack of substantive and solid evidence of anti-competitive behaviour, we acknowledge there are problems that arise with the energy-only market as more volatile renewable energy sources enter the system, particularly problems with certainty over energy security and firming capacity.

32. Firming is a central component of any energy system. Renewables need a back-up source when the weather is not providing a sufficient mixture of wind, sun, or rain. All consumers demand certainty that supply will be available regardless of the weather. Firming, like natural gas peaking plants, provides such certainty and reliability. Therefore, the cost of renewable energy is strongly linked to the marginal cost of thermal generation, like natural gas and coal. The latter has become increasingly expensive over the past three years, increasing to $600/tonne a few times during the April/June quarter, a four-fold increase since 2020.[6]

33. New Zealand's carbon price is increasingly making dispatchable thermal generation more expensive to operate. This creates a signal to invest in low emission alternatives and renewables – the intended purpose of pricing emissions. In the short to medium term however, commercially viable alternatives to thermal used for firming intermittent sources, alleviating the dry-year risk and meeting peak-demand are significantly limited.

Figure 1: New Zealand Carbon Unit Spot Price

Source: commtrade.co.nz

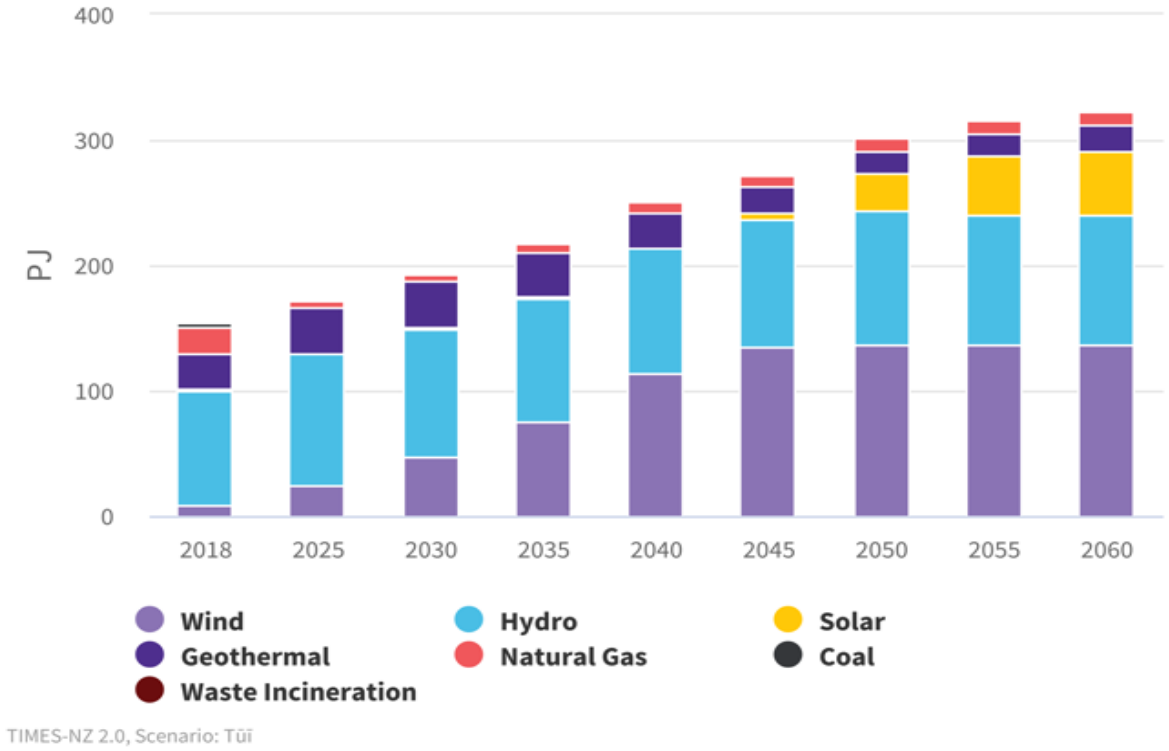
34. As more volatile renewable energy penetrates the market, and demand response technologies are integrated, thermal generation will be needed less and subsequently will be used less. Despite hydro providing significant firming support in the future, thermal will still play a crucial role in firming intermittent energy over the next few decades, especially during dry years and peak-hours of the day. Our TIMES-NZ model shows New Zealand's electricity system is likely to need natural gas, with gas peakers playing a role beyond 2030, both in Kea and Tui, ensuring a back-up to intermittent sources.

35. Despite the need for more flexible generation, uncertainties persist, for both current and future thermal generation. The Gas Transition Plan will alleviate some uncertainties, conceptualising and planning the path ahead. The Authority has recommended accelerating the completion of the Gas Transition Plan.

[6] The Electricity Authority (2022), *Market Performance Quarterly Review*, *April-June* 2022

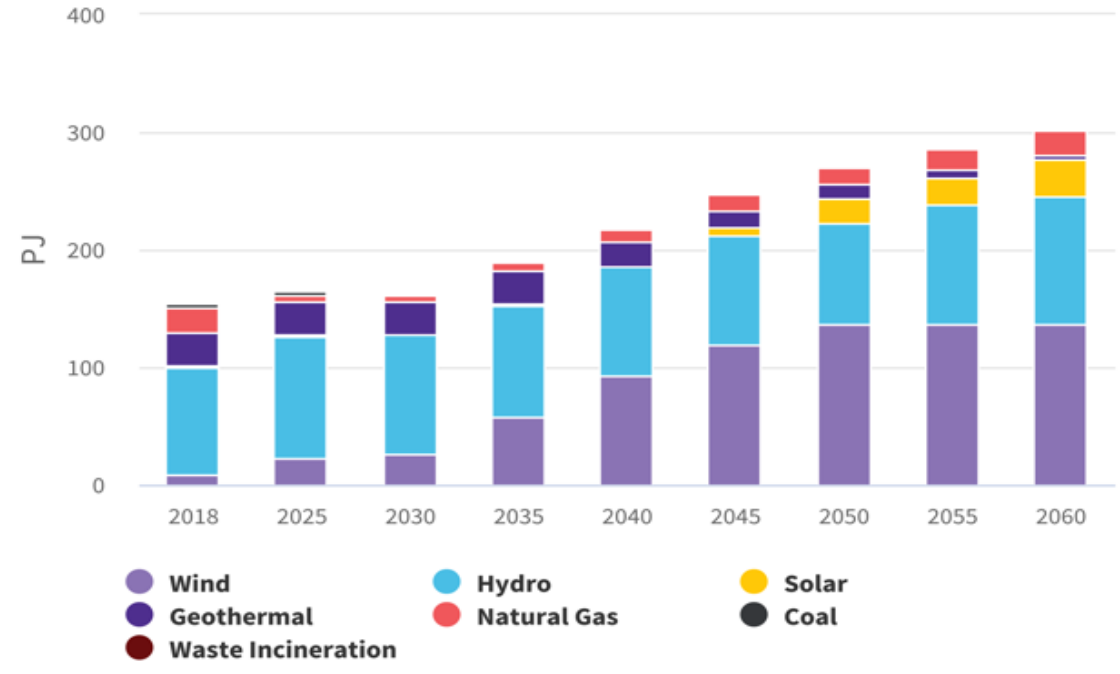
36. BEC acknowledges the Authority rightly understands the considerable impact of uncertainty, and that this plan will help reduce such uncertainty. Notwithstanding this reasonable underlying justification, the plan is a significant undertaking, constituting many complexities. We believe bringing forward the plan is not realistic, and not necessarily desirable, considering the plan should be done right, not fast.

Figure 2: Electricity generation (Tui)
Source: TIMES-NZ, Business NZ Energy Council



TIMES-NZ 2.0, Scenario: Tūī

Figure 3: Electricity generation (Kea)
Source: TIMES-NZ, Business NZ Energy Council



TIMES-NZ 2.0, Scenario: Kea

Peak demand growth

37. The combination of costly thermal capacity and more renewable penetration, makes the economics of operating thermal capacity increasingly undesirable. Since gas peakers soon may only be needed to generate electricity for short durations, there is a considerable revenue risk, with these assets possibly not being able to generate enough revenue to cover their costs, due to the limited scope of their operation. The maintenance and operating costs of such assets are also high. The situation is complicated by the weakening 'social licence' for operating thermal generation, let alone building flexible thermal capacity, as consumers and the public demand action on climate change. The lack of incentives to build flexible fast start peakers is a risk, especially as peak demand continues to grow.

38. Over the last ten years, growth in electricity consumption and peak demand has remained relatively flat. This trend seems to have ended as peak demand has grown over the past two years. According to Transpower, New Zealand's top ten largest peaks occurred over the last two winters, with six of the ten occurring in 2022. There are signs that peak demand growth is not sufficiently balanced by existing generation availability, due to the innate uncertainty and variability of renewable generation. Grid Emergency Notices (GEN) did not occur over three years to 2020, but over the past two years there have been five GENs.

Figure 5: NZ's monthly peak demand curve
Source: Tesla Forecasting Solutions

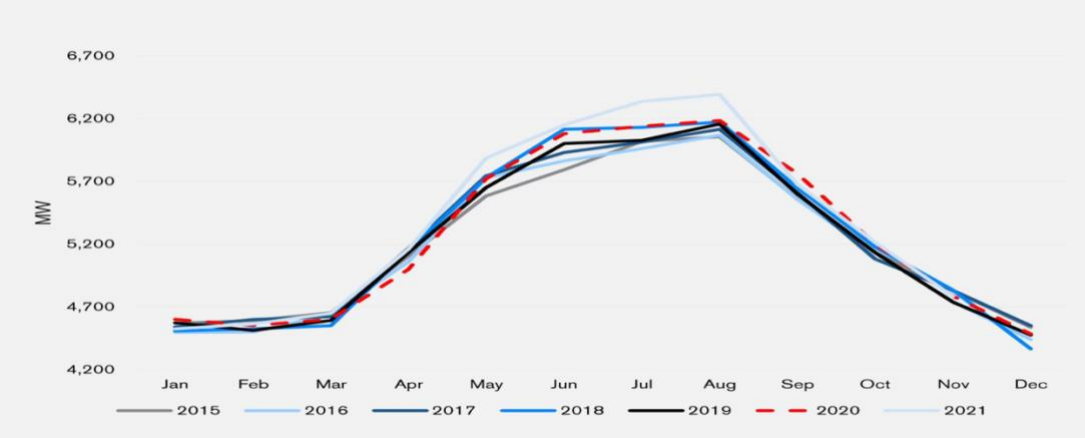
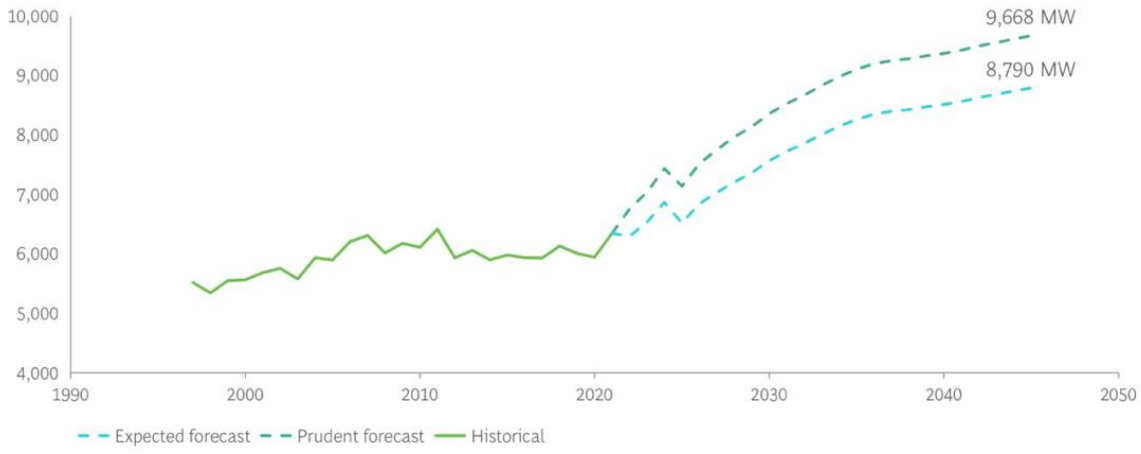


Figure 4: NZ winter peak demand (MW) out to 2050
Source: Boston Consulting Group, *The Future is Electric*



39. With growing volumes of intermittent generation in the system, culminating with the projected mass uptake of electric vehicles, significant system stress is possible. BEC believes this possibility should not be downplayed, as energy security, together with the other two limbs of the Trilemma, sustainability, and affordability, are important to balance. A salient reminder of the importance of balancing the Trilemma is Europe's current energy security crisis. Without sufficient energy security, all consumers are negatively impacted, with higher prices and less reliability. The consequences ripple across an economy, impacting wider societal objectives, whether improving living standards more generally or improving indicators associated with a prosperous, healthy, and resilient society.

40. Under a scenario of full hydro lakes and ample wind, the economics of thermal do not stack up. However, in a matter of minutes, wind generation could drop. If this occurs during a peak period, grid stability becomes a problem. This is a risk during the coldest hours in winter as wind conditions are usually low. Since most of New Zealand's thermal capacity is slow-to-start, taking hours to heat-up, this scenario does not allow sufficient time to ensure stability.

41. It is clear the more renewables New Zealand builds, the more demand response and more agile thermal capacity is needed in the system. Nevertheless, matters are complicated, for instance, with additional policy uncertainty. One policy creating uncertainty is the aspirational 100% renewables target by 2030. This introduces an additional risk to investing in flexible thermal capacity. Nova Energy was hoping to build peaking plants with 400MW of capacity but has stopped altogether due to policy uncertainty around this target and the NZ Battery project. Combining all of these factors together, there remain valid concerns that the market does not provide sufficient incentive to build fast-start thermal peakers to balance demand during peak hours and alleviate the dry year risk. Not only are gas peakers not being built, New Zealand is experiencing thermal exiting the system. This exacerbates the risk of not having enough capacity.

Structural changes

42. If any structural changes are to be made, the BEC believes improving New Zealand's energy-only market to address possible issues around capacity during peak-hours and dry year risk is a likely possibility in the future, as New Zealand decarbonises. Yet this analysis sits within the work of MDAG, investigating price discovery during the transition to 100% renewable electricity.

43. Over the past two decades, New Zealand's straightforward and comparatively simple energy-only market has sent price signals to balance supply and demand efficiently. Across the sector, many believe New Zealand's energy-only market might need to evolve to maintain strong signals for investment in flexible generation. A series of possible mechanisms and structural changes have been suggested to solve the problem of weakening incentives to build peakers, and fast start peakers in the future. All mooted solutions come from across New Zealand's energy sector. There are varying opinions and differing perspectives on what mechanisms or structural changes could alleviate the problem, without causing a multitude of unintended consequences.

44. A shortage of flexible capacity could increase electricity prices. The energy-only market would provide sufficient signals for generators to invest in new flexible generation. However, market uncertainty could weaken the incentive to maintain flexible assets and build new flexible capacity, while potential blackouts would damage the reliability of New Zealand's energy system, unleashing costly consequences on New Zealand's economy.

45. Globally, many countries have adopted mechanisms of all sizes to support resource adequacy, —aiming to solve the problem of do we have enough capacity when we need it? These mechanisms are aimed at ensuring available resources in emergencies (before cutting power), providing price signals for peaking and dry year risks, and demand-side arrangements. The most adopted mechanism is capacity markets, aimed at providing sufficient capacity when needed. In

the jurisdictions which have adopted capacity markets, the missing money problem seems to have been reduced, and sufficient flexible capacity has been provided.[7]

46. However, capacity markets have problems with procuring either not enough or excessive capacity, the latter has been seen with market rules that adopt a conservative approach to reliability.[8] These markets are also complex and difficult to understand,[9] which may distort efficient decision-making. Capacity markets also rely less on market forces, creating winners and losers through politics rather than the market.[10] Since generators pay for capacity, consumers inevitably pay the higher costs associated with capacity markets.

47. Other mechanisms have also been mooted. An emergency reserve scheme, formalised through contracts, enables unscheduled load to be used during an emergency event where supply is not sufficient to meet demand. A strategic reserve has also been raised as a possible solution, with capacity owned, or underwritten, and deployed by a central body to provide reserve capacity. This system operates in Germany. However, it also comes with trade-offs. New Zealand operated a reserve market from 2004 to 2012. It was discontinued as it reduced the incentive to manage risk and to build peaking plants, passing the responsibility to this body.[11]

48. In the recently released BCG report, other mechanisms have been recommended; deepening contract markets by introducing cap contracts, time limited cap contracts and super peak contracts, improved forecasting, improved tracking and monitoring price formation, or possibly a limited dispatch mandate.

49. BEC supports investigating all possible options. However, the investigations must be rigorous and deeply consider all possible unintended consequences. We believe that if New Zealand does adopt a mechanism or multiple mechanisms to deal with capacity issues, it should provide security with the fewest unintended consequences upon investment, least cost to consumers, and least cost to efficiency and competition. However, it is difficult to satisfy all objectives. Therefore, all trade-offs must be considered and weighted appropriately. Sudden proposed changes to the market structure will lead to uncertainty and create a chilling effect on new investment in generation as change takes time and create costs.

50. Again, the answer to the questions, what do we want, what trade-offs are we willing to accept and what costs are the sector and consumers willing to bear, lies within the Energy Strategy, the Gas Transition Plan, and the investigations of MDAG. We look forward to this process and aim to participate and advocate for a balance between sustainability, security, and affordability.

Comments on specific recommendations

To constrain the exercise of power:

51. **BEC <u>OPPOSES</u> inviting MBIE to amend section 46 of the Electricity Industry Act 2010**

I. The Authority has recommended inviting MBIE to expand section 46 of the Act beyond disclosure about thermal fuel supply of thermal generators to include gas users outside the electricity sector.

II. The justification for requiring the disclosure of this information seems to be that the Authority and market participants want to better understand why gas is limited in the market when there is an electricity shortage. However, gas is not available, as it is already contracted to purchasers, and supply does not ramp up or down in response to sudden changes in demand.

III. Low hydro storage and reduced output from the Pokorua field in 2021, caused stress to New Zealand's electricity system. To overcome these issues of system security, large users, like Methanex, had to idle one of their production lines to free up enough gas to back up the

[7] Aagaard, Todd S., and Andrew N. Kleit (2022) *Electricity Capacity Markets.* Cambridge University Press

[8] Ibid, p5

[9] Ibid, p3-4

[10] Ibid, p5

[11] Boston Consulting Group (2022) *The Future is Electric,* p171

system. Situations like this cause harm to large users and the commercial viability of their remaining in New Zealand.

IV. Opening the contracts of users that are outside the electricity market diminishes contractual freedom and the reputation of operating in New Zealand, as there is a large risk that contracted gas could be used for demand response in times of shortages.

To facilitate investment in new renewable generation:

52. BEC understands the significant benefits of foreign direct investment (FDI). New Zealand has been built largely on the back of foreign investment. FDI has been critically important for New Zealand's success. In the absence of domestic savings, which are comparatively low in New Zealand, overseas investors put up venture capital and funding for projects that might otherwise go unfunded.

53. BEC agrees with the Authority that policy uncertainty increases risk. We agree regulatory uncertainty relating to the NZ Battery Project and the firmness of 100% renewables target of 2030 exists and provides a significant barrier to investment. Markets dislike risk and require higher compensation to reflect it. If not, potential investors might simply exit the market and seek better and more consistent investment opportunities somewhere else.

54. BEC agrees with the Authority that current regulatory uncertainty is increasing investors' option value to hold off on large investments until a degree of certainty returns. BEC believes reducing policy uncertainty is vital if New Zealand is going to increase electricity generation rapidly as we decarbonise our economy.

55. Decarbonising New Zealand's electricity system and electrifying the country's economy will require significant levels of investment. We are pleased the Authority has identified several barriers to new investment and has subsequently recommended a list of actions the Authority and other Ministries or agencies should take to reduce uncertainty, diminish risk, and remove constraints on investment.

56. **BEC <u>SUPPORTS</u> the Authority inviting MBIE to investigate the merit of a one-stop shop for overseas investors in renewable electricity generation.**

I. We believe a one-stop shop will help streamline the process of observing and meeting the regulatory requirements of investing in New Zealand.

57. **BEC <u>SUPPORTS</u> the Authority inviting Overseas Investment Office to publish guidance for overseas investors in renewable generation.**

I. Navigating regulatory requirements can be long and costly. Overly complicated and complex regulatory structures create a strong disincentive to invest. Publishing guidance on how to navigate New Zealand's regulatory requirements from beginning to end is positive, providing clarity and improving incentives to invest in New Zealand. A help desk may also aid investors who are considering investing in New Zealand.

58. **45. BEC <u>RECOMMENDS</u> inviting the Treasury to amend the Overseas Investment Act 2005**

I. Section 20(c) of the Overseas Investment Act should be amended. The decision-maker has full discretion to disallow all transactions, not just the more sensitive, unless these were perceived to be in NZ's national interest. Ministers can determine outcomes on a case-by-case basis. This is a substantially more onerous threshold for foreign investment than the national interest test in Australia, under which an investment can proceed unless it is ***contrary to*** the national interest.

II. Section 13(a)(b)(c) can currently mean the OIA applies to investments over $100 million. We believe this level is relatively low, considering the extent of overseas investment that is needed to electrify New Zealand's economy over the next decade. Investors dislike risk and regulatory uncertainty. Increasing this level beyond $100 million will reduce the risk that some investors face while navigating through the OIA process, by exempting them from the process.

Additionally, the $100 million threshold itself is relatively arbitrary. Therefore, we hope the Authority invites the Treasury to investigate the benefits, and costs, of increasing this threshold.

59. **BEC <u>SUPPORTS</u> the Authority inviting MBIE to publish an Annual Electricity Generation Investment Opportunities report.**

I. This report will help clarify potential investment opportunities for overseas investors that may lack information. The more informed investors are about the lucrative opportunities of investing in New Zealand, the more likely they will invest. In the recently released BCG report — *the future is electric* — the total investment required out to 2030 is estimated to be $42 billion. Overseas investors are key to accessing this capital.

60. **BEC <u>SUPPORTS</u> the Authority inviting Transpower to publish connection enquires and studies.**

I. Developers and generators regularly mention delays in connection to the grid and local networks. As noted in the paper, connection enquires have increased from historical levels of 5 per year to 45 in FY21 and 85 in FY22. The scale of these enquires is likely to increase in the future. BEC agrees that there are likely to be opportunities in streamlining requirements. Publishing studies for connection will alleviate the problems of potential duplication. However, BEC is aware that Transpower already publishes connection pipeline information.

61. **BEC <u>RECOMMENDS</u> the Authority invites MBIE to provide clarity about the NZ Battery Project**

I. The BEC agrees with the Authority that the NZ Battery Project creates significant uncertainty and consequently a large risk to investing in new generation. A decision on the NZ Battery Project will reduce some uncertainty. BEC recognises that one large uncertainty arising from the NZ Battery Project is how – in this case pumped hydro at Lake Onslow – will operate and how it will integrate into the wholesale market. If the project does continue, clarity on how pumped hydro at Lake Onslow would integrate into the market is crucial. BEC recommends MBIE must provide more clarity on how pumped hydro at Lake Onslow would operate, while outlining a set of principles for the project.

Steps the Authority is taking to facilitate investment in new renewable generation:

62. **BEC <u>SUPPORTS</u> the undertaking of regular monitoring of progress on generation investments, and an annual update on the investment pipeline and impediments.**

I. Identifying barriers to generation investment is important. It is abundantly clear that developers list the same constraints: the RMA, connection delays, the OIA, policy uncertainty and access to firming arrangements. Barriers observed regularly display a trend and subsequently indicate a list of priorities and necessary actions that should be taken by the Authority or other agencies.

II. Barriers to new generation are also not constant as the economic, regulatory, and political environment, both domestically and internationally, is dynamic. Barriers can manifest and subside. Reviewing the number of barriers will help policymakers and the energy system build more generation.

Steps the Authority is taking or proposing around competition

63. **BEC <u>SUPPORTS</u> the investigation of mechanisms to accelerate the development of the demand response market.**

I. As noted previously in this submission, a flexibility market will be vital in the future. It has significant potential to flatten peak demand, reduce the scale of thermal needed during peaking hours, enhance competition and benefit consumers in the long-term. Investigating and implementing mechanisms, like real time pricing, sit within the Authority's main statutory objective.

64. **BEC <u>OPPOSED</u> the introduction of a disclosure, monitoring and voluntary clearance regime for very large contracts over 150MW.**

I. We have outlined our opposition to this proposal which sits within an earlier submission.

65. **BEC is <u>NEUTRAL</u> on the recommendation to clarify disclosure requirements.**

I. In principle, we support clarifying disclosure requirements with the aim of reducing uncertainty and removing possible barriers unintentionally written into the requirements. However, more information on the proposed changes is required before a stance is taken.

66. **BEC <u>SUPPORTS</u> better information sharing with the Commerce Commission**

I. Competition, and the perception of competition, are both important. Transparent and better information sharing between the Authority and the Commission will ensure better decision-making and improve the perception of competition. A lack of information can create sub-optimal policies and frameworks, which hurt consumers in the long-term.

Additional comments

The effect of carbon prices on generators' earnings

67. In the Authority's paper, the effect of carbon prices on generators' earnings is discussed. As the price of carbon increases, the more expensive it is to operate fossil fuels in the electricity system. BEC supports the ETS and the signal it sends to choose low emissions alternatives, invest in renewable generation, and replace thermal generation. Since thermal generation continues to set marginal electricity prices, extra earnings are made on existing renewable generation with a low short-run marginal cost (SRMC). We acknowledge the Authority does not support nor recommend a tax on generators' earnings, instead has requested comments on the matter.

68. BEC does not support the possible introduction of a tax on 'windfall gains' associated with higher carbon prices. A tax on windfall gains will blunt electrification. Within the economic literature it is well recognised that a levy on windfall gains reduces production.,[12] with producers absorbing the extra cost. As a result, the marginal cost of production rises, and the production quantity reduces for any given level of price.[13] The literature shows that cumulative deadweight loss occurs, the opportunity cost of the tax. In the long run, the loss can be substantial.[14]

69. A windfall tax will also hurt the ease and attractiveness of investing in the jurisdiction which adopts such tax. Shapiro (2006) notes higher windfall taxes result in reduced incentives to invest in energy companies as the opportunity cost for shareholders rises as investors could opt for other profitable investments.[15]

70. BEC notes that the windfall is largely transitory. As more generation is built and alternatives become viable, the unintended effects of carbon prices upon earnings will subside. Taxing potential windfall gains will only reduce the incentive to invest in renewable generation — which is desperately needed out to 2030. As mentioned throughout this paper, the Authority recognises the importance of overseas investment and recommends several actions to reduce the barriers faced by investors. Introducing a tax would be contradictory to this aim.

71. BEC agrees with the Authority that 'it is not a clear-cut exercise to determine how much of this should be counted as 'windfall gains." We would like the Authority to release more detailed information on its calculations.

MDAG

67. We would like to note that the work done by MDAG is incredibly important. MDAG's work has been focused on how the electricity market could develop as New Zealand decarbonises its economy in the medium to long-term. MDAG's paper highlights that as New Zealand gets closer

[12] R. J. Shapiro, N. D. Pham (2005). The Economic Impact a Windfall Profits Tax For Savers and Shareholders. Sonecom, November, p. 3.

[13] Ibid, p3.

[14] Shapiro, N. D. Pham (2006). The Economic Impact of a Windfall Profits Tax on Federal, State and Local Public Employee Pension Funds. Investors Action Foundation, p. 2.

[15] R. J. Shapiro, N. D. Pham (2005), The Economic Impact of a Windfall Profits Tax For Savers and Shareholders. Sonecom, November, p. 5.

to 100% renewable generation there will be a raft of issues that will need to be addressed. MDAG's work is becoming more relevant today than first envisioned. For example, in November 2022, we saw several days with 98% renewables. It is clear that we need to act at pace to solve these issues. The outcomes concluded by MDAG must be prioritised to ensure a right balance between affordability, security, and sustainability.

The Resource Management Act (RMA)

72. As noted within the Authority's paper, obtaining consent is a significant impediment to investing in new generation — both in cost and opportunity cost with time delays. BEC has voiced this impediment in several submissions in the past. We are pleased the Authority acknowledges this problem. The recently released Natural and Built Environment Bill and Spatial Planning Bill are aimed at solving the problem of slow consenting. However, BusinessNZ has many concerns with both bills. The details of these issues will be addressed in BusinessNZ's submission due at the beginning of February 2023.

A work programme

73. This paper outlines an extensive list of actions to be taken by the Authority directly, and recommendations which sit within the scope of other agencies. BEC recommends developing a work stream which maps out these actions and the predicted timeline for completing such actions. This will give some certainty to market participants and the wider sector more generally about the Authority's work and the time in which it is expected to be completed. BEC would like the Authority to report back on the progress of these recommendations.

Engagement with the Authority

74. BEC would like to reiterate that it is pleased to have had the opportunity to comment on this paper. It is important that stakeholders are consulted on policy changes that inevitably will have an impact on their organisation, on organisations across the sector, and to note the implications for New Zealand's energy system more generally. The Authority has ensured that stakeholders across the sector are thoughtfully consulted and included. Workshops are a key tool in bring together expertise and knowledge to participate in valuable dialogue. Open dialogue eases uncertainty and underlying risks, while improving the durability of, and support for, regulatory changes. We recommend the Authority considers running more workshops that provide for these conversations. BEC would like to extend an invitation to the Authority to provide help in any capacity the Authority sees fit, including making the expertise of our diverse membership available to the decision-making progress.

APPENDIX ONE – BACKGROUND INFORMATION ON THE BUSINESSNZ ENERGY COUNCIL

The BusinessNZ Energy Council (BEC) is a group of New Zealand's peak energy sector organisations taking a leading role in creating a sustainable energy future. BEC is a division of BusinessNZ, New Zealand's largest business advocacy group. BEC is a member of the World Energy Council (WEC). BEC members are a cross-section of leading energy sector businesses, government and research organisations. Together with its members BEC is shaping the energy agenda for New Zealand.

Our vision is to support New Zealand's economic wellbeing through the active promotion of the sustainable development and use of energy, domestically and globally. With that goal in mind, BEC is shaping the debate through leadership, influence and advocacy.

BusinessNZ is New Zealand's largest business advocacy body, representing:

- Regional business groups EMA, Business Central, Canterbury Employers' Chamber of Commerce, and Employers Otago Southland
- Major Companies Group of New Zealand's largest businesses
- Gold Group of medium sized businesses
- Affiliated Industries Group of national industry associations
- ExportNZ representing New Zealand exporting enterprises
- ManufacturingNZ representing New Zealand manufacturing enterprises
- Sustainable Business Council of enterprises leading sustainable business practice
- BusinessNZ Energy Council of enterprises leading sustainable energy production and use
- Buy NZ Made representing producers, retailers and consumers of New Zealand-made goods

BusinessNZ is able to tap into the views of over 76,000 employers and businesses, ranging from the smallest to the largest and reflecting the make-up of the New Zealand economy.

In addition to advocacy and services for enterprise, BusinessNZ contributes to Government, tripartite working parties and international bodies including the International Labour Organisation (ILO), the International Organisation of Employers (IOE) and the Business and Industry Advisory Council (BIAC) to the Organisation for Economic Cooperation and Development (OECD).