Energy Resources Aotearoa
POWERING A BETTER NEW ZEALAND TOGETHER

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Ministry of Business, Innovation and Employment (MBIE)
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Submission on *Measures for Transition to an Expanded and Highly Renewable Electricity System*

Introduction

1. Energy Resources Aotearoa is New Zealand's peak energy sector advocacy organisation. Our purpose is to enable constructive collaboration across the energy sector through and beyond New Zealand's transition to net zero carbon emissions in 2050.

2. This document constitutes our submission on the MBIE consultation document *Measures for Transition to an Expanded and Highly Renewable Electricity System* (the Consultation Paper).

Overarching points

The Government's vision and strategy for the energy system

3. We welcome signals that the energy strategy due in late 2024 will set out a vision and "potential pathways" as we transition toward net zero long-lived gases by 2050. Rather than a strategy that specifies a particular pathway, we favour one that identifies key objectives and parameters, but preserves flexibility to iterate within those parameters.

4. We also welcome commentary throughout the Consultation Paper to the effect that the energy system is a means to an end – we produce energy to power livelihoods and businesses. Including economic growth and productivity alongside the classic energy trilemma makes clear that New Zealand should not achieve its energy security, affordability, or sustainability goals by shrinking its economy (and the associated wellbeing of its people).

5. In our view, the energy system is now facing heightened stress – particularly in the electricity system, where capacity in winter 2024 is looking under pressure. These stresses on the energy system highlight the importance of energy security and affordability, and in our view, point to a need for a rebalancing of policy focus as it relates to the energy trilemma. This submission lays out a range of proposals to

reset policy settings toward a more stable and investment-friendly environment for energy.

The Consultation Paper helpfully synthesises a wide range of familiar issues

6. Most of the issues and potential solutions addressed in the Consultation Paper are familiar. In most cases they are the subject of ongoing work across multiple agencies, and/or are being actively debated in the energy sector. The Consultation Paper has usefully synthesised these into one place, including with a stocktake of existing work already underway and the state of the evidence base. This is timely because the Consultation Paper, and submissions on it, will provide a comprehensive basis on which the incoming Government can prioritise its efforts.

7. We have dealt with many of the matters raised in the Consultation Paper in previous submissions. We have selectively reiterated the most critical points in this paper, but Appendix 1 also includes a list of our previous submissions that may provide further detail on our views.

8. Some of the matters raised in the Consultation Paper overlap or relate to others in the *Advancing New Zealand's Energy Transition* package. Where this is the case, we have pointed to our parallel submissions which may cover our views in more detail.

We have commissioned and/or produced a suite of reports that will directly inform any policy design post-consultation

9. Over the past 18 months Energy Resources Aotearoa has delivered a suite of evidence-based reports to inform the development of the National Energy Strategy. Officials will already be aware of these (we have welcomed their positive engagement on each report), but we have listed them in Appendix 1 for ease of reference.

Part 1: Growing Renewable Generation

Chapter 2: Accelerating supply of renewables

Addressing regulatory and market uncertainties hindering investment in electricity generation

10. The document discusses the regulatory and market uncertainties that may be hindering investment in renewable electricity generation. The Lake Onslow project is identified as a key uncertainty – we agree and have been clear it should be ruled out immediately by the incoming Government to clear the way for market-led investment.

11. We strongly support any efforts to encourage large scale investment in new renewable electricity generation capacity. We note though that this also carries a corresponding need for flexible peaking capacity (on current economics, gas-fired peaking generation will almost certainly play a key role here). In this regard, we

note that the Government's aspirational target of 100% renewable electricity by 2030 is not specified as a source of uncertainty in the Consultation Paper. We believe this should immediately be dropped because it represents a material risk weighing against necessary investment in new fossil fuel peaking generation to back up our increasingly renewable system. Our parallel submission on the Gas Transition Issues Paper addresses this issue in further detail.

Potential financing measures for renewable generation

12. We are generally sceptical about the merits of contracts for difference (CfD), feed-in tariffs, and renewable certificate obligations as government policy tools to incentivise renewable generation in the New Zealand context. The reasons for this include:

    a. our energy-only market has already delivered significant growth in renewable capacity, and Transpower's latest SOSA indicates that the pipeline of new development is progressing;[1]

    b. preferential treatment for specific kinds of new generation raises questions as to a level playing field with other existing (or new) generation that does not receive these government benefits; and

    c. proof of 'additionality'. It may be difficult, particularly given renewable generation capacity is growing already, to prove that these measures aren't simply supporting investments that would have happened anyway (or displacing others that would have otherwise been made in the absence of the measures).

13. To be clear, our reservations on the above are specific to government measures. Contracts for difference may be an effective means for private energy users and producers to establish long-term certainty that underpins both supply and demand side investments. We see the natural role for government here being two-fold:

    a. government might have a role in addressing any barriers to private parties identifying opportunities for, and entering, contracts that provide this long-term investment certainty; and

    b. government might wish to enter power purchase agreements or similar, using its own aggregated demand profile, to attract new investment in electricity generation capacity (though we would caution this should still seek a balance between incentivising desirable behaviour and delivering value-for-money to taxpayers).

1 Consistent with our view elsewhere, to the extent New Zealand's energy system has not built new thermal peaking capacity that most sector players agree is required, we see this as being due to regulatory/policy barriers rather than a fundamental issue with the energy-only market.

14. We suggest that to the extent intermittent renewables require de-risking, government's focus should be on ensuring the energy-only market provides sufficient timely incentives for dispatchable generation or storage (covered in the following sections).

Chapter 3: Ensuring sufficient firm capacity during the transition

15. The discussion document notes that the Climate Change Commission's demonstration pathway featured 200 MW of new natural gas peaking by 2035, but that recent Concept Consulting work for the Electricity Authority found no new investment would be economic at least until 2032. In our submission on the associated *Ensuring an orderly thermal transition* paper, we noted there are a wide range of views on this question, but most of these point to new gas-fired generation capacity being required.[2]

16. We believe new gas-fired peaking generation will be required to keep consumer prices affordable and to support new renewable investment. Our conclusion is driven by our understanding of the market and operational fundamentals – ideally, it is not one that government should mandate. We do not believe policy measures should be pursued to specifically incentivise or direct this – rather, we support fuel and technology agnostic settings that enable alternatives to compete on cost (with the carbon price factored in).

17. As a starting point, the key issue we see is the need for negative investment signals to be removed so that alternatives can compete on a level playing field. Rather than specific new interventions being required, we suggest the best way to support necessary investment in (fossil fuel or otherwise) firming capacity is to 'take grit off the gears' by addressing the suite of policies that are weighing down investment confidence across the energy sector – particularly in new gas supply and generation. These are variously covered elsewhere in this submission, but include:

    a. ongoing uncertainty associated with the Lake Onslow, the scale and operation of which would fundamentally change the electricity market;

    b. the Government's aspirational target of 100% renewable electricity by 2030; and

    c. a rolling maul of onerous and disproportionate policy and regulatory impositions on the upstream oil and gas sector, including the 2018 ban on new exploration outside onshore Taranaki and successive changes to decommissioning and financial assurance requirements.

18. If policy measures to further support or incentivise new firming/dispatchable capacity are pursued, these should include fossil fuelled firming on the basis that the emissions of this are already priced in the ETS. If fossil fuel firming or

2 See pages 2-4 of our submission here: https://www.energyresources.org.nz/dmsdocument/253

dispatchable capacity is lower cost, with its emissions priced in, it should not be precluded.

19. It might be argued that a risk of this approach is 'locking in' future emissions from new fossil fuel capacity. But emissions are capped under the ETS – if carbon prices rise rapidly in the future, this does create the risk of stranded assets. But this is a business risk to be borne by investors and not one regulators should be concerned with. The onus is on Government to set stable, durable long term policy settings (particularly around the ETS and the energy market) against which investors can make informed decisions about risk and reward.

20. For further detail, see our parallel submission on the Gas Transition Issues Paper.

Chapter 4: Managing slow-start thermal capacity during the transition

Investment in gas-fired peaking plant during the transition

21. We generally agree with the Consultation Paper's finding (based on the work of MDAG and others) that new measures are not currently required – but the risk of disorderly phasedown of thermal generation should be actively monitored and the existing programme of work progressed. There may come a point in the future where additional market-based mechanisms are warranted to strike the right balance between the commercial objectives of thermal capacity operators and the security requirements of the wider system.

22. In practice, market participants have signalled their intent well in advance. A minimum notice period – which is floated in the Consultation Paper – is in effect a regulatory mandate to run assets. Our preference is that the energy market itself incentivises running of capacity when it is economic to do so. If a notice period is introduced on the basis that it provides a buffer against system risks of rapid retirement, it should include an ability to apply to the regulator for an exemption where this is warranted.

23. We do not support a strategic reserve, on the basis that both MDAG and BCG independently concluded it would increase costs and undermine investment incentives without materially improving energy security.

24. For further detail, see our July 2023 submission on the Electricity Authority's *Ensuring an Orderly Thermal Transition* consultation paper, available at https://www.energyresources.org.nz/dmsdocument/253.

Chapter 5: The role of large-scale flexibility

25. In our view, large energy users and retailers are sufficiently incentivised to, and capable of, identifying and contracting large-scale demand response opportunities. The consultation document itself notes recent examples such as the NZAS-Meridian 50MW deal, and Contact's plans to contract more than 100MW

of flexible demand by 2026. We expect that this market will continue to mature without significant government support or intervention.

Part 2: Competitive Markets

Chapter 6: Workably competitive electricity markets

Existing work programme

26. Our submission on the MDAG's *Price discovery in a renewables-based electricity system* consultation paper details our views on these issues. To briefly recap here:

    a. we acknowledge MDAG's concern that an increasingly renewable electricity system may thin competitive incentives in the provision of shaped products (i.e., flexibility) – though noting its conclusion is based on scenario modelling, rather than observed market behaviour;

    b. we agree with MDAG's preferred initial focus on measures that address the exercise of market power (conduct) rather than structural market power at its source. Even where these less stringent transparency measures are explored, it will need to be demonstrated that their public net-benefits outweigh the private costs of forcing disclosure; and

    c. a very high threshold should be maintained for the more stringent 'back-up' structural interventions (e.g. virtual disaggregation of hydro storage and generation). We also caution that simply floating policies for further development can have a dampening impact on investment confidence.

Structural changes to the electricity market

27. We do not believe a case has been made for either vertical separation (generation from retail) or horizontal separation (amending the geographic footprint of any gentailer). While reaching a definitive conclusion on retail competition is difficult, we note that the Electricity Authority's comparative analysis of retailers' gross margins and internal transfer pricing do not readily suggest material competition issues exist. Continuing to monitor this over time will help to support market confidence and information asymmetry.

28. We do not believe structural changes should be looked at now to address competition issues 'in case they are needed with urgency'.

29. We particularly oppose further investigation of a single buyer model for the wholesale electricity market. This model would fundamentally undermine the necessary efficient price signals and would concentrate decision-making in a single entity. We prefer the current market model because it disaggregates decision-making among many actors, with a plurality of views about risk and risk management, and who directly bear the costs and benefits of their decisions. The current model also allows price variations that reflect the 'real' cost of delivering

electricity, based on location and timing. This will, over the long run, deliver much more efficient outcomes.

Part 3: Networks for the Future

Chapter 7: A transmission system for growth

30. We generally agree that the balance of risks between investing too late and too early in electricity transmission may have changed compared to historically – i.e., that the risk of investing too late has increased. This is why we strongly support efforts to streamline resource management consenting for generation, transmission, and distribution infrastructure, which will shorten the timeline to take projects from planning to commissioning.

31. However, we caution that the risk of investing too early, or over-investing in capacity that is not eventually needed at all, remains and is non-trivial in impact. Great care should still be taken to ensure that any efforts to pre-empt future demand by building infrastructure well ahead of time should be based on robust forecasts and realistic expectations.

Chapter 8: Distribution networks for growth

Removing barriers to new connections

32. Pricing and timing for new connections differs across EDBs, networks, and sub-networks, based on a range of factors including their location, capacity available, and reinforcement works required. EDBs receive significant volumes of new connection requests every year, across residential, commercial, large industrial, EV charging, and more. A key challenge for EDBs is negotiating price and timing for this large volume of new connections, ensuring equitable outcomes for as many customers as possible.

33. In some cases, new connections are not flexible in terms of their requirements (for example, existing large industrials) while others may be able to explore a range of options (location, solution) to fit their demand profile in with existing network capacity or planned works (for example, EV charging).

34. In our view, the priority should be ensuring that EDBs take a consumer-focused approach, working alongside project proponents to understand their energy demand, project constraints, and potential solutions. Process efficiencies may certainly be possible for connection processes, but there may conversely be very good reasons why this can take time. Early and frequent engagement between the EDB and project proponent is essential.

Visibility of network capacity and congestion

35. We generally support greater visibility of current network capacity and congestion, and more information being made available by EDBs to this end. We note some

EDBs are well progressed in providing increasingly granular open-source information about the current state of their networks to inform investment decisions. We also support greater information being made available about potential future demand, particularly from EV charging and process heat.

Chapter 9: Is the Government's sustainability objective adequately reflected for market regulators?

36. The consultation document asks whether the statutory objectives of the Electricity Authority and Commerce Commission adequately support the broader objectives of the energy transition – specifically, responding to climate change and reducing emissions.

37. These regulators are already empowered by section 5ZN of the Climate Change Response Act (the CCRA) to take the Government's emission reduction targets and plans into account, where these are not inconsistent with their core statutory objectives. The Commerce Commission has stated that it considers in practice there will be real scope to take account of the permissive considerations under section 5ZN of the CCRA while still promoting its core statutory objectives under Part 4 of the Commerce Act.

38. We believe this is appropriate, and ensures the regulators remain centrally focused on their respective core purposes. We agree with the findings of the 2018-19 Electricity Price Review, which found that adding to these core objectives with other non-discretionary considerations would pull them in too many directions, require difficult trade-offs between competing objectives, and blur accountability. Attempting to introduce additional mandatory objectives into these market regulation and competition focused regimes risks worsening their performance in achieving efficient market outcomes for consumers.

39. The reality is, though, that significant growth in demand for electricity is expected to occur over the coming decades, driven largely by a rising carbon price and the need to reduce emissions. We are supportive of the Electricity Authority and Commerce Commission exploring ways to enable more anticipatory investment ahead of demand, rather than 'just in time', to help accommodate this step change in scale and investment.

Part 4: Responsive Demand and Smarter Systems

Chapter 10: Increasing distributed flexibility

Further measures to support market access for distributed flexibility

40. We strongly support sector initiatives to explore the massive opportunities that distributed flexibility and energy efficiency offer. We note a significant programme of activity is already underway across the private sector and regulators, including

trials operating under regulatory exemptions. We support this 'regulatory sandbox' approach to enabling innovation.

41. We note that at this early stage it is not yet clear whether an integrated platform for distributed flexibility will emerge organically. Such a platform is likely essential to enable owners of distributed flexibility to realise (monetise) the full value of flexibility services they offer into the market.

42. As a starting point, we generally support government setting out the future structure of a common digital energy infrastructure to allow trading of distributed flexibility in an integrated market. Its approach, though, should retain flexibility so that this structure can evolve as the market, and the technologies within it, takes shape.

Smart device standards and regulation

43. We support voluntary information measures such as EECA publishing publicly available specifications for EV chargers and other devices, including specifications for 'smart ready' devices. We likewise support publishing of whitelists of devices that meet these specifications (modelled on the success of the Energywise programme).

44. We note MBIE is developing changes to the Energy Efficiency and Conservation Act 2000 to enable EECA to set standards mandating demand response capability in devices, and/or requiring default off peak charging settings. Any such standards should be carefully considered to ensure that the public and private benefits of mandating this capability (e.g., lower operating costs, lower electricity network costs associated with meeting peak demand) outweigh the costs (i.e., the premium for demand-response capable devices). We expect that the market will naturally gravitate toward 'smart' devices without compulsion as a market for demand flexibility emerges and enables consumers to monetise their associated benefits, but this assumption warrants monitoring and testing.

Feed-in tariffs for distributed solar and batteries

45. We do not support subsidies for distributed solar and batteries. New Zealand's energy-only market – in which all forms of generation compete on a level playing field on price – has fundamentally delivered an efficient, low-cost electricity system. We do not support undermining this by 'picking winners' through subsidies for particular forms of generation.

46. Likewise, we are doubtful that government support through financing measures is required. A number of New Zealand banks already offer concessionary loans for energy efficient retrofits, including installation of home solar and batteries. Solar providers themselves also offer financing options that can include low or zero interest loans. Grid-scale battery investments are already occurring – for example, Meridian plans to commission a 100MW battery at its Ruakākā Energy Park by September 2024 (more here).

Part 5: Whole-of-System Considerations

Chapter 11: Setting priorities and improving co-ordination

Cost-reflective pricing

47. We strongly support retaining cost-reflective pricing in the energy system. As the Consultation Paper itself acknowledges, markets achieve lower prices in the long run, incentivising generation, network, and technology investments in the right place and time.

48. The Consultation Paper asks if pricing below the cost of supply, or cross subsidisation in transmission and distribution pricing, could be justified to achieve energy affordability and address distributional impacts. It similarly asks if electricity prices could be reduced for households suffering energy hardship. On both counts, while we support the laudable intent of addressing energy hardship, distorting cost-reflective price signals in the energy-only market is not the best way to achieve them. Provided prices are not above what a competitive market would deliver, and some consumers still cannot afford electricity, this is not an electricity market issue and requires other measures to address it. Equity and affordability issues should be addressed through additional non-market measures, such as welfare or other transfers.

49. The Consultation Paper notes that current measures (such as the Winter Energy Payment) offer a similar level of support to all recipients, and do not provide extra support for customers in higher cost areas to ensure they do not pay more than consumers in lower cost areas. We suggest that these issues are best addressed through fixing the specified measures (e.g., by targeting the Winter Energy Payment to need and/or region). We also emphasise that the first question should be whether regional price variations are cost reflective (if they are, this narrows the range of problems warranting government intervention).

50. The Consultation Paper also notes the administrative costs associated with greater targeting, but this is an inherent trade-off if we seek to provide as much support as possible to the most vulnerable consumers. It is also not clear that targeted support through price regulation in the market would avoid this same issue.

51. Likewise, we do not support regulating lower electricity prices where this would help deliver the Government's emission reduction targets and plans. Putting aside the inherent difficulties involved in placing emissions reduction requirements ahead of the need to deliver secure and affordable electricity, the ETS already internalises the cost of emissions so that the cost of these fuels reflects their 'true' cost, with their emissions included. As the carbon price rises over time, the economic case for fuel-switching in industry and transport will improve. Artificially lowering electricity prices for particular sectors or users would significantly distort market incentives and raises the question of who cross-subsidises any concessionary pricing.

Concluding remarks

52. We appreciate the opportunity to submit on this Consultation Paper alongside the other components of the *Advancing New Zealand's Energy Transition* package. We are more than happy to continue engaging with officials as the process unfolds, particularly given the incoming Government will wish to assess the issues and to prioritise additional work – if any – it wishes to take.

Appendix 1: Reference Material

Energy Resources Aotearoa reports

Report	Description	Links
Fuelling the Energy Transition Energy Resources Aotearoa	Lays out credible pathways for the transition and shows that a disorderly transition out of natural gas could cost $6.3 billion by 2036, compared to a technology-led transition that enables renewable gases and CCUS.	Summary report Full report
Building Energy's Talent Pipeline Energy Resources Aotearoa	An Industry Skills Action Plan for the energy sector, including oil and gas. Jointly prepared by Energy Resources Aotearoa and the Taranaki Regional Skills Leadership Group.	Summary report Full report
2035/2050 Vision for Gas Castalia	Explores potential pathways for the gas transition, holding energy security constant to identify trade-offs between energy costs and emissions reduction. Strengthens the evidence base in favour of an orderly transition that enables CCUS. Commissioned by Energy Resources Aotearoa, Gas NZ, and the Major Gas Users' Group Inc.	Summary report Full report
The Role of Gas in Electricity and Industry EnergyLink	EnergyLink's independent analysis of the range of potential scenarios for natural gas use in electricity generation over the long-term. It finds the best strategy is to retain gas-fired generation beyond the 2030s (including new peakers in all scenarios); switch Huntly to gas-only as soon as practicable; and concert all geothermal to include reinjection of CO_2.	Summary report Full report

Previous Energy Resources Aotearoa submissions

53. We suggest that, in addition to this submission and the reports above, officials refer to at least the following previous submissions from Energy Resources Aotearoa.

    - Electricity Authority's Ensuring an Orderly Thermal Transition (July 2023)
    - Climate Change Commission's Draft Advice on Second Emissions Reduction Plan (June 2023)
    - Transpower's Draft Security of Supply Annual Assessment 2023 (May 2023)
    - Commerce Commission's Options to Maintain Investment Incentives in the Context of Declining Demand (February 2023)

54. All our previous submissions are available here.