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Ministry for the Environment

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Submission on New Zealand's draft second Emissions Reduction Plan

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1. Energy Resources Aotearoa is New Zealand's peak energy sector advocacy organisation. We represent participants from right across the energy system, providing a strategic sector perspective on energy issues and their adjacent portfolios. Our purpose is to enable constructive collaboration across the energy sector through and beyond New Zealand's journey to net zero carbon emissions in 2050.

2. This document constitutes our submission on your consultation relating to New Zealand's draft second Emissions Reduction Plan (**ERP2**). Our comments are focused on the energy sector, but also the transport, waste sectors and non-forestry removals (as there are crossovers), and on the emissions trading scheme (**ETS**).

3. To be helpful for responsible agencies we have answered consultation questions separately from chapters 5, 6, 9, 10, and 11 (energy, transport, non-forestry removals, waste, and adaptation respectively) as set out in **Attachment 1**. We include a final section where we argue the draft ERP2 should have more consideration of standards and specifications across all fuels and all sectors, and we have attached a draft timeline (**Attachment 2**) which we think should be developed further to support those of us working on the intricate and many climate policy consultations, reviews and advice.

Key Messages

4. This consultation has arrived at the apex of a national energy crisis. Critical to the problem is understanding that climate policy cannot displace energy policy, and that electricity needs fuel – reliably, affordably, and long-term. Weather dependent fuels (hydro, wind, solar) cannot support the electricity system through sustained dry spells or every winter. Many of our industrials also rely on high energy intensive fuels to power their operations, and will for many years, yet this winter's electricity prices are causing closures and job losses.

5. Natural gas is needed to underpin the electricity system and temper prices. Batteries and storage will play an increasing role but they are costly, are not yet available in New Zealand at scale and when used can only cover a very short term peak, not a prolonged dry spell.

6. We believe that there is more natural gas available but critical to unlocking this future is restoring confidence in government policy, which must be joined across climate, transport, energy and resources sectors so that they are not pulling in opposite directions.

7. While urgency is needed in response to the gas market, a slow and steady approach is needed for overall net emissions reductions to meet our targets. The latest decisions on ETS settings have reset expectations of approach and that complementary measures should be used sparingly. However, the energy sector will still be required to do the heavy lifting in reducing emissions, while the sector is already strongly contributing.[1]

8. Innovation and research and development (**R&D**) are vital components to the transition, but any government support for these must be targeted, timely, temporary and technology neutral.

9. Pairing natural gas with existing and innovative technological solutions (for example, carbon capture, utilisation and storage (**CCUS**), low emissions fuels, biogases, wood pellets) can unlock further contributions towards our climate goals. All options should be made available through enabling regulation and standards that are up to date and aligned with our trading partners.

Chapter 1: Approach to New Zealand's climate change response

10. We support New Zealand's and the world's journey to a net-zero emissions future, consistent with the Paris Accord. We are encouraged that the draft ERP2 outlines a strategy to reduce net emissions carefully over time and in line with our targets, while providing regulatory predictability and a credible, neutral, level playing field to enable the significant investment that will meet our energy needs.

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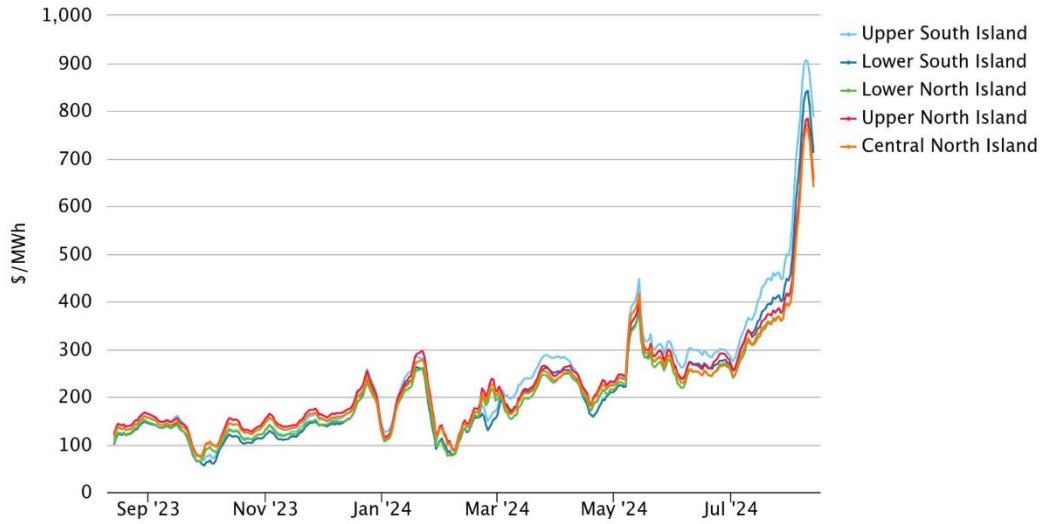
[1] The latest Greenhouse Gas Inventory 1990-2022 revealed the lowest gross emissions since 1999, with energy sector emissions reductions of **8.1%,** including transport (compared with 1.4% from agriculture, 5.1% from industrial processes and product use, and 1.5% from waste. Source: New Zealand's Greenhouse Gas Inventory 1990–2022: Snapshot | Ministry for the Environment.
See also https://www.energyresources.org.nz/assets/Uploads/Progress-Report-Energy-Resources-Net-Zero-Accord-October-2023-.pdf which shows that national emissions from natural gas and LPG in New Zealand **fell 27% between 2010 and 2021**, while overall supply only fell 10% in the same period, with overall emissions intensity of these fuels falling 18%. Even greater reductions were made by New Zealand's upstream oil and gas sector, substantially reducing both its overall emissions, and its emissions intensity.

11. We support New Zealand's legislated targets and the way that the draft ERP2 has framed this challenge with a focus on a least cost market-led transition. This is a welcome return to sensible public policy.

12. Unfortunately, the transition we are seeing in New Zealand's energy sector is a transition to energy poverty and shortages. Energy prices have recently reached the highest spot prices in the world, not accounting for income levels – New Zealand's are among the lowest in the OECD - which paints an even worse picture. Recent wholesale electricity price trends at various reference points can be clearly seen in the following graph.[2]



Source: Electricity Authority, https://www.emi.ea.govt.nz/ market statistics and tools

13. We are seeing clear evidence of how reliant the economy is on natural gas and how important it is to the electricity system. About 20% of the gas produced is used in the electricity market and about 10% of electricity generated requires gas. The high prices are evidence of how one-dimensional climate and energy policy settings have become over recent years.

14. The most detrimental issue from an emissions perspective is the amount of imported coal used at Huntly power station to help fill the energy shortage we face and will continue to face for some time. Coal is still vital to maintaining our energy security but fundamentally this outcome is a failure of the previous government's policy efforts to suppress the essential role of natural gas in the economy. Natural gas helps maintain an essential, reliable and affordable means of production

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2 For past 24 months' data see here: Electricity Authority - EMI (market statistics and tools) (ea.govt.nz)

15. While we are relying on demand *response* – energy costs, together with consenting barriers, are causing sub-optimal demand *destruction* and industrial closures with subsequent economy shrinkage. Indigenous fuel for firming is insufficient this winter and this tight supply condition will likely continue for the next few years.

16. That insufficiency should be reflected in the final modelling for ERP2, in particular the low gas supply forecasts. On the one hand we are delighted to see the Commission model gas use higher than gas production forecasts, implying that more gas can be produced and used while still meeting our climate goals. However, modelling that assumes gas demand *will be met* one way or another (with further gas exploration and development or substitutes for natural gas – LNG imports, [3] for example) ignores two factors, being:

    a the impacts of the previous government's failed policies, and the lack of clarity about what fuels and technologies will fill the energy gap in an affordable way at scale should fossil fuel sources of energy not be available; and

    b the intertemporal aspect. These vital sources of energy may be available in the medium to longer term, but we are already seeing clear signals from large gas users that their demand will continue to go unmet and energy prices will continue rising, forcing a reduction in output or closure. This will inevitably bring with it grave economic and social impacts, such as job losses.

17. Environmental and climate policies need to go hand in hand with energy and economic policies. In recent years, we have observed a delaying and chilling of investment in electricity generation, including renewables. This is in large part because of the cacophony of disparate market signals which have confused investors whose confidence has been eroded by climate-centric policies.

18. We had the Lake Onslow project, 100% renewable electricity target, a suite of ERP1 'complementary' policies that destabilised and undermined the ETS, and previous government agenda of the last six years aimed at reducing the use of fossil fuels in transport and industry – **with no clear plans or strategy for energy security or affordability**. It is worth observing that the gas exploration ban remains in place as of the time of writing.

19. All options need to be in the mix, not just renewables, but low-emissions technologies and energy intensive fuels where they are needed. A key role for government is to set early and enabling regulations, standards and specifications for low emissions fuels and technologies. The government should not be in the business of selecting fuel or technology favourites and banning things it does not like. This should be left to consumers to choose.

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3 LNG imports will not replace natural gas for industrial uses, such as producing methanol.

Chapter 2: Tracking our progress towards meeting emissions budgets

A slow and steady approach is best for the climate and economy

20. We congratulate the Government on its commitment to a least-cost, net-based approach outlined in the draft ERP2. While informed by science, climate change *is* an economic issue, and the net burden imposed on the country as we address it should be minimised. Subsidies of renewable forms of electricity, for example, already being scaled up by the private sector, is unlikely to be a least cost way. Only through prosperity can we chart a course that will see New Zealand retain the ability to meet its ambitious climate goals.[4]

21. We have long advocated for the importance of a least cost approach. We wrote on this very issue back in 2021 (see our Perspectives Note here).

22. New Zealand is an innovative country but cannot easily scale up new technologies. As a technology taker (once a product has reached a sufficient level of maturity), international markets provide important signals for investment and policy direction. We cannot always feasibly or sensibly be ahead of the pack.

Targets are important, therefore they should be realistic in ambition

23. We encourage consistency for all climate policy, including keeping our 2030 Paris Agreement target and our 2050 net zero target unchanged.

24. We are starting to see countries openly acknowledging their difficulty in meeting their targets. For example, Scotland has abandoned its statutory 2030 climate goal. There is speculation that other countries will do likewise (such as Canada and Australia), or that they will at least maintain their targets but fail to achieve them.

25. We are also seeing some large international companies do likewise. For example, *Air New Zealand* recently announced it would abandon its 2030 carbon intensity target. Others, such as *bp* and *Shell*, have paused their biofuel refining operations as new markets for low emissions fuels develop more slowly and some targets intended to drive market uptake prove to be overly ambitious.

26. There is an ongoing debate about the role and cost of overseas mitigation units in meeting our target. We must demonstrate our efforts and intent towards meeting our existing target in a credible way, but we do not believe that New Zealanders

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4 We note that the IPCC, IEA and New Zealand scientists agree that outdated scenarios underpinning climate research and assessments are informing poor policy decisions and increasing costs of climate change mitigation. Yet councils, consultants, and groups funded by government continue to proliferate them. It is time to abandon implausible worst-case scenarios, such as RCP8.5.

should be held hostage to a politically motivated target that was not consulted on or planned to achieve, except via the purchase of offshore units.

Careful consideration of the use of offshore mitigation is needed

27. New Zealand must be looking for every possible leverage opportunity before investing taxpayer funds in offshore mitigation units. If considering investment in offshore mitigation units, the following guidance should be considered:

    a the need for a very high evidence-based threshold *before* we commit scarce taxpayer funds;

    b alignment with our national interests, for example, investments in aid, trade and research and development;[5] and

    c the cost of offshore mitigation must not be assessed or measured purely against our domestic mitigation costs but against that *plus* any additional qualitative and quantitative benefits of investing funds in New Zealand to take mitigation action, creating jobs, biodiversity benefits and enabling prosperity. [6]

A climate resilient energy system requires mitigation and adaptation

28. We cannot understate the importance of climate adaptation for New Zealand. A climate resilient energy system is fundamental to enabling climate resilience and adaptation, across all sectors. At the same time, New Zealand's energy sector is increasingly vulnerable to the increasing impacts of climate change.

29. We are pleased to see that adaptation features in your climate change strategy. Recognising the strong link between mitigation and adaptation is long overdue. We recently presented our submission on the inquiry into climate adaptation to the Finance and Expenditure Select Committee.

Energy security and resilience could be included in our NDC

30. We already know that meeting our current NDC is going to be difficult and expensive. We do not support changes to our targets. However, when changes are considered later this year, we suggest broadening the scope so that it is more

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5 We are unsure why our recent climate related investments in our Pacific neighbours have not yielded offshore mitigation units. All such international climate finance should be required to do so.

6 The Government is providing an investment totalling more than $100 million for regions to protect against and mitigate the effects of climate change. Source: Climate resilience packages for regions | Beehive.govt.nz. It is unclear why the mitigation co-benefits are not being factored in, or being included in accounting towards our NDC.

consistent with the purpose of the Paris Agreement as set out in Article 2, which specifically includes mitigation, adaptation, food security *and* sustainable development (which in turn could include energy security and resilience).[7]

31. Further, Article 4 (NDCs), paragraph 7 says:

> "Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans *can contribute to mitigation outcomes under this Article*.
>
> (emphasis added)

32. A revised scope would allow New Zealand to:

a showcase its ambition across a wider set of dimensions; and

b refocus on a more coherent, realistic and systemic approach to our actions addressing climate change while achieving energy resilience and economic prosperity rather than a siloed or blinkered focus on mitigation alone – a problem the last government left us with.

Chapter 3: Strengthening the New Zealand Emissions Trading Scheme

An ETS-led approach will produce the least cost pathway to net emissions reductions

33. Energy Resources Aotearoa believes that an ETS-led approach – underpinned by neutrality of sector, fuel, and technology, and focused on net emissions – will deliver a net zero transition at least cost to New Zealand.

34. The ETS has been subject to constant and material 'tinkering' over the past few years leading to unnecessary and destructive volatility. Key to this has been its direct undermining by complementary measures, many of which have merely shifted emissions around due to the 'waterbed effect'.[8]

35. The 'waterbed effect' arising from a capped ETS creates a high bar for justifying complementary policies. Justification needs to include robust assessments of costs and benefits and monitoring regimes for measuring value for money and effectiveness.

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[7] We note that the UNFCCC website describes NDCs as embodying "efforts by each country to reduce national emissions and adapt to the impacts of climate change." See https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs.

[8] For a discussion of the waterbed effect and how pertains to carbon leakage we refer the reader to our perspectives note, available at: https://www.energyresources.org.nz/dmsdocument/202.

36. We support the government's direction for ETS policy to make it more predictable and stable, but some adjustments are needed for recognising *avoided* emissions in the low emissions gas and waste sectors. This is to make sure the ETS does not disincentivise investments into new projects and technologies which will remove emissions from current activities but are not appropriately recognised in ETS regulations.

37. Avoided emissions could soon be achieved through CCS and from the production of biogases from waste. There needs to be a carbon price advantage on emissions that never make it into the atmosphere, with a clear regulatory regime for capture and storage projects. Avoided costs should be relative to avoided emissions. For more on this see paragraphs 55-64 below.

Complementary measures need to be costed and the trade-offs justified

38. The long list of discontinued initiatives from ERP1 illustrates just how expensive and ineffective many of those complementary policies are. These were well-intentioned and aimed at reducing gross emissions, but many of them were the wrong policy solution, for example:

    a direct subsidies (such as the Government Investment in Decarbonising Industry (**GIDI**) fund and the Clean Car Discount);

    b inappropriate targeting of 'consumer behaviour change' to limit rather than encourage choice (such as the vehicle kilometre travelled (**VKT**) reduction targets and the threat to ban new gas connections); or

    c wasted public effort and funding for policies which have not been continued.

Modelling assumptions look good but will need regular updating

39. We recommend further sensitivity testing on modelling and policy assumptions over the second budget period, particularly regarding natural gas and its substitutes.

40. We encourage an assessment of the net present value and abatement costs of each initiative proposed for ERP2 and that these are monitored and evaluated for effectiveness. In particular, we would like to see the forecast reduction in tonnes of carbon for each non-ETS initiative, and its dollar/tonne cost. Such transparency is critical to the overall efficacy of climate change policy settings.

41. We are pleased to see that intervention logics for key draft initiatives have been published in the technical annex and that the modelling assumptions have been amended to update the previously assumed baseline from 2023.

Free industrial allocation is not a subsidy and reflects property rights

42. Policy makers need to be mindful of why free industrial allocation of NZUs was established for Energy Intensive Trade Exposed (**EITE**) firms in the first place and recognise the difference between purpose and effect. Its purpose is to compensate businesses whose rights were impacted by the introduction of a carbon price; its *effect* is mitigation of emissions leakage. Industrial allocation is neither industry policy or therefore a subsidy.

43. We consider that free allocation of New Zealand Units (**NZUs**) should remain largely unchanged. We note that work is underway to ensure free allocations more accurately reflect emissions by firms receiving them, with new regulations to be published later this year.

44. We urge the Government to take a cautious approach to any future changes to the phasing out of allocation of NZUs as this could undermine the incentive to invest in emissions reducing actions (creating a first mover 'disadvantage' situation). Such actions tend to be financed by the units they 'free up', and reducing the allocation of units creates the real risk that firms hold off on the very investments needed to reduce emissions. Units have value, like all property does, and the market needs confidence that these will not disappear prematurely.

45. The five-year discretionary review introduced in 2023 **should be removed** as soon as possible. We understand that officials advised against it, but it was included at the previous Climate Change Minister's insistence (see our 2023 submission here).

The sectoral approach to emissions reduction is practical, but ultimately unrealistic

46. Carbon emissions in energy related sectors need to be approached as an integrated, complex system. Carbon prices act as a thread that runs throughout the economy, changing relative prices and in doing so, unlocking emissions reductions from places we could not expect or plan for.

47. This, and the emergence of new fuels and technologies encouraged by it, increasingly blurs the boundaries between sectors. Bioenergy is a good example of this, where forestry, energy, waste and transport sectors all have some involvement. Again, the role for government will be to align and provide coherence between the various actors, funding streams, timelines and priorities. Early and enabling regulation will be critical as will cross-agency alignment.

48. It will be important not to be too siloed or reductionist in thinking about the optimal approaches to sectoral targets. We saw this with ERP1, and its long shopping list of interventionist policies focused on gross emissions reductions. We welcome the much more focused and shorter list of proposals.

Chapter 4: Funding and financing

Proceed with caution on proposals for funding and financing climate mitigation

49. We note there is work underway to unlock private investment and remove barriers for funding and financing climate mitigation and promoting biodiversity, the basics of which are outlined in the draft ERP2. It is good that work is underway to address investment barriers and/or enhance investment confidence.

50. We welcome the creation of new regimes such as voluntary carbon and biodiversity credit markets, but their design needs to be thoughtful, especially with regard to the interaction with the compliance market. The added complexity would need to provide substantial benefits that outweigh administration and compliance costs. Biodiversity credits will be part of the non-forestry removals markets, which are still emerging. Consumers may be reluctant to pay a premium for products that are attracting a carbon discount for producers/suppliers.

Chapter 5: Energy

Electrify NZ and removing consenting barriers are insufficient on their own

51. The key policy proposed in the energy chapter is reducing consenting burden through Electrify NZ. We support this policy broadly but see two important blind spots in the proposals:

    a faster investment in electricity generation alone will not provide energy emissions reductions because investment is needed in other fuels (such as natural gas, renewable gas, LNG) to create the essential backup to a weather-based renewables system; and

    b faster consenting of electricity generation will not address the investment needed in grid infrastructure and transmission to make that electricity available to consumers.

52. Just as it was inappropriate for energy policy to be substituted by climate policy, so too the risk of energy policy now being substituted for by infrastructure or resource management policy. While clearly subject to overlaps, energy policy has its own specific needs and identity.

Renewable gases need more specific attention in ERP2

53. Renewable gases are an important opportunity, as identified in the draft ERP2. However, there is little detail about what is needed to enable them, or the range of benefits they can provide.

54. Key supporting measures fall into two categories:

    a certainty for future viability of gas pipeline infrastructure; and

    b adjustments to the ETS and other economic settings to support increased renewable gas uptake.

CCUS is a useful emissions reduction technology, but only if we have more natural gas and projects are economically viable

55. The draft ERP2 places great emphasis on the ability of CCUS to reduce emissions over the second and third budgets. We are strongly supportive of this.

56. However, it is important to note that if carbon is captured before it is combusted **CCUS is not a removal technology** (it avoids emissions in the first place) and does not belong in the same category as forestry offsets. We expect this consultation will flush out responses that categorise CCUS as a non-forestry removal (**Chapter 9**). It is crucial that all CCUS (or CCS) comments are captured in this consultation across the energy and non-forestry sectors, *whether they are answered in Chapter 5 or Chapter 9*.

57. With gas reserves as low as they are, the assumption regarding the availability of CCUS needs testing. If natural gas supplies remain low and the economic case for CCUS is such that it does not transpire or scale, then emissions reductions will come from a reduction in gas instead. This has not been modelled and could be a different amount than modelled for CCUS.

58. The deployment of CCUS in New Zealand will depend upon the commerciality of a project, which is driven by the abatement cost, carbon price, and the perceived project risk profile.

59. We note that the impact of any gas imports has not been modelled but assume this would effectively represent tonne for tonne any natural gas supplies that it replaces at point of combustion (but would not account for emissions from producing and transporting the LNG). Emissions could be higher than modelled if higher intensity fuels are used in place of gas, such as coal.

60. We have long advocated for enabling legislation to unlock the potential of CCUS in New Zealand. Public support for CCUS projects is needed and should be encouraged by the government alongside advancing the regulatory regime.

61. Care should be taken to avoid duplication and overlap of the regulatory requirements. A permitting regime should be developed to manage the lifecycle of the CO_2 storage project for industrial emissions and exclude upstream oil and gas

operations that recover and reinject carbon dioxide as these activities can be managed through existing legislation, namely the Crown Minerals Act 1991 (**CMA**).

62. We recently wrote about CCUS as a low-carbon fuel choice, addressing a number of the negative myths commonly propagated about it use, and submitted on MBIE's consultation on CCUS and you can find our detailed submission here.

Further support is needed to help attract investment in natural gas exploration and production

63. Alongside CCUS regulation, changes to the CMA and the new fast track consenting rules will improve the regulatory settings for enabling low-emissions gas. However, the economic challenges and the perception of New Zealand's high sovereign risk are going to be significant barriers to investment.

64. Bipartisan support across parliament to address the intolerable sovereign risk to foreign investors would help attract further investment. There is also a need to fast track the appropriate infrastructure should we need to start importing gas (LNG imports), as a backstop for our energy security. It is likely however, that this infrastructure will sit idle for much of the year so the market incentives will need to account for this opportunity cost.

Chapter 6: Transport

Transport policies need to demonstrate good value for public money

65. In our view, the transport sector could be doing more heavy lifting over the second emissions budget as it produces the largest proportion of carbon emissions and is well placed to reduce emissions from changes to consumer behaviour if the right settings are in place.

66. The core role for government involvement in transport sector climate policy is to set appropriate and timely standards and specifications for emerging fuels and technologies. There is some public funding in the transport section of the draft ERP2, which has been well signalled and is temporary. We are reluctant to endorse technology specific policies or subsidies.

67. One of the greatest risks when executing such policies is that they confuse price signals and 'crowd-out' private sector investments. It is therefore good to see that the draft ERP2 includes options for review of the effectiveness of these policies, although this should be the standard practice. The focus should now be on getting good value outcomes from the public funding.

68. Facilitating industry discussions is the right approach for supporting reductions in international aviation and shipping. We submitted on the Climate Change Commission's consultation on this topic recently, which you can read here.

69. Public funding of $765,000 from the previous government for two feasibility studies on domestic production of sustainable aviation fuels now needs to produce good public value. Further funding cannot be justified.

70. Better public transport through a rapid transit network in Auckland and improvements to North Island rail are sensible long-term investments. It will be important that the government sets expectations of councils and regional authorities to get these ambitious projects delivered.

71. However, it is not clear why these nationally funded infrastructure investments are justified over others that have not been funded, and how these networks will demonstrate good public value over time beyond just emissions reductions over the next two emissions budgets.

Chapter 9: Non forestry removals

72. CCUS is a non forestry removal *only* in those circumstances in which the natural gas has been combusted and the carbon has been captured.

73. Please see further comments in the table below in Attachment 1 under Chapter 9.

Chapter 10: Waste

74. Our focus for the waste sector is on ensuring that we allow all fuels, where economic, to play a role in our energy future. New Zealand is facing a severe and potentially prolonged energy shortage.

75. Landfill gas capture is a potential substitute and booster for natural gas in the low pressure reticulated gas pipe network . This should be better recognised across waste and energy sector regulatory settings. As mentioned in paragraphs 46-48, the sectoral approach of the ERP2 does not make this easy.

76. Key actions that require immediate attention include:

    a the ETS needs to better account for emissions liabilities, opportunities and reductions in landfill waste facilities, and ensure options for reduction or avoidance of emissions through waste to energy projects appropriately account for the benefits of these;

    b landfill gas capture needs to improve but it is not just about incentivising capture, but its efficient use (for better emissions outcomes for our

energy/waste system). The scope of landfills that require landfill gas capture needs to be reviewed;

c organic waste disposal incentives and regulation need to take a cross-sector approach across energy, waste, and agriculture;

d regulatory uncertainties need addressing (e.g., in the Commerce Act) and the consenting needs streamlining through national direction; and

e benefits of an education and awareness campaign about renewable gas could be worth considering.

Chapter 11: Helping sectors adapt to climate change impacts

77. Natural gas is essential in the face of increasing climate impacts especially for emergency response.

78. See paragraphs 28-32.

Additional comments

More attention needed in ERP2 on standards for low emissions and renewable fuels

79. We think all options need to be on the table and we want to be sure that there are no regulatory or operation barriers to technologies or efficiencies being developed across the energy system (forestry/climate/energy), and across domestic production and imports/exports of fuels.

Tools and standards needed to assist uptake of low emissions fuels

80. Updated fuel specifications will enable immediate economic and environmental benefits through improved market access to the latest low emissions and renewable fuels and technologies.

81. Life Cycle Assessment (LCA) tools need to be developed to assist the uptake of low-emissions fuels. These tools (with updated standards and specifications) will enable businesses to assess the carbon footprint of bioenergy solutions such as biomethane and wood pellets compared to traditional fuels.

82. These tools and standards would need to apply for imported and domestically produced products and be harmonised with our trading partners.

83. Consideration should be given to how any taxes and levies are applied to low emissions fuels.

Sustainable Aviation fuel

84. The recent 2 + 2 Trans Tasman meetings are the start to a sensible approach to SAF policy. Taking our lead from Australia's standards, specifications and certification of origin policies is the most efficient way to scale up safe supply and use in New Zealand. A low carbon fuel standard would provide the clear and certain demand signal to support investment decisions.

85. There should not be differences in fuel specifications for any SAF produced domestically to what is imported.

86. Government subsidies for air travel that is only used by a small portion of the population is not an acceptable way to address climate concerns for aviation. A reliable, affordable supply of fuel provides market participants with access to the most cost-effective products.

87. We support the intention of the government to help facilitate New Zealand's participation in industry discussions and negotiations, including the work that is led out of the International Civil Aviation Organisation (ICAO).

Biomass conversion to 'torrefied' black pellets

88. Genesis Energy is already trialling woody biomass in its Huntly power station as a potential substitute for coal. Domestic production of high energy density biomass pellets could be scaled up to help:

    a contribute to our energy security in a world of declining gas production;

    b place downward pressure on electricity prices; and

    c avoid the premature replacement of thermal infrastructure like boilers.

89. There is an opportunity to establish biomass torrefaction, carbonisation and gasification technologies throughout New Zealand.[9] These technologies will help New Zealand achieve its emission reduction goals. They would also provide the New Zealand forestry sector with an opportunity to add further value and the social licence to operate.

90. Torrefied pellets have characteristics that make them more suitable than white pellets for replacing coal in existing energy plants because they have higher density, lower moisture content and higher volumetric net energy density. Black

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9 For example, see https://www.carbona.nz/.

pellets are easier to store and handle (relative to white pellets) and have the obvious benefits of lower emissions intensity than coal.

Biogases from waste

91. The energy section of the draft ERP2 consultation document is scarce on detail about what is involved in 'enabling renewable gases'. Biogas and biomethane technologies require policy support to drive the development at scale and cost for gas to be brought to market.

A bioenergy taskforce

92. We see value in a dedicated workstream across the sectors and the standing up of a cross agency group or taskforce to unlock these opportunities. Such a group for biomass pellets, for example, could include forestry and energy sector experts and regulatory experts such as EECA.

93. We think such a group should focus on addressing the complexity of the coordination problems and assessing the nature of any barriers that could require government intervention, such as consenting or certification.

Concluding remarks

94. Thank you for the opportunity to provide our submission on the draft ERP2. Climate change brings a complex, multi-faceted, cross-sectoral set of challenges and potential options that cannot be seen in isolation of each other or from other competing objectives.

95. Climate policy is cluttered and can be difficult to navigate and see the next steps or how they all fit together. To be helpful, and to illustrate the complexity of the climate related policy landscape we find ourselves in currently, we have prepared a timeline, as **Attachment 1**. We would be very happy to work with officials in developing this further as we have heard from our members (and several officials) that a tool like this is needed.

96. We have provided our views on the topics where our advocacy is strongest and our membership have an interest. Many of these topics appear in our recent submissions and we encourage officials to read our website for further information.

97. If you require any further information or clarification of any kind please do not hesitate to contact us and we will readily discuss, debate and delve further into any of these very important issues.

Attachment 1: Responses to consultation questions

Chapter 3: Strengthening the New Zealand Emissions Trading Scheme

	We support the ETS as the main lever to take climate action. The ETS is the most efficient (cost effective) flexible tool the government has to reduce emissions. A stable ETS provides the market the confidence to invest. Confidence is a key element of certainty regarding investment (including clear communication about the future of industrial allocation). We consider that under the new set of government policy setting the ETS will work as it is intended and settings should not be tampered or tinkered with. This will enhance market confidence in the settings and unlock investment and the journey to the low emissions future we all desire. The ETS and its carbon price is the most efficient tool to deliver our low emissions journey in the energy and other sectors. It changes relative prices and provides price signals to consumers that encourages optimal choices and behaviour change

Chapter 5: Energy

5.1	What three main barriers/challenges that are not addressed in this chapter do businesses face related to investing in renewable electricity supply (generation and network infrastructure)?
	1. high energy prices due to a reduced gas supply; 2. investment uncertainty, especially for foreign investment and volatile economic conditions; and 3. building more electricity renewables won't be cheap or result in cheaper electricity, especially during winter peaks.
5.2	How much will the Government's approach to driving investment in renewable energy support businesses to switch their energy use during 2026–30 (the second emissions budget period)?
	☒A moderate amount - there will still be other barriers
5.3	What three main barriers/challenges do businesses and households face related to electrifying or improving energy efficiency, in addition to those already covered in the discussion document?
	1. insufficient fuel for generating sufficient electricity to meet demand, resulting in further demand destruction and industrial business close-ins or closures, and more burning of coal; 2. high up front and capital costs of switching as well as permissions from landlords and councils; 3. outside factors, such as other living costs rising.

5.4	How much will existing policies support private investment in low-emissions fuels and carbon-capture technologies?
	☒A moderate amount - there will still be other barriers CMA changes, CCUS regime, and fast track consenting will all help but there are economic and political barriers, see our response in 5.5 below and also in paragraphs 53-62 in our submission above. We support the following actions to advance the uptake and us of CCUS in New Zealand: 1. the development of a regulatory framework; and 2. R&D support. Existing policies do not drive development and uptake of renewable gas.
5.5	What three main additional actions could the Government do to enable businesses to take up low-emissions fuels and carbon-capture technology?
	1. set clear regulation and standards for *all* fuels and low-emissions technologies (SAF, renewable diesel, renewable gas (biogas, hydrogen), fuel-cell technology, CCUS, new electricity sources such as offshore wind) and ensure these are coherent with relevant policies for the most likely use cases. Life Cycle Assessment (LCA) tools should be developed to enable businesses to better understand and compare the inherent carbon footprint of bioenergy solutions; 2. establish cross-party government alignment on gas policy to relieve some of the sovereign risk (preferably with support for the next 30 years); and 3. attract subject matter experts back to government agencies with expert career pathways and develop up-to-date, globally aligned training programmes for working with new fuels and technologies.
5.6	If you are an electricity generator, please explain and/or provide evidence of how Electrify NZ could affect projects already planned or underway.
	N/A
5.7	If you are an electricity generator, please explain and/or provide evidence of how Electrify NZ could increase the likelihood that new projects will be investigated.
	N/A
5.8	Please provide any additional feedback on the Government's proposals to reduce emissions in the energy sector and the industrial processes and product use sector.
	We are surprised to see the discussion document and consultation questions on the energy sector are almost entirely about investment in electricity generation and ElectrifyNZ, and there is nothing about investment in the fuels needed to create the much-needed backup during the transition, and beyond 2050. This is concerning because many

	submitters will be guided by these consultation questions alone which could materially dilute the quality and range of views on the full suite of investments and trade-offs needed for meeting the second emissions budget. It is well known natural gas has a role to play in our journey to a lower emissions economy, as shown by the IPCC and the Climate Change Commission. Natural gas is going to be required out to 2050 and beyond as a firming safety net when intermittent, unreliable renewables are unavailable. This will ensure energy security as well as investment over time in technology and capacity building for the low carbon future. Natural gas is especially important in times of natural disasters to ensure heating and cooking is available (such as Cyclone Gabrielle) and in the rural sector. In addition, there are a range of technologies and fuels that are increasingly feasible in the help they can offer New Zealand in powering its economy. Removal of barriers and assistance in addressing the complex cross sector co-ordination problems will be required to unlock these (such as torrefied wood, renewable gases etc). We applaud efforts and the intention to have more energy efficient and low carbon homes but the principle of equity needs to applied – proposals to remove natural gas from households in order to share it with the wider economy are naïve. More natural gas for long-term energy security is in the best interests of all New Zealanders. There is scope for the use of regulation, R&D support and capacity building to advance biomass uptake (for the development of fuels such as SAF). We also suggest the establishment of a biomass group to help unlock opportunities such as torrefaction of waste wood to address the complex coordination problems.

Chapter 6: Transport

6.1	Do you support the proposed actions to enable EV charging infrastructure?
	☒Yes we support this action However, only if implemented with the programme designed for withdrawing or reducing government co-funding over time. Government should continue to have some oversight of the network of EV chargers because the market participants might not be sufficiently incentivised to do so.
6.2	What are the three main actions the Government can do to reduce barriers to and enable the development of a more extensive public EV charging infrastructure in New Zealand (without adding too much cost for households and businesses)?
	1. maintain a realistic picture of demand and review the EV charging policy regularly, adjusting the level of government co-funding down

	in line with its effectiveness and level of private investment, and maintaining oversight of the network; 2. implement land use consenting rules (such as fast track consenting and exclusions) as quickly as possible to allow for surrounding areas to be developed to support EV charging hubs. The surrounding land developments will form part of the investment package and will likely justify private investment in the actual chargers rather than viewing the chargers as a standalone investment; 3. set standards for EV chargers (for example their voltage, speeds, internet connections). Plan for newer technologies to enter our market rapidly, but avoid unplanned obsolescence of early EVs by letting investment favour only newer faster chargers and leaving gaps in the network for older EVs. We do not support the return of the clean car discount, subsidising EVs, E-bikes, bike lanes or other infrastructure. Such policies have rightly been consigned to the policy scrapheap.
6.3	Do you support the Government's proposals to reduce emissions from heavy vehicles?
	☒Yes we support these proposals However, we do not support further government funding for heavy vehicles above what has already been agreed through Budget '24.
6.4	What are the three main actions the Government can do to make it easier to switch to low- and zero-emissions heavy vehicles (without adding too much cost for households and businesses)?
	1. create and maintain standards and specifications for new and low-emission vehicles and fuels so that the New Zealand market is prepared for new technologies, and taking advice from the industry on which makes and models are most appropriate for New Zealand's geographic and economic features. This would include Low Carbon Fuels standards for heavy vehicles, and compared on a lifecycle basis to maintain inclusive choices for all; 2. avoid any further subsidies for particular technologies, an agnostic approach to technology will allow for the most cost-effective solutions; 3. avoid any further schemes (such as vehicle scrappage or EV subsidies) that distort market incentives and unfairly discriminate against selected consumers.
6.5	Do you support the Government proposals to reduce emissions from aviation and shipping?
	☒Yes we support these proposals
6.6	What opportunities might there be from rolling out new technologies to reduce emissions from aviation and shipping?

	The obvious emissions reductions, but a key risk with these could be increased costs for consumers.
6.7	What are the three main actions the Government can do to make it easier to reduce emissions from aviation and maritime fuels (without adding too much cost for households and businesses)?
	1. create standards and maintain specifications in line with our international fuel suppliers, with emissions accounting and sustainability criteria to match; 2. allow all fuel solutions by focusing on carbon intensity, measured across the lifecycle in all current and future transport energies (SAF, renewable diesel, green methanol, hydrogen, electricity, fuel cells); and 3. allow the ETS to recognise all fuels and their emissions intensities across their lifecycles.
6.8	Please provide any additional feedback on the Government's thinking about how to reduce emissions in the transport sector.
	There has been a proliferation of micro-level transport policies in recent years to respond to climate change. This approach has produced expensive wish lists of interventions that have undermined market incentives and consumer choice. The draft ERP2 initiatives are much more restrained and rely on well-functioning markets. It is therefore important that the government provides stable and predictable settings for markets. We see overall a lack of attention on standards and specifications in the draft ERP2 and would like to see more detail on these in the final advice. A growth in EV chargers will require electricity network upgrades and these can come at a high cost (passed through to all electricity users, not just those who charge their EVs). There are limited options for financing between the provider and the electricity distribution businesses (EDBs).
Chapter 9: Non-forestry removals	
	We support non forestry removals. We support the use of the following non forestry removal opportunities – on farm vegetation, wetlands and peatlands, blue carbon, and the removal aspect of third party CCS. To this end, we support the use of biodiversity credits and the ETS. We also support consideration of the co-benefits of non forestry removals including biodiversity, water quality improvements, adaptation and economic benefits. CCUS is a non forestry removal only in those circumstances in which the natural gas has been combusted and the carbon has been captured. CCS at the well head at an oil and gas production facility captures the carbon before combustion and is a gross reduction. In that instance it is not a non-forestry removal and should not be treated as such.

Chapter 10: Waste

10.1	Do you agree or disagree that the Government should further investigate improvements to organic waste disposal and landfill gas capture?
	☒Agree
10.2	What is the main barrier to reducing emissions from waste (in households and businesses or across the waste sector)?
	There are few incentives for landfills to capture gas currently or for captured gas to be put to most efficient use. An avoided carbon price could provide some incentive, but it would need to be greater than the costs of reducing those emissions (a biogas market solution needs to be profitable).
10.3	What is the main action the Government could take to support emissions reductions from waste (in households and businesses or across the waste sector)?
	Aside from encouraging businesses and households to internalise their emissions through small scale interventions like composting, there are opportunities to scale up landfill gas capture activities and use the ETS to encourage the most efficient use of captured gas. Two recent reports[10] on biogas provide valuable and comprehensive information on the barriers and opportunities in the New Zealand context. We support the findings in these reports.
10.4	Please provide any additional feedback on the Government's thinking about how to reduce emissions in the waste sector.
	Please see our suggestions for key actions in paragraph 76 above, and comments below in the next section on standards for low emissions fuels. We support the reduction of unnecessary red tape on the building and use of waste to energy technologies. Policy opposition to the use of such technology is antediluvian and seems predicated on the mistaken premise that the ability to use wate to generate power will encourage more waste. This is illogical.

Chapter 11: Adaptation

	See paragraphs 28-32. Natural gas is essential in the face of increasing climate impacts especially for emergency response, i.e., heating and cooking in the aftermath of climate related disasters such as Cyclone Gabrielle. The availability of natural gas in that particular instance demonstrated the value of the diversity of energy forms. Investment in energy security and resilience in New Zealand will increase New Zealand's long run productivity and decrease costs in the future.

[10] https://www.powerco.co.nz/news/industry-insights/the-potential-for-biogas-in-aotearoa and https://www.gasindustry.co.nz/assets/CoverDocument/Gas-Transition-Plan-Biogas-Research-Report-February-2023.pdf

Attachment 2: Illustrative timeline of climate policy consultations and reviews