Energy Resources Aotearoa
POWERING A BETTER NEW ZEALAND TOGETHER

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Submission on *Te hau mārohi ki anamata | Transitioning to a low-emissions and climate-resilient future: Have your say and shape the emissions reduction plan.*

Ministry for the Environment
Submitted by email to climateconsultation2021@mfe.govt.nz

Submission on Transitioning to a low-emissions and climate-resilient future

Introduction

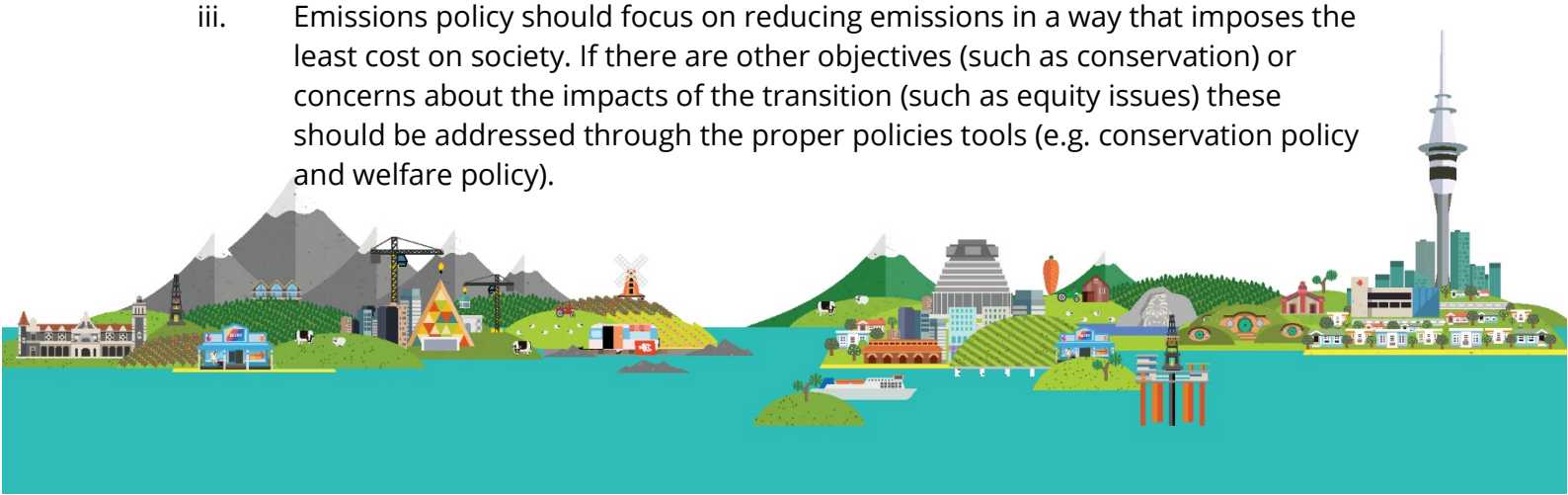
1. Energy Resources Aotearoa ("Energy Resources") represents people and firms in the energy resources sector, from explorers and producers to distributors and users of natural resources like oil, LPG, natural gas, hydrogen and biogases.
2. This document constitutes Energy Resources' submission to the Ministry for the Environment on its *Te hau mārohi ki anamata | Transitioning to a low-emissions and climate-resilient future: Have your say and shape the emissions reduction plan.*
3. Our submission outlines some scene-setting remarks and core policy principles, before responding to a range of the questions posed in the discussion document, as attached in **Appendix One**.

Executive Summary

i. We support the objective of net zero emissions. The question is not the goal but the method and pace of changed required to achieve it.

ii. The goal of the discussion document should be on reducing net emissions. Net zero is the statutory target and a focus on gross emissions is unwarranted and will lead to costly policies.

iii. Emissions policy should focus on reducing emissions in a way that imposes the least cost on society. If there are other objectives (such as conservation) or concerns about the impacts of the transition (such as equity issues) these should be addressed through the proper policies tools (e.g. conservation policy and welfare policy).



iv. We support the New Zealand Emissions Trading Scheme ("ETS") as the principal policy tool except where demonstrable market failures remain.

v. In considering further policies, cost-benefit analysis is needed, and each proposal must be carefully considered in light of the fact that the ETS has a fixed and sinking cap which will ordinarily neutralise the effects of further measures.

vi. Centrally driven policies will have higher abatement costs and face information issues. The risk of government and policy failure must be carefully considered.

vii. In relation to energy issues, the energy trilemma should be adopted as a governing framework to ensure balance between sustainability, affordability, and security of supply.

viii. Regulatory barriers to innovation and technology should be identified and addressed, including in relation to carbon capture and storage ("CCS').

ix. The risk of carbon leakage should be front of in mind. It cannot be discounted as an insignificant risk. Reducing domestic emissions in export sectors only for them to move offshore is counter-productive and domestically harmful, both economically and socially.

x. Investment decisions need stable and predictable long-term policy settings, and are compromised by plans that are subject to political risk.

xi. We support the concept of an energy strategy that is aspirational, direction-setting and not overly prescriptive. However, this needs to be complemented with an energy accord. An accord will help operationalise the goals contained in a strategy, and facilitate the investment required to unlock the smooth transition we all want.

General comments

The ETS sends price signals regardless of the complexity of economic activity

4. The most effective and credible way that policies are translated into behavioural change is through prices. To efficiently reduce emissions in our economy, price signals distil and convey complex, dispersed and dynamic information that informs action, ensuring that the most efficient abatement opportunities are realised by individuals and firms. A price systematically selects for least cost changes that reduce emissions, since a price effectively embeds a cost benefit analysis through individual choices.

5. The ETS can serve the function of including the costs of emissions into all prices in the economy included under its ambit, not just the goods and services that the government may currently think need to reflect emissions costs.[1]

[1] We briefly address the claim, occasionally made, that consumers are not switching transport choices in response to carbon pricing. Firstly, decisions are typically made at the margin so are not always particularly 'visible'. Secondly, if there is low price elasticity of demand, then that may mean lower cost abatement opportunities are being pursued elsewhere in the economy. Thirdly, if it is seriously demonstrated that consumers are not making optimal choices (to the extent that optimal choices really exist at all when viewed in aggregate) then there may be information failures to investigate and to correct, and this should be done before restrictive regulations are made.

6. Professor William Nordhaus was awarded the Nobel Memorial Prize in Economic Sciences in 2018 for his work demonstrating that carbon pricing is the most efficient tool for reducing emissions. Nordhaus found that carbon pricing:

    a. sends signals to consumers about which goods and services are more carbon-intensive;

    b. sends signals to producers about which activities are most carbon intensive (such as coal burning) and which are less carbon-intensive (like solar or wind);

    c. sends signals to propel innovation to find new, affordable alternatives; and

    d. … is the best means to convey these signals within well-functioning markets.[2]

Drastic transformation is not necessarily needed

7. Drastic change or apparent 'transformation' is not needed for significant changes in emission levels to happen over time. This means that natural gas[3] boilers, for example, need *not* be banned, but rather a price signal will mean incrementally less natural gas will be used over time and lower emitting alternatives will be employed where it is efficient to do so.[4]

8. We strongly consider that the price signal through the ETS should remain the principal tool except where exceptional circumstances and clear evidence support further measures. Policy makers, who have expressly rejected least cost as an organising principle, appear to be using climate change to pursue other objectives besides emissions reduction. In doing so, they are not making regular use of basic disciplines like cost-benefit analysis to assess ex ante performance.

9. In considering 'transformation', a concept proposed in the discussion document, it is worth keeping in mind two other concepts:

    a. the concept of 'the margin': thinking about the 'margin' (as in the outer edge) reminds us that decisions by individuals and firms often change only in incremental stages. For example, a user of a petrol car may not abandon it all together in the face of carbon prices but may drive incrementally less and walk to the local shops instead. This can seem discrete and difficult to observe at the individual level, but in aggregate the effects can be large; and

    b. the concept of diminishing returns: emissions reduction is less a question of which technology should be used but *how much should be used*. It is likely, for example, that solar will be part of the journey to net

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2 https://www.iisd.org/articles/nordhaus-nobel.

3 As opposed to other clearly labelled, and well understood gases such as hydrogen and biomethane, or biogases.

4 Given each individual faces their own 'utility function', each individual will make decisions that they understand to be efficient based on the tacit knowledge and information that they possess, and this cannot be determined centrally.

zero, as the first solar panel will reliably reduce emissions. But at some point, further investment in solar (or any other technology) will stop displacing other technologies, and its emissions benefits will cease. Centrally designed public policy will struggle to see the point at which benefits cease, due to the inherent challenges of dispersed knowledge. Indeed, this is the fundamental problem with the core organising principle of green technology policy, whereby 'more is simply better'.

The discussion document advice does not engage with the neutralising effect of the capped ETS on further measures

10. We consider it critical that emission reductions must happen at the level of the national economy, and not just in particular sectors. In considering this point, it is critical to bear in mind that New Zealand has just recently (and rightly) instituted a genuine cap and trade scheme. This emissions cap means a new and important dynamic in climate economics must be carefully considered – the 'waterbed effect'.

11. The waterbed effect is an analogy showing that under a capped system, regulations further to the ETS cannot reduce overall emissions, because 'pushing down' on one part of the 'waterbed' (through a sector-specific ban or fuel mandate for example) means that the displaced set of emissions simply 'pops up' somewhere else in the economy as the overall volume of emission units does not change.

12. This has a direct and probably unavoidable consequence for the effectiveness of other direct interventions which must be seriously and deeply considered each time another policy is proposed.

13. The fixed cap is particularly relevant to a new and emerging emphasis on reducing *gross* emissions. A focus on gross emissions with inadequate regard for the emissions cap can lead to a costly and ultimately destructive game of 'whack a mole', whereby gross emissions are hit with suppressive policies that, in addition to various unintended consequences and costs, enable units to be freed up for emission elsewhere. The result, therefore, can be much pain for little or no gain.

14. Quantification of emission reductions (and associated costs), and how they can be achieved in the context of a cap (if at all), should be clearly articulated. This is *especially* important given the apparent focus on gross emissions and the desire to suppress sectoral emissions through direct regulation.

Costs and benefits of complementary measures need to be evaluated using established New Zealand government methods

15. The costs of the policies for the transition should be fairly distributed and not loaded onto certain sectors of the economy without considering the impacts. Consumers and firms should be informed of the costs of transition in a transparent way.

16. The broad approval of, and support for, the ETS will be threatened if the costs of transition are unfair or excessive. Policy interventions need to be justified using regulatory impact analysis, as required by the Cabinet Manual and following Treasury regulatory impact guidance.[5]

17. In choosing the mechanism to reduce emissions, the choices are necessarily between imperfect instruments. What instrument is better is an empirical question that can be guided but not resolved from first principles. In considering additional policies, the following questions must be asked:

    a. what is the *specific* and residual problem to be addressed?;

    b. what are the feasible options (government and/or non-government) for achieving the desired objective?; and

    c. are the benefits of government intervention likely to outweigh the costs (including risk of government failure)?

Risks to consider when contemplating further policies

18. Alongside market failure, the government must also consider the risk of policy failure, also known as government failure in the language of public administration.[6] Extreme care must be exercised when considering regulation beyond the relatively simple policy of an ETS. Specifically, the weaknesses of political and bureaucratic institutions must be recognised and carefully considered. Too often the costs of government regulations are assessed simply in terms of direct administrative and compliance costs, but this is far too narrow.

19. In addition to the considering direct costs, transaction costs and opportunity costs of resources spent on compliance, it is crucial to consider the risks of government failure, which can occur because of:

    a. *political failure*: legislation responds to interest groups at the expense of the general public;

    b. *bureaucratic failure:* government agencies tend to advance their own interests (e.g. expanding budgets and influence) rather than addressing the original problem that warranted intervention in the first place;

    c. *judicial failure*: slow, costly and uncertain legal processes can arise from new regulations;

    d. *regulatory capture*: regulatory agencies can end up captured by stakeholders in the regulated industry; and

    e. *regulatory creep*: where additional costly regulations are needed to manage unintended consequences of the original policy).

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5 https://www.treasury.govt.nz/information-and-services/regulation/impact-analysis-requirements-regulatory-proposals.

6 Note that our use of the term government failure is not intended to convey a political judgement nor is it necessarily pejorative. We use the term in its traditional public economics and public administration sense whereby government policy can lead to a misallocation of resources.

20. The discussion document assumes that additional policies are needed and appropriate without recognising and engaging with the risks of government failure which could compromise its own preferred path of regulation.

21. If there are other market failures in relation to emissions, it must be demonstrated that these are residual and material following the primary intervention focussed on externalities (i.e. the ETS). The problem definition must be clearly articulated and then the marginal costs and benefits of intervention must be clearly demonstrated.

22. Even if there instances where further measures are justified, this is not carte blanche justification for interventions across the economy - each must be clearly justified on its merits with a high degree of confidence that net benefits will arise.

Direct emission regulations have a long history of failure and should be treated with extreme caution

23. The discussion document does not adequately consider the risks that policymakers get the particular bets on technologies and emissions-reducing policies wrong. Specific pre-determined policy settings like bans/restrictions (on new gas connections, new coal boilers and internal combustion vehicles for example) risk closing off future options, including for example biogases which could use the existing gas infrastructure.

24. The government should take lessons from other countries that have taken direct measures to reduce emissions. The case of Germany is highly instructive and should be well-known.

Central plans create complexity and lead to inefficiency, so policy failure must be considered

25. We are concerned to see the discussion document state (page 13) that:

> "Government will pull all available policy levers – emissions pricing and other incentives (for example, the Clean Car Discount), targeted regulation, direct investment in innovation and infrastructure and technology change, and tailored sectoral policy packages to drive and support the change required."

26. The number of plans and strategies proposed in the discussion document concerns us. Ones we identified include the:

    a. Emissions Reduction Plan;
    b. Treaty of Waitangi Strategy;
    c. National Energy Strategy;
    d. Circular Economy Strategy;
    e. Bioeconomy Strategy;
    f. Freight and Supply Chain Strategy;
    g. Industry Plans;
    h. Building Transformation Plan;
    i. Equitable Transitions Strategy;

j. New Zealand Rail Plan;

k. National EV Infrastructure Plan;

l. Hydrogen Roadmap; and

m. Multisector Strategy.

27. We consider that it is practically impossible to co-ordinate and successfully implement so many centrally driven strategies and plans across a whole dynamic and evolving economy. The interactions and unintended consequences cannot be predicted, and the misallocation of resources will almost certainly arise. The belief that government can overcome the economic calculation problem has even been described as 'the fatal conceit' by Professor F A Hayek, winner of the Nobel Memorial Prize in Economics.

Sectors are becoming increasingly interconnected, meaning simple signals are more important than ever

28. The economy and various markets for energy use are becoming increasingly complex and increasingly interwoven. Traditionally, transport fuel, electricity and process heat were previously quite clearly delineated by different and essentially unrelated fuel sources, but this is no longer the case and this complexity must be front of mind for policy makers. Indeed, these various sectors are now inextricably interlinked by the carbon price.

29. An example of the greater interconnection is that with increasing electrification, the electricity market is now relevant to both process heat and transport; and similarly, natural gas becomes more important for affordable electricity in terms of peaking. Another example of interconnectedness is that using natural gas or electricity for hydrogen production would put upward pressure on the prices of the fuel used for feedstock.

The risk of poor interaction of policies

30. Interventions throughout the various sectors and aspects of the economy begin to interact in ways that government cannot realistically envisage. This can lead to an intertwined set of interventions that produce unintended outcomes, and which may be too difficult to reform or repeal should they subsequently prove to be misguided.

31. It can be tempting to focus on a particular policy goal (such as increasing the share of renewables) through regulations, but this will almost inevitably have a ripple effect into other parts of the economy or energy system. Any ripple effects considered inconsistent with future government aspirations may compel these governments to intervene in the affected sectors, to "fix" the incentives and behaviours. Before long, we may end up with a nested web of interventions that are impossible to predict the effects of, and from which we may not be able to extract ourselves.

32. By way of example, the pathway the proposed approach sets us on as a country has been reasonably well foretold in the UK's Helm Report. In his key findings, Professor Helm notes that:

> "The scale of the multiple interventions in the electricity market is now so great that few if any could even list them all, and their interactions are poorly understood. Complexity is itself a major cause of rising costs, and tinkering with policies and regulations is unlikely to reduce costs. Indeed, each successive intervention layers on new costs and unintended consequences. It should be a central aim of government to radically simplify the interventions, and to get government back out of many of its current detailed roles."[7]

33. Interventionism is also more likely to have a chilling effect on commercial investment, as there becomes greater risk of other interventions impairing assets or interfering with commercial plans.

Long-term policy credibility and stability is important

34. Long-term stability, predictability, and political durability is critical given New Zealand's reliance on foreign capital and the lengthy capital-intensive developments involved in the energy sector across political cycles.

35. Without political stability behind climate policy, economic actors will likely delay making important actions to reduce emissions, or they will raise prices as risk is factored in. Neither is helpful in achieving decarbonisation.

36. The political consensus for the ETS and the fact it is well established, and at $65 per tonne without economic or social unrest, is significant. Consensus is easier to form and is more permanent around a set of rules (i.e. rules- or systems-based approach) than for a series of ad hoc policies like EV subsidies, renewables mandates etc.

37. We do not want to see a situation where we have to 'start again' when a change of government occurs. The more cross-party support in the energy sector, the more predictability it gives to energy investors who make long-term decisions. For example, of direct relevance is the recent announcements of the opposition National Party to repeal the ban on new offshore petroleum exploration and new decommissioning legislation.[8]

38. Projects started by government subsidies are particularly susceptible to political swings and changes of government. There is a real risk of stranded assets when firms are subsidised to undertake otherwise uneconomic projects, as those businesses can fold when controversial subsidies are repealed by a new government, meaning public money has been wasted and resources misallocated.[9] Care should be taken to ensure that firms are investing in

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7 Sir Dieter Helm, The Cost of Energy Review, 25 October 2017, page 8, paragraph 3.

8 https://www.national.org.nz/decommissioning-bill-another-blow-to-energy-affordability-and-security.

9 We occasionally hear concern about stranded assets in the fossil fuel sector, but providing it is private money at risk and not a result of subsidies, boards will consider long-term risks at no risk to broader society.

genuinely productive economic activity, and not simply incentivised towards 'rent-seeking' because of the availability of government subsidies.[10]

Conclusion

39. We thank for the Ministry for the Environment for the opportunity to comment on the discussion document. Although supportive of the goal of net-zero emissions, we consider the principles and approach proposed lacks rigour and does not engage with fundamental dynamics of a capped ETS, which neutralises the effectiveness of further direct regulation.

40. We recommend revising the principles and relying on the ETS except where any demonstrable and material residual market failures remain. In those circumstances, cost benefit analysis should be conducted in relation to any further proposals. In addition to considering market failures, the risk of policy failure must also be recognised and accounted for.

10 "Instead of creating wealth, a firm seeks to obtain financial gains from others through alteration/ manipulation of the environment where economic activities take place. A popular example for rent-seeking is political lobbying by companies. These are primarily done by companies in order to make economic gains through government action. This might be done by a company to get subsidy from the government for the product which it produces or increasing tariff rates by the government for its services, etc. Such a practice neither leads to creation of new wealth, nor does it benefit the society." Source: https://economictimes.indiatimes.com/definition/rent-seeking.

Appendix One: Responses to questions in the discussion document

1. This appendix responds to questions posed in the discussion document. Not all questions are answered as not all are relevant to our sector or our members.

Question 1. Do you agree that the emissions reduction plan should be guided by a set of principles? If so, are the five principles set out above the correct ones? Please explain why or why not.

2. Principles can be useful if they are used as touchstones to guide and inform thinking, although they should not be determinative as the bottom line should be policies where social benefits outweigh social costs.[1] We believe the proposed principles are not suited to the task at hand, and, instead of guiding decision-making, are vague and broad enough to justify almost any intervention that could be proposed. In addition, broad principles without a key analytical construct and their heart are not conducive to ex post accountability or analysis.

3. Our core concern is that the proposed principles are focussed enough on the heart of the climate change challenge, i.e. reducing emissions and ensuring efficient and least cost abatement. We would suggest the following principles (in no particular order) be used:

    a. **long-term stable and durable policy** – it is important that policies to help achieve the emissions transition are stable and durable. This is because the transition will take place over many decades, so individuals and businesses need to have confidence that choices they make will not be undercut by sudden policy changes. This is particularly important in the energy sector due to the high capital costs and long-term nature of many projects;

    b. **least cost abatement** – the transition will be costly, and it is important for it to happen with the least cost to community welfare.[2] Policies should ensure that *abatement* of emissions happens in a way that is the most efficient and the least destructive to community welfare;

    c. **focus on net emissions, not gross –** the statute is clear that the objective is for net *zero* emissions, i.e. gross emissions minus offsets. Net is also the scientifically relevant measure. The climate doesn't care about reductions vs removals;

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1 We suggest that standard economics be used as the governing framework, with allocative, productive and dynamic efficiency as the key goal, and that the threshold for intervention be the demonstrable presence of material market failure (externalities, monopoly, information asymmetries or public goods). In considering regulations, a full analysis of costs and benefits be made, and as a matter of course this should always include assessment of the risk of government failure.

2 We released a Perspectives note on *Why a 'least cost' approach to net zero emissions is critical* which can be found at https://www.energyresources.org.nz/dmsdocument/178.

The net *zero* emissions goal is also reflected in Article 4 of the Paris Agreement which states that:

> "Parties aim to… … achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.

The use of the term "net" in law and policy is important: it reflects the bipartisan political consensus that in some cases emissions cannot be eliminated without incurring excessive costs. It is better for society to offset these emissions with the net result for the climate being the same;

d. **technology and fuel-neutral –** associated with a net emissions focus, policies should be neutral/agnostic towards fuels and technologies and seek to achieve efficient choices without heavy normative preference imposed;

e. **energy trilemma –** the energy trilemma should be used as a supporting analytical construct when considering energy-related matters. The energy trilemma focusses thinking on the three key components of a successful energy system - affordability, reliability and sustainability. Each component is important, but trade-offs are inevitable.

   The focus should be on achieving sound and balanced energy policy and not *overemphasising* sustainability, especially to the extent that general energy policy gets used predominantly to achieve specific climate change objectives;

f. **employing optimal policy mechanisms –** a focus on net emissions means that policy should target emissions and not a multitude of other objectives. Although spin-off benefits are a bonus, emissions policy should focus solely on reducing emissions. Where non-emission matters are important, the optimal policy tool should be used. Providing direct support to people impacted by climate change or the costs of the transition has never been a purpose of the ETS and there are more effective policy tools to achieve this. If the ETS has distributional consequences that are deemed undesirable, then the state's role in redistribution can be exercised through welfare or tax policy; and

g. **remain cognisant of the risk of international competitiveness and carbon leakage** – emissions should not be reduced through closure of firms in New Zealand if activity is likely to simply relocate overseas to jurisdictions with less stringent emission policies.

   Should exporting firms close, the risk of carbon leakage arises. Although dependent on circumstances, this cannot be disregarded as a serious unintended consequence of aggressive emissions policies. Not all countries have enforced domestic emission caps. This has direct

implications for the likelihood of leakage from firms that we work with in the energy resources sector.[3]

Question 2. How can we enable further private sector action to reduce emissions and help achieve a productive, sustainable and inclusive economy? In particular, what key barriers could we remove to support decarbonisation?

4. The ETS with its fixed and sinking cap will drive emission reductions through the price signal. Government should ensure that no unreasonable regulatory barriers prevent innovation and emission reductions. We do not want or support policies that favour or especially promote particular technologies. What we seek is an even-playing field that allows fuels and technologies to find their efficient place in the economy, for example, CCS.

Barriers to carbon capture and storage

5. CCS has the potential to reduce emissions at a large scale. CCS is the process of capturing carbon emissions from large sources such as power plants and large industrial users and storing them where they cannot escape into the atmosphere. Often this is deep underground in geological formations where natural gas originally came from.

6. CCS is a good example of an emissions reduction technology that faces regulatory barriers However, the lack of an enabling regulatory framework for the use of this technology in New Zealand will dissuade investors. New Zealand academics and the Productivity Commission have already shown that the regulatory regime is a major barrier, and identified where the gaps lie.[4]

7. In New Zealand, the 8 Rivers company has proposes a zero emissions power generation plant in Taranaki. As part of its "Project Pouakai", 8 Rivers is proposing to produce electricity, urea and hydrogen fuel with zero-emissions using proprietary Allam-Fetvedt cycle technology that captures all CO_2 inherently in the production process enabling sequestration of pure CO_2. This technology has just been successfully deployed in Texas, and New Zealand should ensure its regulatory settings do not unnecessarily preclude it from happening here.[5]

8. In Europe there are number of projects underway, including in Holland and the UK, which have established decarbonised industrial clusters that seek to

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3 For example, in the scenario of New Zealand methanol no longer being produced by Methanex here due to emission pricing imposts, it is most likely that production will simply shift to China. It is likely that any reduction in the amount of Methanol produced will be picked up by other producers (potentially China). New Zealand methanol is the swing producer in the region so its closure would immediately be felt and other participants would be able to seize the opportunity to fill the supply gap

4 Barton (et al) (2013), Carbon Capture and Storage: Designing the Legal and Regulatory Framework for New Zealand: Report for the Ministry of Business, Innovation and Employment and the New Zealand Carbon Capture and Storage; Productivity Commission (2018), Low Emissions Economy: Final Report, page 449.

5 https://netpower.com/press-releases/.

consolidate emissions and send them to offshore storage.[6] The UK also hosts multiple CCS and hydrogen projects, including Acorn, which is designed to be a low-cost, low-risk CCS project that provides CO_2 mitigation infrastructure aimed at meeting the Scottish and UK Government's net zero targets.[7] Acorn recently announced Shell, Harbour Energy and Storegga have become equal partners in the Project. The Northwest of England and North Wales are seeking to develop a similar CCS and hydrogen project called HyNet Northwest.[8]

9. CCS can be the enabling technology that unlocks and enables a hydrogen economy and underpin security of gas supply by encouraging the appropriate incentives to invest in ongoing gas exploration. The lack of investment confidence was highlighted in a recent report by the Gas Industry Company.[9]

Capital barriers

10. 'Capital barriers' are commonly viewed as a barrier that Government should seek to overcome. We do not consider this to be the case, as they are just a normal part of the commercial sector and not evidence of any market failure. Costs inform where emissions can be reduced at least cost, and real economic costs cannot be avoided – subsidies or regulation just mean someone else pays it. Emission reduction projects certainly compete for internal capital, but this does not represent an actual barrier per se. The observation about competition for capital is axiomatic as everything faces competition, as all decisions involve an opportunity cost.

11. We accept that it is important that firms have information to ensure they can make informed decisions about energy but consider that firms already have the right incentives to pursue and use this information. General information can be obtained online, tailored advice can be sought from consultants, advisors and sometimes government-provided information.

Question 3. In addition to the actions already committed to and the proposed actions in this document, what further measures could be used to help close the gap?

12. An Energy Accord could be a useful tool. We cover this later in response to question 58.

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6 https://www.porthosco2.nl/en/.

7 https://www.netzeroteesside.co.uk/.

8 https://theacornproject.uk/.

9 https://www.gasindustry.co.nz/work-programmes/gas-market-settings-investigation/developing-2/final/document/7342.

Question 4. How can the emissions reduction plan promote nature-based solutions that are good for both climate and biodiversity?

13. Policies should be targeted at achieving the goal that the relevant mechanism or tool is suited to. If emissions reductions are the objective, that should be pursued in a manner that imposes the least loss of community welfare. Pursuing other objectives through emissions policy will almost certainly increase the cost of the transition. Biodiversity is a separate policy and should be achieved through biodiversity policy. Some spinoff benefits may arise, but those are merely a 'nice to have' and should not be given particular weighting except as a potential tie-breaker.

14. Climate policies should focus on reducing net emissions. Separate policies can solve biodiversity. Using climate policies to pursue non-emissions goals can only be achieved at the expense of higher emissions. Other environmental and social goals should be achieved separately.

Question 6. Which actions to reduce emissions can also best improve our ability to adapt to the effects of climate change?

15. Fundamentally, reducing net emissions at the lowest possible cost will achieve this. Income and not foregoing economic growth buys protection from the harm of climate change, so resources should not be wasted on less efficient policies.

16. The risk mitigation function that natural gas can provide in the electricity system should be taken into account. The transition to a greater share of variable renewable generation in the electricity network will occur over an uncertain timeframe. The natural gas pipeline networks mitigate resilience risks to the extent that weather-related issues affect variable renewable generation.

Question 7. Which actions to reduce emissions could increase future risks and impacts of climate change, and therefore need to be avoided?

17. Avoid prematurely moving to reliance on renewable electricity generation which is susceptible to weather issues. This would involve shifting away from a hard target of 100% renewable electricity. For this reason alone, a hard target is undesirable.

Question 20. Is there anything else you wish to share in relation to making an equitable transition?

18. As New Zealand moves towards a lower emissions economy, the energy sector will be a large part of this transition to more renewable energy and emerging industries. The energy workforce is challenged to not only meet the future skill needs of emerging industry but to also ensure its current highly skilled workforce is not vulnerable to labour market restructure.

19. In terms of skills retention, it will be important that there will be enough jobs in new areas to sustain the workforce. To help inform thinking about necessary skills development, greater consideration is needed in relation to what the new jobs and skill requirements could be and whether the education system or immigration settings are conducive to providing those skills.

20. In terms of skills transfer, it is important that existing skills in the energy resources sector are not prematurely ended through the effects of government regulations before new jobs are available in alternate firms and sectors. If a 'gap' emerges, this is negative not only for workers out of between employment but also for firms in low emissions sectors.

21. The skills in the upstream oil and gas sector will have a critical role in supporting other industries such as geothermal, hydrogen or biogas. The skills can also support increased importation of refined petroleum products if the remaining refineries in Australia and at Marsden Point close in the near term. A vibrant ecosystem of service providers is vital both to the current sector but also to the transference of skills and capabilities to adjacent sectors. If such firms cannot access skills then they will struggle to profitably operate.

Question 23. Is there anything else you wish to share in relation to government accountability and coordination?

22. If the government considers that direct interventions and regulations are justified, it needs to show the costs of its chosen path and demonstrate, through cost benefit analysis, that they are worth proceeding with. The ETS provides a transparent and universal cost mechanism for the cost of emissions throughout the economy. The proposals have not been assessed in a cost-benefit framework or exposed to proper analysis of risks.

Question 27. Is there anything else you wish to share in relation to funding and financing?

23. Rather than putting revenues into climate spending, we recommend the money directly provide tax relief to households. This would help to ensure that households are not directly worse off simply because of the carbon prices they must pay as a necessary part of the transition. It would also help to ensure durability and support for emissions mitigation as the direct burden on households will be lessened.

Question 30. Do you agree the treatment of forestry in the NZ ETS should not result in a delay, or reduction of effort, in reducing gross emissions in other sectors of the economy?

24. Planting trees is a temporary solution, but afforestation will get the country across a hump that will otherwise be very costly to cross. Foregoing or limiting afforestation will mean expensive abatement must be pursued now, even

though it is almost certain that in the future lower there will be lower cost abatement opportunities (such as through technological developments).

25. Planting trees may be a low-cost abatement option for many landowners, but only until it is not. New Zealand does not have unlimited marginal land and there are competing uses, so as the best land for pines is used up the supply of suitable land declines which pushes up the land and carbon price. This makes other abatement opportunities more attractive/competitive.

26. Even if there are some undesirable land use outcomes at the margin these can be controlled with government or council policy around land use or government purchase of the land with compensation. We note that there is no danger of *running out* of land. If we did nothing else to reduce gross emissions (extremely unlikely) and only planted trees to lower net emissions, and only planted trees on farms, by 2050 we would have covered 9% of farmland in trees. The earliest date we run out of land on the most generous assumptions is some time in the 2500s.[10]

27. A sound tool to avoid the overplanting of trees or the need for specific government land policy (assuming this is warranted) would be to enable offshore mitigation through high-quality international units, so as to provide likely lower cost abatement options than afforestation. The Climate Change Response Act 2002 has a strong presumption against the use of international units, and we consider this should change.[11]

Question 32. Are there any other views you wish to share in relation to emissions pricing?

28. See our discussion in paragraphs 4-6 in the body of this submission.

Question 58. In your view, what are the key priorities, challenges and opportunities that an energy strategy must address to enable a successful and equitable transition of the energy system?

29. We are not generally favourable of typical government strategies as they can become specific *plans* which take on the role of individuals and businesses who should plan themselves. Strategies often over-promise and under-deliver and inadequately engage with the trade-offs and costs when pursuing the stated vision. Neither do they tend to be durable across political cycles.

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10 See https://greatsociety.nz/2021/08/24/how-much-land-do-we-really-need-to-plant-with-trees/.

11 Section 5Z in Part 1B of the Climate Change Response Act states:

(1) Emissions budgets must be met, as far as possible, through domestic emissions reductions and domestic removals.

(2) However, offshore mitigation may be used if there has been a significant change of circumstance—

A.1 (a) that affects the considerations on which the relevant emissions budget was based; and

A.2 (b) that affects the ability to meet the relevant emissions budget domestically.

30. On the other hand, a sound strategy should be aspirational, and *directional* – setting a direction of travel, *after which*, and *against which* choices can be judged, but it should not be determinative or overly specific.

31. Our general concern about strategies is realised in the discussion document states on page 84 that:

> "Once the emissions reduction plan is in place, we will develop an energy strategy to consider priorities, challenges and opportunities for a successful transition."

32. This sequencing is not aligned with a strategy in the normal sense of the word and does not give us confidence in it. A sound strategy should outline, at a high level, how determined objectives can be achieved. Any plans and detail should come *after* that (although in the case of government strategies we consider that businesses and individuals should undertake the planning as opposed to government).

33. That said, we can support the Government adopting a national energy strategy, if orientated correctly and 'pitched' at the right level. Our suggestion is that such a strategy should be complemented by an energy accord. Having developed the appropriate goals, the Government should work with the energy resources sector to develop an *accord* between energy sector participants and the Government. An accord would codify a joint commitment to work together to enable and promote a vibrant and well performing energy resources sector. We distinguish this from a top-down energy strategy, and would be in the spirit of a collaborative approach similar to the Construction Sector Accord. This would provide for the close industry input and commitment needed to ensure enduring change.

34. An accord, properly developed, would create a framework and platform for government and industry to collaboratively work together to consider and address key challenges in the sector. These could include security of supply, affordability, environmental sustainability including emissions, regulatory environment, and skills and training. This very list highlights the complexity in the sector and the suitability of genuine work between businesses and government.

35. If an accord is reached, a subsequent work plan could be developed to deliver the outcomes agreed upon, perhaps timed broadly through the emission budgets to promote action on three fronts:

    a. actions from businesses;

    b. actions from government; and

    c. joint actions requiring involvement and commitment from both businesses and government.

Question 60. What level of ambition would you like to see Government adopt, as we consider the Commission's proposal for a renewable energy target?

36. Fundamentally, we consider the only target needed is the net-zero emissions one. A deeply valuable insight from the Interim Climate Change Committee was that a renewable electricity target would have perverse consequences in the broader energy system and recommended a focus on electrification of transport and process heat instead. The logic of this should be taken one step further: an energy target is not appropriate either, and the focus should be elevated to the level of the whole economy.

Renewable energy target

37. The Commission proposed a target of "60% renewable energy by 2035". The focus should be on emissions rather than fuel types or technologies. As a second-best option, if the government were to adopt any quantitative energy target (something we are generally sceptical of), the target must be about low emissions (the desired result) and not renewables (one of the inputs to achieving the desired result).

38. This is because:

    a. not all renewable generation is low emissions (for example, high-emitting geothermal fields which can produce a similar emissions footprint to natural gas-fired generation);

    b. all generation, including renewables, contains embedded emissions created throughout the asset lifecycle, and those embedded emissions should be taken into account; and

    c. hydrocarbons can be used with carbon capture and storage or other offsets to reduce emissions.

39. We understand that the Commission recommends the 60% renewable energy goal because its modelling suggests that this will happen by 2035 anyway, but the proposition of a hard target is an unnecessary one-way bet. Targets constrain optimisation and can force second best outcomes. Targets can also be a recipe for rent-seeking, whereby firms lobby government for inefficient policies or subsidies to help achieve an arbitrary goal, such as biofuel mandates which force undesired and higher cost fuels upon consumers in the hope that one day they will be economic. As stated in the BusinessNZ Energy Council 2017 Energy Briefing:

> "…targets can also make government a hostage to fortune. Mandatory targets with hard and fast plans to achieve them can easily become inflexible millstones that stifle innovation and misdirect resources."[12]

[12] Page 7 of the PDF. https://www.bec.org.nz/__data/assets/pdf_file/0009/137556/2017-Energy-Briefingsingle-pages.pdf.

40. A myopic focus on renewables could lead to costly decisions to push out fossil fuels simply to meet the 60% target even at the expense of efficiently reducing net emissions.

Renewable electricity target

41. While we support the language in the discussion document indicating that the current 100% renewable electricity target is only aspirational, we do not support a renewable electricity target. If a renewable target is to be kept at all, we would look to the Climate Change Commission's recommendation that it be replaced a goal of 95–98 per cent renewable electricity by 2030.

Question 61. What are your views on the outcomes, scope, measures to manage distributional impacts, timeframes and approach that should be considered to develop a plan for managing the phase out of fossil gas?

42. As a general principle, we do not support bans as they are blunt instruments which reduce optionality and hide the true cost of abatement. Bans may also have significant unintended consequences which cannot be easily unwound, and even if such consequences are identified, it is very difficult to reverse them in a manner that restores investor confidence if the policy is subject to party politics.

43. We prefer price signals to guide changes on the margins, and with a capped ETS our level of confidence in this strengthened.

44. The Climate Change Response Act, which should govern all climate policy, is emphatically not about phasing out oil and gas (although the industry recognises and accepts that a significant reduction is almost certainly required). Instead, the task and challenge should be to reduce emissions' impact on the environment by lowering net emissions through achieving an efficient mix of reduced use, more efficient use, improved management of fugitive emissions, offsets, and bio and geo sequestration etc.

Gas connection ban

45. We strongly oppose any policy that new gas or LPG connections should be banned by 2025 and "earlier if possible", and consider it to be the epitome of bad public policy. Officials have not established the intervention logic for such a change and appears to have ignored basic public policy analysis, and have not demonstrated with any confidence the emission reductions it would deliver.

46. It is concerning to see a substantial recommendation that forces significant change on an entire industry without any assessment of the costs and distributional impacts. Moreover, there are significant economy wide market structure and competition implications for any new business that requires a new natural gas connection. A ban will force new businesses to use more expensive and/or less effective fuels putting new entrants at a commercial disadvantage relative to incumbents.

47. What may be a good choice for one firm may not be good for another, and because information is dispersed only the firm in question can best make decisions on what technology to use.

48. A ban would threaten to destroy the value of long-lived assets that can continue to provide significant value in New Zealand through and beyond the transition. Biogas and hydrogen can be used in natural gas pipeline infrastructure, but preventing new connections will undermine the ongoing operation and maintenance of that infrastructure closing off the option of cleaner fuels. Natural gas network operator First Gas is actively looking at how the network can be used for low emission fuels. LNG, which could be imported could also use existing infrastructure and this will provide a likely safety valve in the absence of sufficient domestic gas.
