



# Submission of the New Zealand National Party to the Climate Change Commission 2021 Draft Advice for Consultation

## Summary

National supported the establishment of an independent Climate Change Commission (Commission) for the purposes of providing robust, independent and evidenced based policy recommendations to Parliament. National continues to support such a Commission.

The draft Emissions Reduction Plan produced by the Commission is not presently in a form where National could support it.

**We request an extension to the Commission's timeline so that the Commission can have adequate time to address the serious issues raised by submitters.**

The draft Emissions Reduction Plan requires New Zealand implement over 70 different policies reshaping our economy and society. Yet few of these policies are accompanied by detailed policy analysis.

In order to support the final Emissions Reduction Plan, National requires all policy recommendations to be supported by:

- Analysis on the cost of the policy and expected emissions reductions including, where possible, a cost of abatement to be calculated
- Analysis of why the emissions reductions achieved by the policy cannot efficiently be delivered by the existing Emissions Trading Scheme (which now includes a cap on emissions)
- Where applicable, analysis of how effective the policy has been when implemented overseas
- Details of how the policy would be implemented

The Commission has presented economic analysis which estimates the economic impact of achieving the proposed Emissions Budgets is less than one per cent of GDP. This is a significantly lower estimate than that provided to Parliament in the Regulatory Impact Statement on the Zero Carbon Bill.

Expert review of the Commission's economic modelling identifies the input assumptions used by the Commission as the drivers of this lower estimate.

This by itself is not an issue: there will always be different views on how technologies will develop over time. We understand that the Commission may have reached different conclusions on what assumptions to use than that of previous modelling.

However, when the advice of the Commission is heavily reliant on input assumptions a few steps are needed to provide confidence to the public and Parliament:

- The Commission needs to release the advice received that informed input assumptions. For example, we understand assumptions on EV costs were based on a consultant's report. This report should be released.
- Where costs are highly dependent on predictions of the future, sensitivity analysis is needed so that policy makers can understand the key risks to achieving emissions targets. For example, if EVs reach price parity with combustion vehicles five years later

than assumed, how does this impact the economic cost? On face value, the sensitivity analysis provided by the Commission seems to be too tight to provide valuable insights. For example, the "Tailwinds" scenario assumes price parity between EVs and petrol vehicles in 2030, while the "Headwinds" scenario assumes 2032.

A peer review of the economic modelling concluded (emphasis added),

*"Overall the results of the modelling system are heavily influenced by exogenous assumptions, whether about land use, industry survival, vehicle travel, or new technologies and their uptake. This is probably unavoidable when dealing with economic responses to something as historically unprecedented as climate change. **It does imply, however, that sensitivity analysis is crucial.**"*

National strongly agrees with this conclusion. Greater sensitivity analysis is needed in the Commission's final advice.

In addition, serious concerns have been raised by DairyNZ on how the Commission has modelled Dairy sector emissions. These are summarised in our submission below.

In light of the issues raised, we also have concern regarding the path forward from here. The Commission is required to submit its final advice to the Minister in just 2 months (31 May). We request an extension to the Commission's timeline so that the Commission can have adequate time to address the serious issues raised by submitters.

## Context

National supported the passing of the Climate Change Response (Zero Carbon) Amendment Act ("Zero Carbon Act") through Parliament.

This Act included the creation of an independent Climate Change Commission with the purposes of:

*"to provide independent, expert advice to the Government on mitigating climate change (including through reducing emissions of greenhouse gases) and adapting to the effects of climate change; and*

*"to monitor and review the Government's progress towards its emissions reduction and adaptation goals"*

Prior to the passing of the Zero Carbon Act, an Interim Climate Change Committee was established to undertake inquiries into "Planning for the transition to 100% renewable electricity by 2035" and "How surrender obligations could best be arranged if agricultural methane and nitrous oxide emissions enter into the New Zealand Emissions Trading Scheme".

The release of both reports was accompanied by extensive technical and economic analysis considering how different policy proposals would have different costs and consequences for various stakeholders or industry participants. This analysis included assessment of the cost of abatement of various policies.

For example, the 100% Renewable Inquiry found,

*"Going from 99% to 100% renewable electricity by overbuilding would avoid only 0.3 Mt CO<sub>2</sub>e of emissions at a cost of over \$1,200 per tonne of CO<sub>2</sub>e avoided. It is also likely to result in much higher electricity prices than in the business as usual future."*

This 'hard-nosed' approach presented a view contrary to the political commitments the Labour-led Government had made. While this put the Committee in an uncomfortable position, this is the reality of an institution that is truly politically independent.

National supported an independent Climate Change Commission in the Zero Carbon Act on the expectation that the Commission would provide transparent and evidence based advice, regardless of the politics of the day.

National believes that the Commission needs to take the same transparent and evidence based approach the Committee took if it is to fulfil its aims of taking the politics out of climate change policy.

## **Approach to Policy Recommendation in the Commission Report**

The Commission's draft advice lists over 70 different policies as necessary actions (Appendix 1). These range from banning most new petrol vehicles, banning new household gas connections, urgent introduction of regulation to ban new coal fired boilers, and increasing the circularity of the economy.

For these 70 necessary actions:

- No detailed design of the policy is provided to show how it could be implemented
- No costs and benefits are assessed (including transitional costs)
- No analysis of possible perverse outcomes is undertaken
- No rationale is provided for why the emissions reduction could not be achieved through the existing Emissions Trading Scheme (ETS)
- And, where applicable (such as EV subsidies) no analysis is provided for where these policies have been implemented overseas and how well they have worked

The Commission has stated that the path it recommends New Zealand take to net-zero is not the least cost path. Government policy is not required to always take the least cost option for achieving a desired outcome, but Government policy is expected to, through the Regulatory Impact Statement process, assess costs and benefits of the options available and release these to the public. This allows the public, and the Parliament, to understand the additional cost of the option chosen and why it is justified.

The Commission has not done this work, the public is not being told why a higher cost option is justified and how much extra it would cost.

The emissions reduction plan will be completed in just over 2 months and then presented to Parliament. The National Party Caucus will be faced with the challenge of discussing this package of over 70 policies and forming a view on how we respond.

The Commission must understand that it is incredibly difficult for the National Party caucus to support such a large and wide ranging package of policies that will impact people in communities all over New Zealand without an understanding of what they will cost, what benefits will arise, who they will impact, if they are needed (why the ETS can't deliver the reductions) and if the policies have worked overseas.

As drafted, the Commission's Emissions Reduction Plan puts the National Party Caucus in an impossible position. We are being asked to support 70 policies without seeing analysis of who they will impact and how much they will cost.

## ***An example of why this analysis is needed***

To take just one of the 70 policies as an example of why detailed analysis is needed, the Commission has recommended New Zealand “urgently” ban new coal fired boilers.

Such a policy may seem simple on face value. Coal fired boilers create emissions, and we have a policy goal of reducing emissions. Banning coal fired boilers is therefore a simple and effective way to stop people burning more coal.

National does not necessarily oppose this policy, we simply view the evidence that is presented by the Commission in favour of the policy as too light.

We do note that DairyNZ has said the following on the policy.

“We are concerned that the proposal to ban new coal fired boilers will reduce competition in the milk-processing sector in areas where a supply of gas is unavailable, such as in the South Island. We request that this reduction in competitive forces amongst dairy processors is included in future advice on the costs and benefits of this proposal.

“We note that the existing NZ ETS has the benefit of impacting existing processors and new entrants equally, whereas the proposed policy of a ban on new coal fired boilers only impacts new entrants.”<sup>1</sup>

The issues raised by DairyNZ justify further consideration before such a policy is listed as a necessary action: if the policy places higher costs on new entrants than existing producers, the policy may have the unintended consequence of significantly reducing competitive forces in the dairy processing sector (a sector of massive economic importance to New Zealand).

DairyNZ also point out that, should shifting dairy processing off coal be an effective way to achieve our climate change targets, the existing ETS would deliver such behaviour change as it places an emissions price on coal (and dairy processors are highly sophisticated investors who can make well-informed decisions on the lowest cost-energy option). The Commission has recommended the policy without explaining why the ETS cannot deliver the emissions reduction desired.

## ***Clearer language on policy recommendations***

### *Necessary actions*

The Draft Advice report lists over 70 “time-critical necessary actions” and “necessary actions”. The Draft Advice report also defines the “necessary actions” as “important for meeting emissions budgets” (section 1.3).

The varied language leaves us unclear if the policies recommended are necessary or simply important.

### *Policies listed in Chapter 17 of Evidence Report*

---

<sup>1</sup> <https://www.dairynz.co.nz/media/5792808/dairynz-submission-accelerating-renewable-energy-and-energy-efficiency.pdf>

Chapter 17 “The direction of policy for Aotearoa” of the Evidence Report discusses many policies qualitatively.

A number of policies are described with various terms including “needed”, “consider” and “potential policies”. These are listed in Appendix 1 and numbered 71 to 138.

Some of these policies listed in Chapter 17 have been included as “time-critical necessary actions” and “necessary actions” in the Draft Advice. It is unclear how Parliament should view the policies that are listed in Chapter 17 of the Evidence Report but not listed as necessary actions in the “Our Advice” report.

Without clarity there is a risk that, following the Commission's final Emissions Reduction Plan being presented to Parliament, there is confusion on if these further 67 policies listed in Chapter 17 are recommended by the Commission or not. More specific language is needed when policies are discussed.

A clear rationale for why some policies are viewed as necessary, some are recommended and others are listed for consideration would also enhance public understanding of the Commission's recommendations.

### **Some policies only loosely linked to climate change**

Some of the policies recommended by the Commission are only loosely linked to climate change. For example, the Commission has listed increasing the circularity of the economy and pursuing more compact urban form as “necessary” actions to achieve our emissions budgets.

These policies are only tangentially linked to greenhouse gas emissions and the evidence for why they are necessary for achieving an emissions budget is unclear.

In order to maintain a strong public licence the Commission needs to steer clear from straying into areas that are only tangentially linked to climate change.

### **Assumptions applied to economic model**

The Climate Change Commission economic modelling projects the overall cost of meeting New Zealand's targets and proposed emissions budgets to be less than one per cent of GDP. This is significantly lower than that which was estimated at the time the Zero Carbon Bill was passed. The New Zealand Institute of Economic Research (NZIER) estimated that a net-zero target accompanied by a 25 to 50 percent reduction in ‘Short lived gases’ would reduce GDP by between 11 and 12 per cent in 2050 (Table 1).

*Table 1: Economic analysis contained in Regulatory Impact Statement for Zero Carbon Bill*

<b>Scenario</b>	<b>GDP in 2050 – Baseline</b>	<b>GDP in 2050 under target scenario</b>	<b>Percentage change</b>
NZIER: Non-fungible net-zero target for long-lived gases; 50% target for short-lived gases (2019)	\$536 billion	\$473 billion	-11%
NZIER: Non-fungible net-zero target for long-lived gases; 75% target for short-lived gases (2019)	\$536 billion	\$476 billion	-12%

Climate Commission modelling of economic costs (2021)			0.3 to 0.9% of GDP
---	--	--	--------------------

Parliament finds itself in the challenging position of receiving two different estimates for the costs of the 2050 target that vary by a factor of ten, less than 2-years apart. This naturally raises questions.

Infometrics Chief Economist Dr Adolf Stroombergen undertook a peer review of the economic modelling the Commission performed. Some key insights from Dr Stroombergen are (emphasis added):

**“Exogenous assumptions are likely to be the main reason why real GDP exhibits such small changes between scenarios compared to past modelling by NZIER and Infometrics.** Even scenarios TP3 and TP4 which have ETS1 carbon prices over \$800/tonne do not see reductions in GDP of more than 1% in 2050. Other exogenous changes such as emissions from waste, a higher uptake of EVs and the disappearance of gas-fired electricity generation (from ENZ) also play a significant part in enabling the economy to adjust to those very high carbon prices at little overall cost – not much of the economy is left exposed to such prices. Without these and other changes in technology the model would likely produce larger macroeconomic effects.

*“Overall the results of the modelling system are heavily influenced by exogenous assumptions, whether about land use, industry survival, vehicle travel, or new technologies and their uptake. This is probably unavoidable when dealing with economic responses to something as historically unprecedented as climate change. **It does imply, however, that sensitivity analysis is crucial.**”*

National requests that greater sensitivity analysis is conducted over key areas that drive costs in the model, for example, the assumptions related to transport sector and dairy sector emissions.

### **Assumptions applied to electric vehicles**

The “Our Path to 2035” scenario appears to assume light passenger electric vehicles are \$56,033 in 2018, reducing to \$47,471 in 2021, \$40,588 in 2025, and achieving price parity with petrol vehicles in 2030. Light passenger petrol vehicles are assumed to be \$36,096 in all years.

It is challenging for the National Party to understand if these assumptions are reasonable. On face-value, the cost assumed for a new EV in 2021 appears to be substantially below what we would have expected. We have asked the Commission for information on how these values were derived and were informed the numbers are based off a consultant's report. We have requested a copy of this consultant's report but have not received this in time to write this submission.

We note also that the “Our Path to 2035” and the “Tailwinds” scenarios has EVs dropping from \$20,000 more expensive than petrol vehicles in 2018 to reach price parity with petrol vehicles in 2030, while the “Headwinds” (worst case) scenario has EVs reaching price parity with petrol vehicles in 2032. This appears to be an extremely narrow set of scenarios tested for what is likely to be a key driver of economic costs in the model.

### **Assumptions relating to dairy sector**

Peer review of economic models was conducted by the following experts:

- Matthias Weitzel and Toon Vandyck, European Commission, Joint Research Centre, Seville, Spain
- Dr. Adam Daigneault, University of Maine
- Dr Adolf Stroomborgen Chief Economist Infometrics
- Dr. Marc Hafstead Fellow and Director, Carbon Pricing Initiative Resources for the Future Washington, DC

All peer reviewers are highly qualified and respected. Of note however is that none of the experts selected have suitable knowledge and experience of New Zealand's pastoral agricultural sector, and the critical role this plays in modelling the economic cost of a New Zealand specific transition.

None of the expert reviewers consider the economic modelling of pastoral emissions in-depth. In fact, meat and dairy is only mentioned once in any of the peer reviews.<sup>2</sup>

The Commission's economic modelling includes a 17 per cent reduction in dairy emissions over the period 2018 – 2035. This sits alongside a 15 per cent reduction in animal numbers and 4 per cent reduction in land area, while milk production increases 1 per cent (2018 to 2035).

In other words, emissions are able to fall while milk production remains the same.

DairyNZ are highly critical of the agricultural sector modelling in their submission and in particular the assumption that milk production can remain stable while reducing emissions 17 per cent.

DairyNZ state that:

"We believe the Commission's path for agriculture is not just "pushing towards" but is beyond the limit of what we as sectoral experts are confident can be delivered. This is because the assumptions made to underpin this assessment are overstated or cannot be verified"

What is concerning to the National Party is that many of the issues that DairyNZ's highlight in their recent submission are the same points that DairyNZ raised in their February 2020 submission in response to the Commission's 'Call for Evidence'.<sup>3</sup>

DairyNZ estimate that costs of achieving the Commission's pathway to the dairy sector alone equate to between 0.98 and 1.4 per cent of GDP – estimating a higher cost from the dairy sector alone than the Commission has estimated for reductions from all sectors of the economy.

DairyNZ estimate losses in GDP from the dairy sector alone are between 0.98 % (Headwinds) and 1.4% (Our Pathway to 2035) per annum. These correspond to annual losses of \$1,665 and \$2,393 per household in 2035.

---

<sup>2</sup> Daigneault points out in his review that there appears to be inconsistency in material provided on if dairy or meat production reduces more.

<sup>3</sup> <https://www.dairynz.co.nz/media/5792810/dairynz-submission-ccc-call-for-evidence-carbon-budgets.pdf>

## Challenges going forward

As it stands today, the National Party has highly significant concerns on the efficacy of the Commission's Draft Advice. This relates to:

- 70 policies stated as necessary without sufficient supporting analysis
- Estimated economic costs that vary significantly from previous calculations – with the potential that this variation is due to the assumptions used for key sectors such as transport and agriculture
- A lack of sensitivity analysis presented to show where the key risks to the New Zealand economy will lie in pursuing the proposed emissions budget

We are concerned that the Commission now only has two months to consider submissions received and prepare final advice to the Minister. This is not long enough to address some of the very serious issues raised in submissions.

In our view, significant improvement is needed to both the economic modelling and the policy analysis the Commission has conducted to date.

National requests the Commission is given an extension to its deadline so that a robust Emissions Reduction Plan can be delivered to the Minister and presented to Parliament.

National has also sent a copy of this submission to the Minister of Climate Change reiterating this request to provide the Commission with more time to complete its work.



Stuart Smith

MP for Kaikoura

Climate Change Spokesperson

## Appendix 1: List of policies contained in Commission advice

### Listed in Draft Advice Report

#### *Time Critical Necessary Actions*

1. Government develop an Equitable Transitions Strategy that is linked to the Government's Economic Plan.
2. Place a time limit on light vehicles with internal combustion engines entering, being manufactured, or assembled in Aotearoa, other than in specified exceptional circumstances. The limit should be no later than 2035 and, if possible, as early as 2030.
3. Introduce a package of measures to ensure there are enough EVs entering Aotearoa, and to reduce the upfront cost of purchasing light electric vehicles until such time as they are cost competitive with the equivalent ICE vehicle.
4. Improve the efficiency of the light vehicle fleet and stop Aotearoa receiving inefficient vehicles by introducing an emissions target for light vehicles new to Aotearoa of 105 grams CO<sub>2</sub> per kilometre by 2028.
5. Develop a charging infrastructure plan for the rapid uptake of EVs to ensure greater coverage, multiple points of access and rapid charging, and continue to support the practical roll out of charging infrastructure.
6. Develop a long-term national energy strategy that provides clear objectives and a predictable pathway away from fossil fuels and towards low emissions fuels, and the infrastructure to support delivery.
7. Under the framework of the national energy strategy, set a renewable energy target to increase renewable energy to at least 60% by 31 December 2035.
8. Drawing on the work of He Waka Eke Noa, decide in 2022 on a pricing mechanism for agricultural emissions as is required by legislation that is suited to the characteristics of the sector and capable of supporting achievement of the emissions budgets and targets.
9. Implementing measures to incentivise establishing and maintaining at least 16,000 hectares of new permanent native forests per year by 2025, increasing to at least 25,000 hectares per year by 2030 and continued until at least 2050.
10. Requiring an appropriate forest management plan for all forests over 50 hectares defined as permanent to monitor the forest's permanence and limit exposure to risks such as climate change impacts, governance failure, and community impacts.
11. Designing a package of policies that must include amendments to the NZ ETS and land use planning rules, to deliver the amount and type of afforestation needed over time to align with our advice on the proportion of emissions reductions and removals and addressing intergenerational equity.
12. Align unit volumes with emissions budgets, taking into account the need to reduce the NZU stockpile.
13. Increase the cost containment reserve trigger price to \$70 as soon as practical and then every year by at least 10% plus inflation.
14. To maintain continuity with recent prices, immediately increase the auction reserve trigger price to \$30 as soon as practical, followed by annual increases of 5% plus inflation per year.
15. Amend the NZ ETS so that it contributes, as part of a package of policies (see time-critical necessary action 5), to delivering the amount of afforestation aligned with our advice on the proportion of emissions reductions and removals, consistent with budget recommendation 2
16. Establish a sound market governance regime for the NZ ETS as soon as possible to mitigate risks to market function, as some of these risks are potentially catastrophic for

the scheme's effectiveness. This work should be advanced through an interagency team including MBIE for its financial markets expertise.

### **Necessary Actions (specific policies only)**

17. Develop policies for creating a workforce with the skills needed for accelerating the low emissions transition.
18. Deliver specific and time-bound targets to increase low emissions public and shared transport and walking and cycling, and supporting infrastructure through strengthening the direction of the Government Policy Statement on Land Transport.
19. Significantly increase the share of central government funding available for these types of transport investment, and link funding with achieving our emissions budgets.
20. Improve mobility outcomes through measures including supporting public transport uptake nationally and locally by reducing fares for targeted groups (such as for those under 25 years of age), and improving the quality and integration of services.
21. Encourage Councils to implement first and last kilometre travel solutions in their transport networks, such as increased on-demand and shared vehicle and bike services, secure park and ride solutions at public transport, and encouraging micro-mobility options.
22. Further government encouragement for working from home arrangements.
23. As part of a policy package introduce a fiscal incentive, such as a feebate or subsidy, to reduce the upfront cost of EVs until such time as there is price parity with ICEs.
24. As part of an equitable transition, evaluate and support interventions such as leasing, hire and sharing schemes to remove barriers and address some of the upfront capital costs of EVs.
25. Investigate ways to bulk procure and ensure the supply of EVs into Aotearoa and work with the private sector to do so.
26. Evaluate how to use the tax system to incentivise EV uptake and discourage the purchase and continued operation of ICE vehicles.
27. Work with the private sector to roll out EV battery refurbishment, collection and recycling systems to support sustainable electrification of light vehicle fleet.
28. Evaluate the role of other pricing mechanisms beyond the NZ ETS, such as road pricing, can play in supporting the change to a low emissions and equitable transport system.
29. In setting these policies the Government needs to mitigate impacts for low-income households and people with disabilities, regional and remote access, and with limited access to electricity.
30. Set a target and introduce policies so that at least 140 million litres of low carbon liquid fuels are sold in Aotearoa by 31 December 2035.
31. Introduce low carbon fuel standards or mandates to increase demand for low carbon fuels, with specific consideration given to aviation.
32. Introduce incentives to establish low emissions fuel plants, such as biofuel sustainable aviation fuel, and make those fuels more competitive with traditional fossil fuels.
33. Place further emphasis on decarbonising the rail system, and establish an investment strategy and clear targets to increase the share of rail and coastal shipping.
34. Under the framework of a national energy strategy, set a date by which coal electricity generation assets must be retired.
35. Under the framework of a national energy strategy, decide how to progress solutions to the dry year problem, when this should happen, and at what cost.

36. Introduce measures, such as a disclosure regime, to reduce wholesale electricity market uncertainty over Emissions Budgets 1 and 2, to encourage investment in new renewable generation.
37. Assess whether electricity distributors are equipped, resourced and incentivised to innovate and support the adoption on their networks of new technologies, platforms and business models, including the successful integration of EVs.
38. Enable more independent generation and distributed generation, especially for remote rural and Māori communities, and ensure access to capital for this purpose.
39. Monitor and review to ensure electricity remains affordable and accessible, and measures are in place to keep system costs down, such as demand response management.
40. Urgently introducing regulation to ensure no new coal boilers are installed.
41. Introducing measures to help reduce process heat emissions from boilers by 1.4 Mt CO<sub>2</sub>e over 2018 levels by 2030 and by 2 Mt CO<sub>2</sub>e by 2035.
42. Increasing support for identifying and reporting on emissions reduction opportunities in industry, including energy efficiency, process optimisation, and fuel switching.
43. Helping people to access capital to reduce barriers to the uptake of technology or infrastructure upgrades such as boiler conversions, energy efficiency technologies, and electricity network upgrades.
44. Continuing to improve energy efficiency standards for all buildings, new and existing stock, through measures like improving insulation requirements. Expand assistance which targets low-income households.
45. Introducing mandatory measures to improve the operational energy performance of commercial and public buildings.
46. Setting a date by when no new natural gas connections are permitted, and where feasible, all new or replacement heating systems installed are electric or bioenergy. This should be no later than 2025 and earlier if possible.
47. Develop a consistent approach to estimate the long-term emissions impacts of urban development decisions and continually improve the way emissions consequences are integrated into decision making on land use, transport and infrastructure investments.
48. Ensure a coordinated approach to decision making is used across Government agencies and local councils to embed a strong relationship between urban planning, design, and transport so that communities are well designed, supported by integrated, accessible transport options, including safe cycle-ways between home, work and education.
49. Improving and enforcing measures to reduce deforestation of pre-1990 native forests.
50. Encouraging storage of additional carbon and maintaining carbon stocks in pre-1990 forests through activities such as pest control, noting that these removals may be outside of current emissions accounting approaches.
51. Evaluating approaches for storage of new and additional carbon through small blocks of trees and vegetation, noting that these removals may be outside of current emissions accounting approaches.
52. Setting ambitious targets in the New Zealand Waste Strategy for waste reduction, resource recovery and landfill gas capture to reduce waste emissions in Aotearoa by at least 15% by 2035.
53. Investing the waste levy revenue in reducing waste emissions through resource recovery, promotion of reuse and recycling, and research and development on waste reduction.
54. Measuring and increasing the circularity of the economy by 2025.
55. Extending product stewardship schemes to a wider range of products, prioritising products with high emissions potential.

56. Legislating for and funding coordinated data collection across the waste industry before 31 December 2022.
57. Extending HFC import restrictions, where feasible, to include finished products and recycled bulk HFCs by 2025.
58. Reducing leakage and improper disposal of HFCs through mandating good practice from business and technicians.
59. Ensuring that central and local government considers climate change alongside other environmental, social, economic and cultural aspects by including requirements in new resource management legislation, such as the proposed Natural and Built Environments Act, the Strategic Planning Act and the Managed Retreat and Adaptation Act.
60. Requiring government procurement policies to include climate change considerations, in order to leverage purchasing power to support low emissions products and practices, particularly with regard to third party funding and financing transactions.
61. Facilitating opportunities for iwi/Māori to participate in ownership of infrastructure or involvement in projects that align with iwi/Māori aspirations and climate positive outcomes.
62. Implement the proposed mandatory financial disclosures regime and explore the creation of a similar regime that covers public entities at the national and local level.
63. Evaluate the potential benefits of mandatory disclosure by financial institutions of the emissions enabled by loans over a specified threshold.
64. We recommend that, in the first budget period the Government facilitate a programme and direct funding to support Māori-collectives (particularly at an iwi level) to capture and record their own emissions profile within their respective takiwā. This will give effect to rangatiratanga by enabling iwi/Māori-collectives to effectively manage and monitor their emissions and enhance intergenerational planning.
65. Developing options and implementing a plan for recycling some or all of the proceeds from NZ ETS unit auctions into emissions reductions, adaptation, equitable transitions and meeting international climate change obligations.
66. Undertaking a first principles review of industrial allocation policy.
67. Continuing to phase out industrial allocation.
68. Exploring alternative policy instruments that could address the risk of emissions leakage.
69. Providing more information to reduce uncertainty about adjustments to NZ ETS settings, particularly how it intends to manage unit volumes in light of the split-gas 2050 target.
70. Clarifying the role and avenues for voluntary mitigation in Aotearoa.

### **Additional Policies listed in Chapter 17: The direction of policy for Aotearoa (Draft Supporting Evidence for Consultation)**

71. Continue activities to create 100% access to high-speed broadband internet and facilitate the nation-wide roll out of 5G mobile broadband.
72. Consider funding high-speed broadband access for lower socio-economic groups.
73. Government can lead by example by more strongly encouraging and facilitating optional working from home for roles where this can be done.
74. Government provision of incentives for employers who create and enact policies allowing optional working from home. The tax-free allowance for employees working from home introduced could be maintained permanently, for example.
75. Government leadership in the electric vehicle uptake of its own fleets (including ensuring appropriate Budget allocation for agencies) will be critical in ensuring EVs

enter the second-hand market. *(note: this policy is described as “Critical” but then not included as a necessary or time critical action?)*

76. Government and/or the private sector bulk procure and ensure the supply of electric vehicles, or underwrite the risk of sale.
77. Introduce battery refurbishment, replacement and recycling schemes.
78. Piloting leasing schemes, particularly in low income areas, to remove the upfront and ongoing running costs of owning a vehicle.
79. Direct subsidies or support for low-income households or support for car sharing schemes will be important to ensure electric vehicles are accessible for everyone.
80. Encouraging business to buy electric vehicles, by reducing or removing the fringe benefit tax for corporate fleets.
81. Introducing Zero Emissions Zones in city centres that can only be accessed by electric vehicles
82. In use benefits for electric vehicles, such as low or reduced parking charges, or in the future low or reduced congestion charging fees.
83. Targeted measures that are co-created with the disability community would be important to contribute to an equitable, accessible transport system.
84. Setting limits on the age of used imports to encourage vehicles with newer, more energy efficient technology
85. Introducing measures to shorten the lifespan of the vehicles in the fleet, such as scrappage schemes
86. Targets for increased fuel efficiency
87. Introducing measures to shift New Zealanders preferences away from larger, heavier vehicles through behavioural based actions; and
88. Differential registration and use fees for vehicles with lower emissions.
89. Early action and government support will be necessary to phase out the use of coal in low and medium temperature heat in industry by 2035.
90. Regulation should be introduced to immediately deter investment in new coal boilers *(note: this seems to contradict advice that regulation should ban coal boilers).*
91. Government could provide additional certainty to industry by signalling milestones towards 2035 for the phase out of coal use in existing boilers.
92. Demand-side measures should be introduced to reduce barriers to the uptake of low emissions technologies and develop infrastructure upgrades. This includes, for example, boiler conversions, new fuel handling and storage facilities, or grid infrastructure upgrades to distribution and transmission lines or substations.
93. Supply-side measures should also be considered as part of a bioeconomy plan and national energy strategy, to support fuel switching. Such measures could include fostering industry capability, supporting development of robust low emissions fuel supply chains, scaling up production of low emissions fuels, and timely build out of the renewable.
94. The Government plans to make large investments in state housing over the first emissions budget period. Government should leverage this investment to maximise opportunities for emissions reductions, to avoid lock in and prevent stranded assets, and to drive growth in industry capability and readiness.
95. Government should use its significant procurement power to foster integration between building designers and builders, to accelerate capacity building and upskilling, and to build demand for lower emissions materials and practices across the construction industry.
96. Upskilling across the construction industry should be backed by ongoing legislative reform, for example through the Building Code and reform of the resource management system.

97. There also needs to be more co-design of urban form and transport planning with communities to ensure that communities, particularly lower income communities, are not developed in areas most at-risk to changes in future climatic conditions.
98. Develop accessible, trusted, information hubs on emissions reduction measures for farmers. Such hubs can provide farmers with tools and resources to help them measure and manage emissions, as well as support services to implement changes.
99. Co-develop with farmers training and farm extension services that provide opportunities for farmers to share knowledge and experience. This should include specific training and extension services co-developed with and for iwi/Māori landowners.
100. Provide technical and financial support for the development of training and accreditation schemes to ensure farmers have access to advice from credible, impartial advisers and rural professionals who understand how emissions mitigation practices work in different farm contexts.
101. Accelerate and provide further resource to support the development of farm environment plans that consider greenhouse gas emissions on-farm alongside other environmental outcomes, and traditional business outcomes.
102. Continue to invest in farm system modelling to support good decision-making.
103. Providing, facilitating or supporting the provision of concessional farm finance for investments that lead to emissions reductions.
104. Measures are also needed to support landowners who want to diversify some of their land to lower emissions activities.
105. Encouraging cross-sectoral thinking and collaboration by government agencies and sector bodies, or the development of pan-sector governance structures for the primary industries.
106. Investing in market development and infrastructure for new and emerging low emissions agricultural products.
107. Verification of the emissions footprint and broader sustainability of products, including through approaches like certification and product labelling, can help to support market access for low emissions food products.
108. Investing in demonstration projects to experiment with novel technologies, practices and land uses to reduce emissions (eg, using Pāmu farms for demonstration projects).
109. Identify and address regulatory and market barriers to the early adoption of new methane reduction technologies, so they can be widely adopted when commercially available. This should include streamlining the regulatory process for novel products to reduce emissions and making this process clear for companies to bring products to market.
110. Develop carbon monitoring systems that enable tracking of sequestration from different types of vegetation, smaller blocks or dispersed areas of trees, and develop mechanisms to reward this either inside or outside of the NZ ETS.
111. Establish and provide ongoing funding for pest control activities to ensure the carbon stocks in permanent forests are preserved.
112. Provide financial incentives or subsidies to help reduce the costs of establishing and maintaining native plantings. This could include, for example:
  - a. Extending grant schemes such as One Billion Trees, or providing targeted grants for native planting, fencing and predator control to facilitate reversion;
  - b. Results based finance for native afforestation (e.g. nature forest bond scheme);
  - c. Develop ways to recognise wider ecosystem services, which could reward the other environmental benefits of native forests (e.g. biodiversity).
113. Update the NZ ETS lookup tables for a wider range of native species;

114. Ensure the Crown works in partnership with iwi and other relevant Māori-collectives to understand their aspirations for land use, and understand specific barriers to afforestation that iwi/Māori landowners face.
115. Develop management plans for large permanent forests to protect and enhance carbon stocks and other benefits of these forests, and reduce the risks they are exposed to such as pests, disease and climate change impacts. The plan should also consider the community impacts of these forests.
116. Introduce a limit on the amount of forestry units that non-forestry NZ ETS participants can surrender.
117. Alter the amount or rate at which forestry units are allocated -for plantation forestry in the NZ ETS so that they earn less overall.
118. Use resource management instruments or reforms to manage land use conversion to forestry – for example, restrict extensive land use change in some regions, and remove existing limits in others to allow forestry. This option would help to control the amount of forestry that happens in a particular location, and could be used to address concerns about the impacts of whole farm conversion to forestry or impacts on rural communities in some regions.
119. Capacity building and extension services for landowners focused on integrating trees or forestry onto farms as diversification rather than wholesale farm change, to limit the impacts of afforestation on rural communities.
120. Investigate approaches for promoting a native forest industry.
121. Introduce measures to increase domestic timber demand, for example by changing building policies to stimulate the wood processing industry and increase the value chain employment of forestry.
122. Uphold [Government's] obligations under the Te Tiriti o Waitangi and initiate a broad process to understand iwi/Māori perspectives on CCS and BECCS.
123. Take action to develop a better understanding on the geophysical potential and suitability of CCS and BECCS approaches in Aotearoa. This could include:
  - a. Staying informed of global developments in CCS technologies and applications, and broadly assessing their relevance and applicability to Aotearoa;
  - b. Investigating the potential and suitability of depleted or producing oil and gas fields in the Taranaki region for carbon storage; and
  - c. Researching the nature of skills, capabilities and workforce required to support the development and implementation of CCS and BECCS approaches, such as those in forestry, oil and gas, and geothermal energy.
124. Develop information and support materials for producers and consumers on how to reduce waste at source, for example through targeted campaigns around the impact of waste.
125. Encourage innovation in technology and processes through investment in designing out waste and resource efficiency.
126. Remove structural barriers that prevent waste reduction at source for example by mandating the reparability of goods and machinery.
127. Timely development, deployment and scale up of the mandatory product stewardship scheme under the Waste Minimisation Act to improve end-of-life recovery and destruction of HFCs.
128. Support workforce and end user education and safe practises. This includes technician training and licensing around monitoring, minimising equipment leakage, and improving disposal practices.
129. Measures to reduce the upfront capital cost of switching to low GWP compatible equipment.

The following policies are listed as “for example”

130. Develop a coordinated national strategy and timeline for increasing resource recovery with the aim of increasing the waste recovery rate in Aotearoa.
131. Increase investment in the resource recovery sector – including infrastructure, knowledge base, technology to ensure Aotearoa has a fully modern resource recovery sector from collection to sorting to processing to recovery.
132. Shift the burden of resource recovery away from communities and nature to manufacturers, importers and retailers through increasing the use of regulated product stewardship schemes.
133. Ensure that pricing of waste encourages resource recovery, for example by increasing the waste levy and ensuring it applies at all landfill sites, and by ensuring the NZ ETS applies to all disposal sites.
134. Encourage the use of recovered material to create demand for products, for example by using financial incentives or regulation to support the use of waste compost on farms.
135. Ensure consistent access to appropriate feedstock to enable resource recovery sector. This could be done, for example, by mandating recovery targets from landfill and introducing measures to encourage source separation to reduce contamination.
136. Introduce regulation to prohibit organic waste from being sent to landfills that do not have gas capture systems or incentivise gas capture at landfills without gas capture systems
137. Introducing measures to encourage best practise LFG management, including across a wider range of disposal sites (e.g. closed landfills, non-municipal landfills). This could include regulation that mandates non-municipal and legacy sites to capture LFG gas.
138. Require comprehensive audits of LFG capture systems to ensure they are up to standard.