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Zero Carbon Bill

Consultation Submission

 **Generation Zero**

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Introduction

Generation Zero

Generation Zero is a non-partisan, youth-led climate organisation that champions solutions towards a carbon neutral Aotearoa.

Generation Zero is currently calling for all political parties to support the introduction of a Zero Carbon Act. We believe a Zero Carbon Act, backed by cross-party agreement, is the most urgent and important law our current Parliament could legislate. It would introduce direction, certainty and accountability to New Zealand's climate change strategy, and drive a fair and cost-effective transition towards a thriving and resilient zero-carbon future.

Campaign for a Zero Carbon Act

Generation Zero started developing the Zero Carbon Act back in 2016. The idea was to put New Zealand on track to zero carbon by 2050 or sooner, based on the UK's successful Climate Change Act. Generation Zero - together with many other organisations - has been calling for a framework like this for many years. But rather than wait any longer, we decided to take it upon ourselves to develop a fully-formed concept.



In 2017, after a year of research and input from climate change experts, Generation Zero released a Zero Carbon Act policy blueprint. Since then, the Zero Carbon Act concept has gained widespread support across New Zealand.

We want to thank the thousands of individuals, businesses and organisations who have contributed to getting the Zero Carbon Act this far.



Now we need your help to make the Zero Carbon Act a reality in its strongest possible form. Whether you are a student, parent, worker, business owner, or Member of Parliament, we are all, ultimately, citizens of the same planet.

It's time to get our act together on climate change.

Submission overview

This paper contains our responses to the questions in the Government's Zero Carbon Bill consultation document, *Our Climate Your Say*. Our submission is comprised as follows:

- Executive Summary
- Part I: Zero Carbon Act framework
- Part II: Target, budgets, policy plans
- Part III: Climate Change Commission
- Part IV: Adapting to the impacts of climate change

We are considering these issues on an ongoing and iterative basis. In the months ahead, we will be undertaking further research and releasing more material about the ideal form of the Zero Carbon Act. We would welcome the opportunity to meet in person with the Ministry for the Environment to discuss the content of this submission and the Zero Carbon Bill. Please do not hesitate to contact us.



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Executive Summary

This part summarises our responses to the Government's *Our Climate Your Say* discussion document. We address all of these points in more detail elsewhere in our submission.

Part I: Zero Carbon Act framework

Generation Zero believes the Zero Carbon Act should be based on four core principles:

- Fairness
- Cost-effectiveness
- Comprehensiveness
- Environmental sustainability

It must also reflect a commitment to Te Tiriti o Waitangi. It is imperative that the Government works in partnership with iwi and hapū to develop the Zero Carbon Bill.

We submit that these principles are not highlighted strongly enough in the discussion document. These principles should drive the Zero Carbon Bill's development, and be the starting point of every conversation about New Zealand's long-term climate change strategy. For a detailed explanation of these principles, see Part I: Zero Carbon Act framework.

Part II: Target, budgets, policy plans

Q1. What process should the Government use to set a new emissions reduction target in legislation?

Generation Zero supports setting a 2050 target in legislation now. We are calling on all Members of Parliament to build political consensus around an ambitious, legally binding, long-term target in the Zero Carbon Act. Setting a consensus-based target in legislation now will promote political accountability, clarity, and long-term certainty.

There are, however, some good reasons to seek advice from the Climate Change Commission about complex aspects of the long-term target. For example, it would be valuable to ask the Commission for expert advice on the target level for short-lived greenhouse gases within the overarching net zero target.

Q2. If the Government sets a 2050 target now, which is the best target for New Zealand?

We support the most ambitious option in the discussion document: net zero emissions across all greenhouse gases by 2050, based on a 'two baskets' approach (explained below). We submit that:

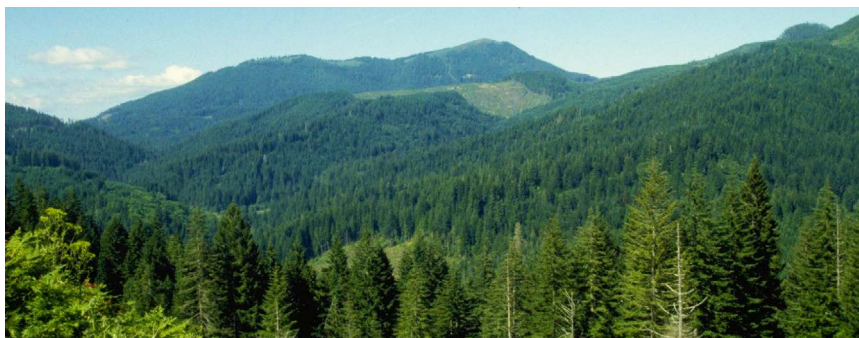
- All greenhouse gases, including methane, must be significantly reduced.
- New Zealand should take a science-based approach to ensure our emission reduction efforts are as impactful as possible.

A science-based approach means:

- Minimising cumulative emissions and gross emissions; and
- Distinguishing between long and short-lived greenhouse gases.

Cumulative emissions

A science-based approach means recognising that New Zealand's contribution to stopping global warming is actually determined by our cumulative emissions between now and the 2050 target. Cumulative emissions must be minimised. For example, reducing emissions in the 2020s is more impactful than delaying action until the 2030s.



Gross emissions

A related issue is the extent to which New Zealand should be able to rely on 'net' carbon offsets (such as forestry) to meet the 2050 target, as opposed to reducing our actual 'gross' emissions. We submit that New Zealand's climate change response should focus on gross emission reductions, particularly in the 2020s and 2030s.¹ One option here is to complement our net emission targets with gross emission targets or offset caps.

Two baskets approach

A science-based approach also means recognising the difference between long-lived greenhouse gases (such as carbon dioxide and nitrous oxide) and short-lived greenhouse gases (such as methane). Short-lived gases do not need to be reduced all the way to net zero to stop temperature rise; they need to be reduced and then stabilised. Long-lived emissions, however, will continue contributing to global warming until they are reduced to net zero.

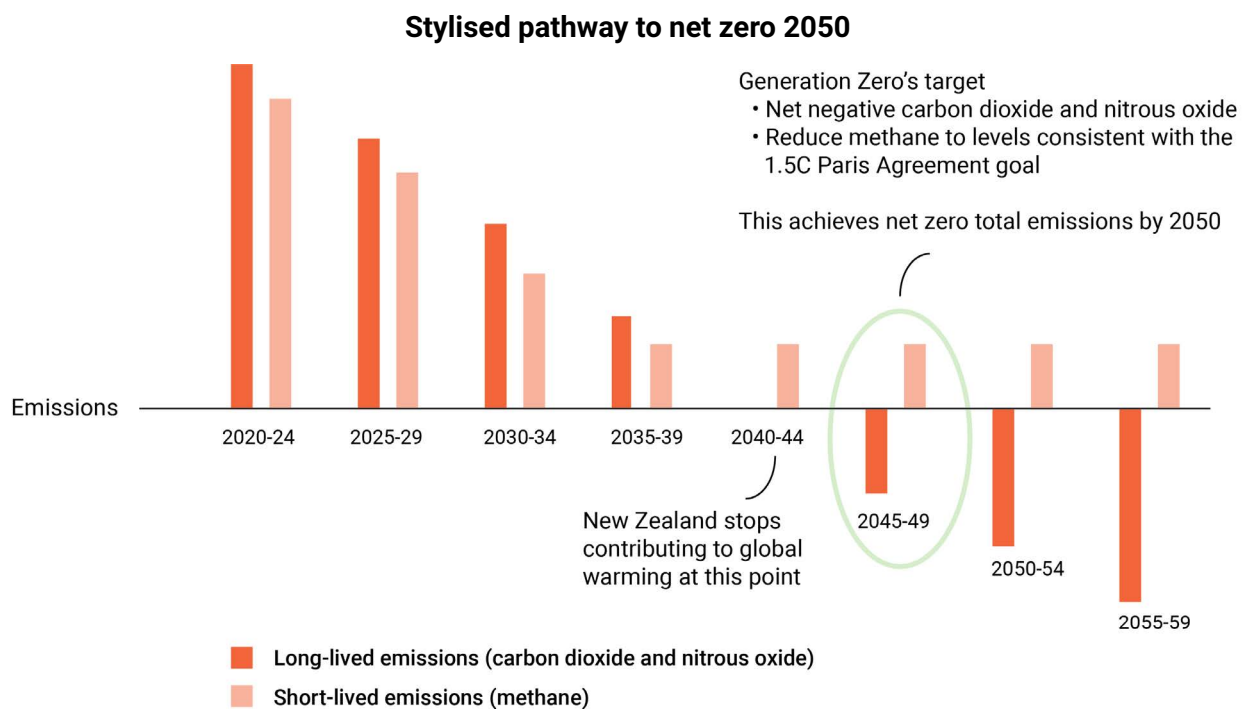
Our proposed policy to distinguish between these gases is known as the 'two baskets' approach. Applying a two baskets approach to a net zero 2050 target would mean:

- **Long-lived basket:** Achieving *negative* long-lived emissions by 2050, by reducing emissions and absorbing more carbon through forestry (and other carbon sinks) than we are emitting.
- **Short-lived basket:** Significantly reducing short-lived gases to a level consistent with the 1.5°C goal in the Paris Agreement.

These two baskets would balance out to net zero across all gases. This science-based pathway is more ambitious and impactful in the sense that New Zealand would cease contributing to global warming prior to 2050 (i.e. the date at which our long-lived basket reaches net zero, and the short-lived basket is significantly reduced to our defined target level).

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1. Carbon offsets will become increasingly significant later on to offset emissions from sectors where gross emissions cannot be entirely eliminated (such as various industrial processes), and to drive New Zealand's net account into negative emissions. Neither of these factors detract from the initial importance of rapidly reducing gross emissions.



Q3. How should New Zealand meet its targets?

The Zero Carbon Act should be met through domestic emissions reductions only. We call this the 'firewall' principle. It means the 2050 target cannot be met by trading international carbon credits.

Q4. Should the Zero Carbon Bill allow the 2050 target to be revised if circumstances change?

The 2050 target should only be revised following a significant change in scientific knowledge or international law (such as the Paris Agreement becoming more ambitious). Any revision should require input from the Climate Change Commission and approval by Parliament.

Q5. The Government proposes that three emissions budgets of five years each (ie, covering the next 15 years) be in place at any given time. Do you agree?

Yes. Legally-binding emission budgets, set 10-15 years in advance so that 3 budgets are in effect at all times, at a level recommended by the Climate Change Commission and approved by Parliament, are a cornerstone of the Zero Carbon Act.

Q6. Should the Government be able to alter the last emissions budget (ie, furthest into the future)?

No. Budgets should only be revised in exceptional circumstances. It is not appropriate for a new government to 'have a say' on an upcoming budget which has already been set.

Q7. Should the Government have the ability to review and adjust the second emissions budget within a specific range under exceptional circumstances?

Under exceptional circumstances, yes. For example, it might be appropriate to change an upcoming budget after an extreme natural disaster (such as a major earthquake). Any revision should require input from the Climate Change Commission and approval by Parliament.

Q8. Do you agree with the considerations we propose that the Government and the Climate Change Commission take into account when advising on and setting budgets?

Generation Zero generally agrees with the proposed list of considerations to take into account when setting emission budgets. Most importantly, the emission budget must be consistent with a fair, cost-effective, environmentally sustainable pathway to the 2050 target.

Q9. Should the Zero Carbon Bill require Governments to set out plans within a certain timeframe to achieve the emissions budgets?

Yes. The Government should be required to set out its policy plans within 6 months of an emission budget being set.

Q10. What are the most important issues for the Government to consider in setting plans to meet budgets?

The Government's policy plans to meet emission budgets should be comprehensive, fair, cost-effective, environmentally sustainable, and honour Te Tiriti o Waitangi. For a detailed explanation of these principles, see Part I: Zero Carbon Act framework.

Part III: Climate Change Commission

Q11. The Government has proposed that the Climate Change Commission advises on and monitors New Zealand's progress towards its goals. Do you agree?

Yes. Generation Zero supports the Climate Change Commission having two functions: (a) providing expert advice, and (b) monitoring our progress and holding the Government to account. The Commission should not be a decision-making body, for the following reasons:

- **Democratic accountability:** Elected officials should be ultimately responsible for making plans and meeting Zero Carbon Act targets. The Commission is not democratically elected or accountable to the public.
- **Compromised watchdog:** A Commission with decision-making powers would have a conflict of interest in holding itself to account over its own policy decisions.
- **Comprehensive policy plans:** Transitioning to a zero carbon economy will require coordinated policies across all sectors of the economy. Delegating some decision-making powers to the Commission (such as ETS settings) risks these policies being made without properly coordinating with policies elsewhere.

Q12. What role do you think the Climate Change Commission should have in relation to the New Zealand Emissions Trading Scheme (NZ ETS)?

The Commission should only advise on ETS settings; it should not make final decisions.

Q13. The Government has proposed that Climate Change Commissioners need to have a range of essential and desirable expertise. Do you agree with the proposed expertise?

Generation Zero generally agrees with the proposed list of expertise. We submit that expertise in public health should also be included.



Part IV: Adapting to the impacts of climate change

Q14. Do you think the Zero Carbon Bill should cover adapting to climate change?

Yes. Generation Zero supports the inclusion of adaptation (this means addressing the impacts of climate change, such as droughts and sea level rise) in the Zero Carbon Act. The Climate Change Commission should contribute its expertise to our adaptation response.

Q15. The Government has proposed a number of new functions to help us adapt to climate change. Do you agree with the proposed functions?

Yes. Generation Zero supports the Government being required to prepare a national climate risk assessment, and a national policy plan to address these risks.

Q16. Should we explore setting up a targeted adaptation reporting power that could see some organisations share information on their exposure to climate change risks?

Yes. Generation Zero supports introducing a mandatory adaptation reporting power.

Part I: Zero Carbon Act framework

This part of our submission sets out overarching considerations for the design of the Zero Carbon Act.

Core principles

The Zero Carbon Act should be premised on the following core principles: fairness, cost-effectiveness, comprehensiveness, and environmental sustainability. It must also reflect a commitment to Te Tiriti o Waitangi.

We submit that these principles are not highlighted strongly enough in the Government's discussion document. These core principles should drive the development of the Zero Carbon Bill, and underpin every conversation about New Zealand's long-term climate change strategy. They should also be drafted into the Zero Carbon Act itself to shape how statutory powers of decision are exercised.

- **Fairness** means giving effect to equity considerations, such as intergenerational justice and the principles of a 'just transition'.² In practice, this means ensuring that vulnerable communities are supported, that there is a just transition for workers in industries where job losses will occur, that the government plays a leading role in the creation of low-emission jobs, and that clear signals are given as early as possible to enable communities and businesses to plan for the impact and opportunities of emission reduction policies, as well as the effects of climate change, such as sea level rise.
- **Cost-effectiveness** means adopting long-term strategies which minimise cost and maximise benefits for New Zealanders. In particular, this means setting targets and plans that avoid passing the cost of transition to young and future generations.
- **Comprehensiveness** means taking an economy-wide approach to New Zealand's emission reduction and resilience strategy. The strategy must encompass all sectors, drive coordinated decision-making and analysis across government, and be sufficiently funded and resourced.
- **Environmental sustainability** means considering the holistic environmental impact of climate change policies, not only the extent of greenhouse gas reductions.

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2. 'Just transition' is a phrase often invoked yet seldom understood. It refers specifically to a framework that has been developed by the global trade union movement to encompass a range of social interventions needed to secure workers' jobs and livelihoods when economies are shifting to sustainable production. On 19 June 2013, the International Labour Organization adopted a *Resolution concerning sustainable development, decent work and green jobs*. For a New Zealand perspective on these issues, see generally Council of Trade Unions, *Just Transition: A Working People's Response to Climate Change* (2017).

Honouring Te Tiriti o Waitangi

Generation Zero strongly believes that the Zero Carbon Act must honour Te Tiriti o Waitangi by giving effect to meaningful partnership between iwi and the Crown. The Zero Carbon Act’s targets and policies must be made consistently with the tino rangatiratanga of iwi and hapū, as enshrined in Te Tiriti. We believe that our climate change response must be informed by tikanga Māori, Māori worldviews towards climate change, and other Māori interests.

There needs to be clear processes through which Māori perspectives are gathered and incorporated into a just transition to a zero carbon economy. These processes should take into account the variation of views in amongst iwi and hapū. The incorporation of local indigenous knowledge, and localised engagement with iwi and hapū (as well as rāwaho), should be fundamental to the consideration of Māori perspectives under the Zero Carbon Act.³ These ongoing processes need to be transparent and well communicated to the wider community in order to provide effective engagement with tangata whenua.⁴

It is also imperative that the Government works in partnership with iwi and hapū to develop the Zero Carbon Bill. Throughout this development process, the Government must undertake meaningful consultation with Māori on climate change issues, fulfil its duty under Te Tiriti to actively protect Māori rights and rangatiratanga over their own interests, and recognise that tangata whenua will be disproportionately affected by the impacts of climate change.

Given the intended scope and multi-decade lifespan of the Zero Carbon Act, we support active consideration of its role in a Tiriti-centric constitutional transformation of Aotearoa New Zealand going forward.⁵

Importance of a well-designed, long-term framework

Climate change is bigger than politics. We need political parties to work together and look beyond election cycles. To date, New Zealand’s climate change response has been incoherent and inadequate. A long-term legal framework will help to ensure that New Zealand’s transition to a resilient, zero carbon economy occurs by the fairest, and most cost-effective and sustainable pathway possible.

Generation Zero agrees with the Parliamentary Commissioner for the Environment and the Productivity Commission that the UK’s Climate Change Act 2008 provides a useful model for developing a strong legal framework in New Zealand. We also agree that the UK model must be appropriately tailored to suit the New Zealand context. This approach has underpinned the development of our Zero Carbon Act policy blueprint to date.

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3. Tawhai, V. M. H. “Rāwaho: In and out of the Environmental Engagement Loop” (2010) In *Māori and the Environment: Kaitiaki*, edited by Selby, R., Moore, P. & Mulholland, M. (Huia Publishers), 77–94.
4. Roberts et al. “Kaitiakitanga: Maori Perspectives on Conservation” (1995) *Pacific Conservation Biology*: 2(1). Surrey Beatty & Sons: 7–20.
5. See generally *He Whakaaro Here Whakaumu Mō Aotearoa*, The report of Matike Mai Aotearoa, The Independent Working Group on Constitutional Transformation (2016).

We note that the UK model has been adopted in numerous jurisdictions around the world. Several of these jurisdictions, including the UK,⁶ are currently reviewing their legal frameworks to ensure they remain fit-for-purpose in a post-Paris Agreement world.

These overseas developments should inform the development of the Zero Carbon Act. The Scottish Climate Change Act 2009, for example, has recently been updated to increase the ambition of its 2050 emission reduction target from 80% to 90%, alongside a new mechanism for setting a net zero target.⁷ Other changes to the Scottish Act include a presumption that their 2050 target will be met entirely with domestic emission reductions, without the use of international carbon credits.⁸



We submit that a well-designed Zero Carbon Act, based on the UK model, and backed by cross-party support, will promote the following interrelated outcomes:

- **Accountability:** The mandatory duties and legally-binding targets in the Zero Carbon Act, combined with the oversight provided by the Climate Change Commission, will ensure that the Government is held to account politically and legally. Accountability drives action and promotes certainty. It must be a central pillar of New Zealand's climate change response.
- **Long-term certainty:** The long-term focus of the Zero Carbon Act is valuable for two reasons. The first is to provide communities and businesses with the certainty they need to:
 - plan ahead;
 - take up opportunities created by a zero carbon economy;
 - invest with confidence in low emission options;
 - take complementary steps to reduce emissions; and
 - understand what New Zealand's transition to a zero carbon future will mean for them.

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6. Climate Change News "UK will legislate net-zero carbon emissions target, says minister" (17 April 2018); for a recent assessment of the UK model, including suggested areas for improvement, see Grantham Research Institute, *10 years of the UK Climate Change Act* (April 2018).

7. Climate Change (Emissions Reduction Targets) (Scotland) Bill 2018; see also Scottish Government, *When to Set a Net-Zero Greenhouse Gas Emissions Target Year: Information and Analysis to support discussion of the Climate Change (Emissions Reduction Targets) (Scotland) Bill* (May 2018).

8. Climate Change (Emissions Reduction Targets) (Scotland) Bill 2018, sections 13-15.

- **Policy coherence:** The second benefit of a long-term focus is to drive better policy-making. The cost/benefit analysis of policy options differs depending on the timeframes and objectives being considered. Without the long-term lens of a Zero Carbon Act, we run the risk of ineffective policies and decisions that prioritise cost-avoidance in the short term. Kiwirail’s decision to replace its electric trains with diesel trains, for example, is a product of perverse short-term thinking. Decisions like this undermine emission reductions elsewhere. The long-term focus of the Zero Carbon Act will allow us to:
 - develop a coherent policy pathway that drives emission reductions over both the short and long-term, which will be fairer, more cost-effective, and less disruptive overall;⁹
 - better identify and reap the co-benefits of transitioning to a zero carbon economy;
 - send more accurate signals to the market to avoid stranded assets and inefficiencies; and
 - ensure New Zealand’s climate change response is coordinated across government and all sectors of the economy.
- **Expertise:** Establishing an independent Climate Change Commission with expertise in a range of relevant areas (including climate science, te ao Māori, technology, and agriculture) will drive our transition to zero carbon by promoting evidence-based policy pathways, and preventing New Zealand’s long-term climate strategy from being waylaid by political short-termism.
- **Transparency:** The Zero Carbon Act will promote transparency through emission budgets and policy plans being set well in advance, and through reporting duties such as emission forecasts and progress reports. Transparency promotes clarity, public engagement, and accountability.

The Zero Carbon Act will need to be carefully designed to give full effect to its core principles, to honour Te Tiriti o Waitangi, and to realise the outcomes listed above. In the three remaining Parts of this submission, we set out our design recommendations for the Zero Carbon Act.

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9. It is by looking ahead and planning backwards that we can most effectively drive action in the near-term. Urgent action is paramount. Indeed, both the Productivity Commission, and the Government’s economic models prepared for the *Our Climate Your Say* consultation, highlight (a) the risks, and (b) the additional cost of delaying New Zealand’s transition to a zero carbon economy.

Part II: Target, budgets, policy plans

2050 target

Q1. What process should the Government use to set a new emissions reduction target in legislation?

- *The Government sets a 2050 target in legislation now*
- *The Government sets a goal to reach net zero emissions by the second half of the century, and the Climate Change Commission advises on the specific target for the Government to set later.*

We should set a target in legislation now. Generation Zero is calling on all Members of Parliament to build political consensus around the direction of New Zealand's climate change response and commit across the House to an ambitious, legally binding, long-term target in the Zero Carbon Act. The target should be net zero total greenhouse gases by 2050, based on a two baskets policy approach. See our response to Question 2.

The UK Climate Change Act, which was championed by the Conservative Party and commits the UK to an 80% emission reduction by 2050, passed its Third Reading in 2008 with overwhelming cross-party support: 463 Ayes to 3 Noes. In light of the UK experience, we believe that setting a consensus-based target directly into legislation will promote political accountability, clarity, and long-term certainty in New Zealand. This is the optimal outcome.

Waiting for advice from the Climate Change Commission about the overarching target risks drawing out an interminable period of uncertainty after the Zero Carbon Act takes effect. However, in the event that it is deemed necessary for Parliament to obtain expert advice before settling on a 2050 target, this should ideally happen prior to, or as soon as possible after, the enactment of the Zero Carbon Act. One option here is to pivot the focus of the Interim Climate Change Committee to begin considering this issue immediately.

Further to setting a 2050 target by consensus, Generation Zero submits that there are complementary targets and issues where it would be particularly valuable to seek expert advice from the Climate Change Commission. These include:

- New Zealand's 'cumulative budget'.
- Gross emission targets (or offset caps).
- A quantitative target for short-lived greenhouse gases.
- Optimal framework settings for a two baskets policy approach, such as the rules for forestry and other offsets.

See our response to Question 2 for more details. It is important to recognise that these complementary targets and issues are closely interrelated. To be clear, we submit that an overarching net zero 2050 target should be set in legislation now, but that all of these interrelated issues must be carefully considered together. For some of these issues, it may prove valuable to undertake a process which allows for expert input from the Commission.

Q2. If the Government sets a 2050 target now, which is the best target for New Zealand?

- Net zero carbon dioxide: Reducing net carbon dioxide emissions to zero by 2050*
- Net zero long-lived gases and stabilised short-lived gases: Long-lived gases to net zero by 2050, while also stabilising short-lived gases*
- Net zero emissions: Net zero emissions across all greenhouse gases by 2050.*

Generation Zero supports the most ambitious option in the discussion document: net zero total emissions by 2050, based on a two baskets policy approach. We submit that:

- All greenhouse gases, including methane, must be significantly reduced.
- New Zealand should take a science-based approach to ensure our emission reduction efforts are as impactful as possible.

A science-based approach means:

- Minimising cumulative emissions and gross emissions; and
- Distinguishing between long and short-lived greenhouse gases.

Cumulative emissions

Setting a net zero 2050 target is not sufficient to determine New Zealand’s contribution to stopping global warming - what matters is the total cumulative emissions released between now and then.¹⁰ A transition pathway which prioritises steep emission reductions in the 2020s is considerably more impactful than a plan which delays action until the 2030s.

The Zero Carbon Act should recognise the importance of minimising cumulative emissions by (a) including this factor as a mandatory consideration when setting emission budgets; and (b) requiring the Climate Change Commission to provide advice on this issue. We support active consideration of further mechanisms, such as tasking the Commission with calculating New Zealand’s ‘cumulative budget’,¹¹ and using this to inform our emission budgets and policy plans.

Gross emissions

A related issue is the extent to which New Zealand should be able to rely on carbon offsets (such as forestry) to meet the 2050 target, as opposed to reducing gross emissions. Generation Zero submits that a concerted focus on gross emission reductions must underpin New Zealand’s climate change response, particularly in the 2020s and 2030s.¹²

Over-reliance on offsets is contrary to the principles of fairness and cost-effectiveness, because it essentially shifts the burden of mitigating gross emissions to future generations, at an increased cost.¹³

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10. Cumulative emissions relate to long-lived greenhouse gases. For short-lived gases, New Zealand’s contribution to global mitigation is determined by reductions to our ongoing flow rate by the time of global ‘peak warming’.

11. We submit that New Zealand’s ‘cumulative budget’ would comprise our share of the remaining global carbon budget, taking into account equitable considerations and acknowledgment of New Zealand’s historical emissions.

12. Carbon offsets will become increasingly significant later on to offset emissions from sectors where gross emissions cannot be entirely eliminated (such as various industrial processes), and to drive New Zealand’s net account into negative emissions. Neither of these factors detract from the initial importance of rapidly reducing gross emissions.

13. Numerous economic models, including those prepared for this consultation, highlight the additional cost of delaying New Zealand’s transition to a zero carbon economy.

The Parliamentary Commissioner for the Environment has set out some of the risks in relying too heavily on offsets, such as carbon stored in forests being released back into the atmosphere because of fire, storms, or disease (risks which will be aggravated as a result of climate change).¹⁴

One option to shift the focus away from offsets is to complement our net emission targets with gross emission targets or offset caps (for example, the 2025-2029 budget shall be met by at least 85% gross emission reductions; or no more than 15% net offsets).¹⁵ Such measures would have the added bonus of increasing the clarity and certainty of New Zealand's pathway to net zero. We discuss 'net emission' policy considerations in more detail below.

Long and short-lived greenhouse gases

Generation Zero submits that New Zealand's climate change policy should recognise the difference between long-lived greenhouse gases (such as carbon dioxide and nitrous oxide) and short-lived greenhouse gases (such as methane). Short-lived gases do not need to be reduced all the way to net zero to stop temperature rise.¹⁶ They need to be significantly reduced, and then stabilised. Long-lived emissions, however, will continue contributing to global warming until they are reduced to net zero.

Confusingly, Question 2 in the discussion document conflates three discrete policy issues:

- **Science-based policy:** Should we distinguish between long and short-lived greenhouse gases?
- **Target design:** If yes to the above, should this distinction be expressed through (a) separate legislative targets; or (b) a single net zero target, complemented with two baskets targets and policies?
- **Ambition:** What should the level of ambition be for the target(s)?

Rather than address each issue separately, these issues have been merged into a single question. As a result, it is not clear whether the difference between option two and option three for the 2050 target is a choice of science-based policy, a choice of target design, or a choice of ambition. This obscures the possibility of favouring the most ambitious option *and* favouring a target design which distinguishes between long and short-lived greenhouse gases. This is Generation Zero's position.

Two baskets approach

Our proposed policy to distinguish between long and short-lived greenhouse gases is known as a 'two baskets' approach. This involves (a) setting different targets and pathways for long and short-lived gases; and (b) not treating the two as interchangeable. In other words, each greenhouse gas is assigned to a particular 'basket' depending on its atmospheric characteristics, and cannot be traded or offset against gases from the opposing basket.¹⁷

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14. See PCE, *Response to Productivity Commission Low-Emissions Economy draft report* (2018).

15. In the alternative, the PCE suggests using a discount rate on forestry offsets.

16. See generally Bowerman et al. "The role of short-lived climate pollutants in meeting temperature goals" (2013) *Nature Climate Change*, 3(12), 1021-1024; Pierrehumbert "Short-lived climate pollution" (2014) *Annual Review of Earth and Planetary Sciences*, 42(1), 341-379; Rogelj et al. "Impact of short-lived non-CO2 mitigation on carbon budgets for stabilizing global warming" (2015) *Environmental Research Letters*, 10(7), 075001. For an overview of the key issues in a New Zealand policy context, see Chapter 8 of Productivity Commission, *Low Emissions Economy: Draft Report* (2018).

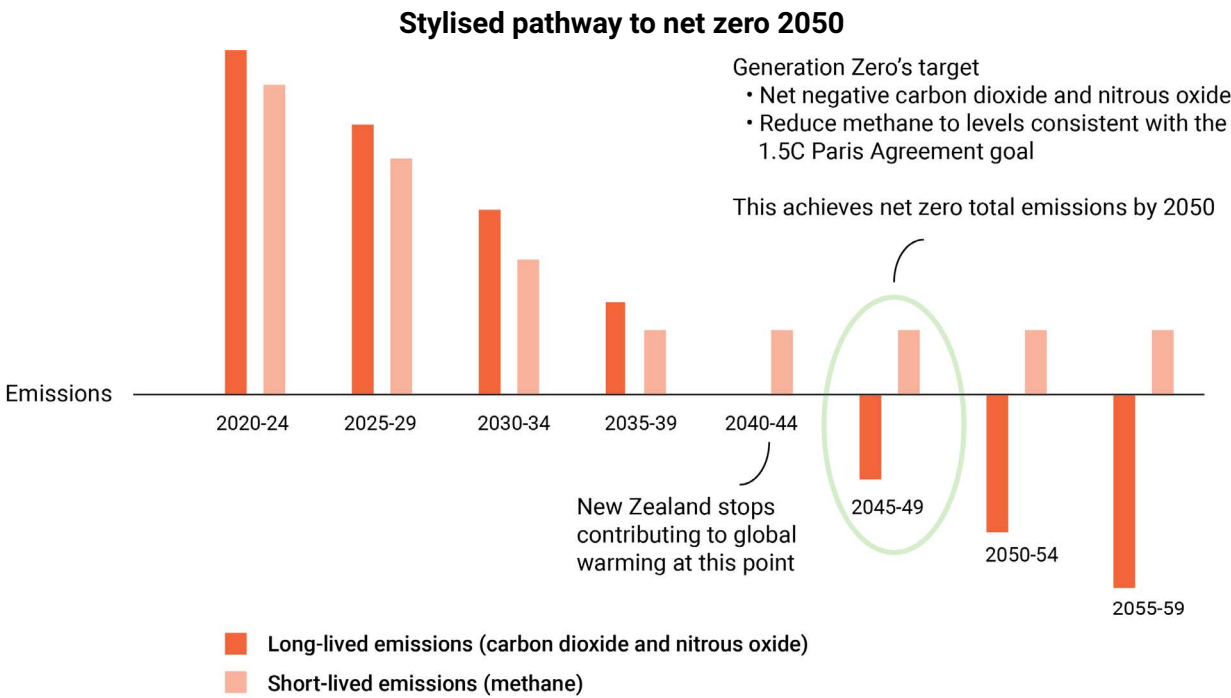
17. Smith et al. "Equivalence of greenhouse-gas emissions for peak temperature limits" (2012) *Nature Climate Change*, 2(7), 535-538.

Applying two baskets to the net zero 2050 target

Under a two baskets policy approach, a net zero 2050 target would be met as follows:

- **Long-lived basket:** Achieve negative long-lived emissions by 2050, by reducing emissions and absorbing more carbon through forestry (and other carbon sinks) than we are emitting.
- **Short-lived basket:** Significantly reduce short-lived gases to a level consistent with the 1.5°C global temperature ceiling described in the Paris Agreement.

These two baskets would balance out to net zero across all gases. This science-based pathway is more ambitious and impactful in the sense that New Zealand would cease contributing to global warming prior to 2050 (i.e. the date at which our long-lived basket reaches net zero, and the short-lived basket is reduced to our defined target level).



The point in this graph at which New Zealand ceases contributing to warming is loosely represented by the second target option (assuming short-lived emissions are reduced) in the Government's discussion document. Under a two baskets approach, the third target option - net zero by 2050 - is simply a continuation of progress along this pathway.

A two baskets approach is not a new innovation - it was used to distinguish and efficiently mitigate ozone-destroying emissions with different atmospheric characteristics under the Montreal Protocol.¹⁸

18. Daniel et al. "Limitations of single-basket trading: Lessons from the Montreal Protocol for climate policy" (2012) *Climatic Change*, 111(2), 241-248.

A further bonus of setting out the long-lived and short-lived breakdown of an overall net zero target is that it significantly clarifies New Zealand's contribution to global mitigation efforts. The parties to the United Nations Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change (IPCC) would be able to more accurately reconcile each country's commitments with temperature ceiling targets, and the global carbon budget, if all countries adopted this approach.¹⁹

Target design for a two baskets framework

A key question is at what level the two baskets framework should be applied. In our original Zero Carbon Act blueprint, we proposed setting separate targets, budgets and pathways for long-lived and short-lived gases – a similar structure is implied by the second option in the discussion document. We adopted this position partly for the purpose of clarity. We also noted that, in any event, the separate targets would need to be converted into a single CO₂-equivalent target for international reporting purposes.

An equally valid two baskets approach is to set a single CO₂-eq target in the Zero Carbon Act, and underpin this single target with a two baskets policy framework. Option three in the discussion document can be re-configured in this manner.

When starting from a single CO₂-eq target, the two baskets distinction between long-lived and short-lived gases can be expressed in two ways:

- **Policy-driven:** This means using two baskets principles to inform policies and pathways (i.e. different contributions by different emission sources). This would increase the flexibility around how emission budgets are met, but decrease the certainty of the actual climate impact of the 2050 target, because it is not clear when long-lived emissions will hit net zero, or what the emission reduction contribution from each basket will be.
- **Target-driven:** This means setting separate targets for long-lived and short-lived gases to complement the single CO₂-eq target. This would increase certainty by clarifying the emission reduction contributions from each basket, but decrease flexibility around how emission budgets are met. Separate emission budgets for long-lived and short-lived gases could also be adopted to further increase clarity.

Generation Zero submits that the target-driven option (without separate emission budgets) represents the minimum baseline for viably employing a two baskets approach.²⁰ The separate targets for long-lived and short-lived gases could be set (a) in the Zero Carbon Act alongside the single CO₂-eq target; or (b) in an alternative legal instrument, possibly in a similar manner to setting an emission budget.

A variation suggested by the Productivity Commission is (c) setting the single CO₂-eq target and the long-lived target in the Zero Carbon Act, but the short-lived target, due to its inherent complexity, is set in an alternative legal instrument.²¹

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19. Millar et al. "Emission budgets and pathways consistent with limiting warming to 1.5°C" (2017) *Nature Geoscience*, 10, 741–747.

20. The Productivity Commission holds the same view; see *Low Emissions Economy: Draft Report* (2018) at page 214 onwards.

21. Productivity Commission, *Low Emissions Economy: Draft Report* (2018), page 216.

Another option involves (d) both the long-lived and short-lived targets being incorporated in the Zero Carbon Act, but in principled terms (e.g. *'By the year 2050, short-lived greenhouse gas emissions must be significantly reduced to a level consistent with New Zealand's equitable contributions to meeting a 1.5°C global temperature ceiling'*). The specific quantitative targets for long-lived and short-lived gases could then be set in due course after receiving expert advice from the Climate Change Commission. Generation Zero supports further thinking being done in this area.



Target for short-lived emissions

With regard to determining the quantitative target level for short-lived gases, we submit that:

- **Significant reductions:** Generation Zero does not accept that methane can be stabilised at current levels. Methane emissions must be significantly reduced.
- **1.5°C target:** As a developed and high-income nation, New Zealand should aim to reduce our flow rate of short-lived emissions to a level which is compatible with the 1.5°C global temperature ceiling described in the Paris Agreement.²²
- **Science-based reference point:** This target level should be calculated against a reference point that is directly reflective of contribution to global temperature, such as a maximum quantity flow rate that drives the concentration of methane in the atmosphere (in parts per billion of methane in the atmosphere). A baseline emission level at a particular date (such as New Zealand's level of methane emissions at 1990) is not sufficiently reflective of a temperature target.
- **Expert advice:** From these starting parameters, determining the specific target for short-lived gases is an issue where advice from the Climate Change Commission should be sought.

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22. See generally Millar et al. "Emission budgets and pathways consistent with limiting warming to 1.5°C" (2017) *Nature Geoscience*, 10, 741–747.

Generation Zero believes that the Productivity Commission has correctly identified the key factors to be applied when determining the quantitative target for short-lived emissions:²³

- *“the global stock of both short- and long-lived gases (Rogelj et al., 2015a);*
- *New Zealand’s historical and ongoing contribution to the global stock of GHGs;*
- *the abatement potential for short-lived gases that is considered acceptable in terms of social and economic consequences; and*
- *an assessment of what New Zealand’s “fair share” of global short-lived gas emissions comprises (MfE 2015b; The Treasury, 2015b).”*

We note that if the starting point is setting a single CO₂-eq target (i.e. net zero total gases by 2050), then determining the quantitative long-lived component of the overall target will effectively determine the short-lived component, and vice versa. Conversely, if the long-lived and short-lived targets are set first, then this will dictate the overall CO₂-eq target. The considerations listed below will also be relevant to determining the short-lived target.

Two baskets considerations

Key considerations for the design of a two baskets framework, including the quantitative target level for short-lived gases, include the following. These are complex and technical issues, for which we recommend that expert advice is sought from the Climate Change Commission.

- **‘Peak warming’:** In terms of mitigating long-term temperature rise, it becomes increasingly important to reduce short-lived emissions around the time of global ‘peak warming’; however, if global warming is unlikely to ‘peak’ in the near future, then it is more impactful to focus on mitigating cumulative long-lived emissions.²⁴ This consideration could be reflected through a highly dynamic short-lived target, which is regularly reviewed, and increases in ambition to coincide with global ‘peak warming’. On the other hand, while scientifically accurate, a rapidly shifting target would pose policy challenges in practice, and create uncertainty for communities and businesses.



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23. Productivity Commission, *Low Emissions Economy: Draft Report* (2018), page 215.

24. Bowerman et al. “The role of short-lived climate pollutants in meeting temperature goals” (2013) *Nature Climate Change*, 3(12), 1021-1024; Smith et al. “Equivalence of greenhouse-gas emissions for peak temperature limits” (2012) *Nature Climate Change*, 2(7), 535-538; see also Allen, M. “Short-lived promise? The science and policy of cumulative and short-lived climate pollutants” (2015) Oxford: Oxford Martin School, University of Oxford.

- **Metric choice:** We do not propose that New Zealand unilaterally abandon the de facto greenhouse gas metric (currently GWP₁₀₀) for the purposes of calculating a 2050 net zero CO₂-eq target, or reporting to the UNFCCC. However, we note that a significant body of research suggests GWP₁₀₀ is an inappropriate measure for dealing with short-lived gases, because it overestimates the effect of short-lived emissions when emitted far from ‘peak warming’, and underestimates their effect when emitted near ‘peak warming’.²⁵ We submit that an additional metric, or suite of metrics, could be employed domestically to complement GWP₁₀₀ and ensure New Zealand’s climate change response is as impactful as possible.
- **Latest science:** The quantitative target level for short-lived gases must reflect the latest scientific knowledge. In particular, methane climate-carbon feedback and other indirect effects should be carefully considered, because these have been inconsistently addressed in metric frameworks to-date.²⁶



- **Forestry:** An unresolved issue with the two baskets approach is how to integrate forestry. This is part of a larger debate about the extent to which forestry offsets should be treated as equivalent to gross emissions reductions.²⁷ Sequestration from permanent forests have a stronger claim to being equivalent to reductions in long-lived gases, although there are some important considerations such as albedo effects and the resilience of the forest ecosystem under rising temperatures. However, carbon storage in plantation forests and harvested wood products might more closely resemble the effect of short-lived gases.
- **Treatment of fossil-based short-lived emissions:** Greenhouse gas emissions from fossil sources are always additive to the stocks of greenhouse gases in the atmosphere, whereas emissions from biological sources are largely part of the carbon cycle (with the notable exception of nitrous oxide). In other words, carbon from the breakdown of fossil-based methane (e.g. natural gas) is additive to the carbon cycle, whereas carbon from the breakdown of biologically-based methane (e.g. livestock) is not. Under a science-based approach, we submit that all emissions from fossil sources, including methane, could therefore be treated more like a long-lived gas and driven to net zero. Below, we set out an alternative paradigm which directly addresses this issue.

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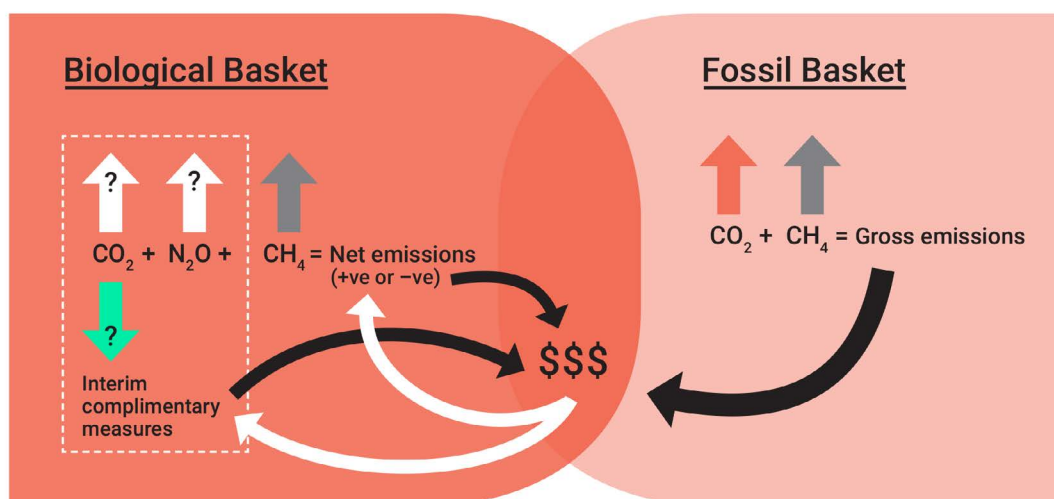
25. See Allen et al. “A solution to the misrepresentations of CO2-equivalent emissions of short-lived climate pollutants under ambitious mitigation” (2018) *Nature: Climate and Atmospheric Science*, 1(16); Shine, K. P. “The global warming potential—the need for an interdisciplinary retrieval” (2009) *Climatic Change*, 96, 467–472.

26. Myhre et al. 2013: Anthropogenic and Natural Radiative Forcing. Chapter 8 in *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, at pages 713-714.

27. See Steffen et al. *Land Carbon: No Substitute For Action on Fossil Fuels* (2016) Melbourne: Climate Council of Australia; and Upton, S. “Managing biological sources and sinks in the context of New Zealand’s response to climate change” (22 September 2016) NZ Resource Management Law Association Conference, Nelson.

Alternative two basket paradigm

We believe that an alternative domestic target-setting, accounting and policy paradigm that distinguishes fossil emissions from biological emissions (primarily sources and sinks from the land sector) is worth consideration. This expands on the long-lived and short-lived baskets approach above, incorporating the different gases within a 'biological' and 'fossil' baskets framework that is more focused on fair and effective implementation at a policy level. A visual representation of this accounting proposal can be seen below.



In this context the biological basket would include sources and sinks of greenhouse gases that are part of the carbon cycle, or have a biological origin, but is not releasing ancient stores of greenhouse gases into the atmosphere. The fossil basket would include sources of greenhouse gases that are releasing ancient stores of greenhouse gases into the atmosphere. Because fossil sources can only release ancient carbon into the atmosphere, there are currently no direct sinks available for these emissions. Question marks indicate current unknowns relating to emissions or sequestration at farm level.

In summary, this implementation-focused approach is motivated by the following:

- Differences in the nature of emissions from biological versus fossil sources (see above) mean that carbon sequestered into biological sinks are not necessarily as permanent as emissions from fossil sources. This raises questions of the environmental integrity of using biological offsets for fossil fuel emissions.
- Farming and other productive land uses function as whole systems, and therefore having a 'net land use accounting' system allows for better alignment between mitigation and sequestration policies:
 - A 'biological' emissions basket can account for the net emission/sequestration for each area of land, while recognising short versus long-lived gas differences.
 - 'Net land use accounting' allows landowners to choose their most effective mitigation options, potentially leading to more effective mitigation efforts.²⁸
 - Using a systems-level approach to encompass the complex interrelationships within agricultural ecosystems will promote emission reduction policies with co-benefits, such as improved water quality, productivity, and rural wellbeing.

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28. See Productivity Commission, *Low Emissions Economy: Draft Report* (2018), page 259.

- Clear and separate targets and budgets for fossil and biological emissions builds transparency around where mitigation is occurring, better aligns with related economic activities and sectors, and thus aligns with available policy levers for mitigation efforts. This ensures that gross emission reduction expectations are transparent and reduces the risk of all sectors attempting to rely on sequestration offsets.

In light of the above, Generation Zero supports consideration of a legally binding, gross target for fossil-based emissions to enable this alternative paradigm. This gross fossil target could be included in the Zero Carbon Act underneath the overarching CO₂-eq target, and would complement other aspects of a science-based approach, such as minimising cumulative and gross emissions, and distinguishing between long and short-lived gases. A gross fossil target and budget(s) would promote certainty and policy coherence, prevent over-reliance on biological offsets at the expense of fossil fuel emission reductions, and enable a fossil vs biological basket framework to be considered in more detail at a policy plan level.

Net emission considerations

Generation Zero recognises that reducing greenhouse gas emissions (of any type) to gross zero by 2050 is currently not feasible, and therefore any net zero emission target must carefully consider the design of ‘net emissions’. By net emissions we mean the total of emissions from sources, minus absorption into sequestration sinks. However, not all sequestration sinks are equal.

When considering net emission accounting under the Zero Carbon Act, the framework should be designed to enable system level dynamics be taken into account. For example, converting healthy grasslands into fast growth pine may release soil carbon,²⁹ which is currently not accounted for (this also raises the principle of environmental sustainability). Net emission accounting must also be sufficiently dynamic to deal with the changing conditions of the sequestration technique. For example, trees may be harvested earlier than planned, or be destroyed by fire or storms.

Due to scientific and technological limitations we currently lack accurate methodologies for measuring some emissions and sequestration in the land sector, in particular nitrous oxide and soil carbon at the farm level.³⁰ For system-level accounting to be effective and fair to landowners, we also support research and development into direct and proxy measures of system-scale carbon stocks and flows, including:

- Monitoring and accounting methods for nitrous oxide, soil carbon, and forested areas that currently fall outside UNFCCC definitions, but which have significant co-benefit and carbon sink potential (for example, riparian margins along waterways).
- Consideration of complementary practice or proxy measures as an interim solution, potentially driven by net-land use accounting under a ‘biological’ basket (see our alternative paradigm above).

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29. Schipper et al. “A review of soil carbon change in New Zealand’s grazed grasslands” (2017) *New Zealand Journal of Agricultural Research*, 60:2, 93-118.
30. See Productivity Commission, *Low Emissions Economy: Draft Report* (2018), page 244.

International aviation and shipping emissions

The Government's discussion document does not clarify whether and how the Zero Carbon Act will account for New Zealand's share of international aviation and shipping (IAS) emissions. Generation Zero submits that these emissions must be accounted for, initially on an estimate basis, as is the case under the UK Climate Change Act.

The Zero Carbon Act should require the eventual incorporation of IAS emissions in accordance with standardised accounting rules, and that the Commission must routinely provide advice in this regard.³¹ However, until IAS rules are standardised between countries, New Zealand's 'estimated' share of IAS emissions should be taken into account by the Government and the Commission when setting emission budgets.³² This will mean that emission budgets are set with sufficient headroom to ensure that New Zealand is on track to meet its 2050 target inclusive of IAS emissions. This approach is currently working in the UK.



Q3. How should New Zealand meet its targets?

- *domestic emissions reductions only (including from new forest planting)*
- *domestic emissions reductions (including from new forest planting) and using some emissions reductions from overseas (international carbon units) that have strong environmental safeguards.*

The Zero Carbon Act should be met through domestic emissions reductions only. We call this the 'firewall' principle. Relying on international carbon credits (even if the credits have integrity) creates uncertainty about what reductions need to be achieved in New Zealand. It also means we are investing in other countries' low emission transitions, rather than our own.

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31. UK Climate Change Act 2008, sections 10, 30, 31 and 35.

32. UK Climate Change Act 2008, sub-sections 10(3) to 10(6).

It is in New Zealand’s interests to stay firmly on track towards a zero carbon economy. Over-reliance on carbon trading is a delay tactic that will cost us in the long run, because the price of international credits will rise over time and we will be forced to make a more abrupt and costly transition later. Delay also means we miss out on the many benefits and opportunities of early action. A clear domestic emissions path will help communities and businesses plan for their future, incentivise New Zealanders to seize a first-mover advantage in clean industry and technology, and provide certainty for low-carbon investments.

Our proposed ‘firewall’ would separate domestic Zero Carbon Act targets from our international responsibility targets. The firewall would not stop New Zealand from purchasing international carbon credits as an additional contribution to global mitigation efforts. Purchasing credits helps other countries finance their transition to a zero carbon economy.

Scottish model

In the event that some reliance on international credits is deemed necessary, which we strongly oppose, one option to consider is a presumption-based approach based on the Scottish climate change statutory framework which is currently in the process of being updated.³³ This could involve:

- **Presumption:** A statutory presumption that the Zero Carbon Act budgets and 2050 target will be met entirely with domestic emission reductions.
- **Some flexibility:** An option for the Government to apply for a one-off exception to this presumption, enabling international carbon credits to be taken into account for the net account of that year, subject to strict limitations:
 - A legal cap on the absolute maximum amount of international credits which can be requested (for example, a level equal to 10% of domestic emission reductions in any one year).
 - The Government must set out to Parliament its reasons for relying on international credits.
 - The Government must obtain and take into account advice from the Climate Change Commission, and obtain approval from Parliament.

We submit that the Commission's advice, and the Government's reasons for relying on international credits, could involve demonstrating that domestic policy options for meeting the upcoming target have been exhausted.

It is also important that any use of international credits under this model is restricted to the net account of the year in which they are purchased. The alternative is allowing credits to be purchased in the final months of an emissions budget to compensate for excessive emissions 4 or 5 years prior. This ‘get out of jail’ option would undermine policy momentum, long-term certainty, and accountability. Retrospectively using international credits to offset earlier emissions is also contrary to the principle of minimising cumulative emissions (see our response to Question 2).

We reiterate that this presumption-based model is still less than optimal. It is in New Zealand’s interests to employ a strict ‘firewall’.

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33. Climate Change (Scotland) Act 2009, and Climate Change (Emissions Reduction Targets) (Scotland) Bill 2018, sections 13-15.

Q4. Should the Zero Carbon Bill allow the 2050 target to be revised if circumstances change? Yes or No

The 2050 target should only be revised in exceptional circumstances. A clear, legally binding target is the cornerstone of the Zero Carbon Act framework. Emission budgets and economy-wide policy plans must be set consistently against the target. If the target can be easily changed for politically expedient reasons, this will undermine much of the framework's value.

However, there are two situations where it would be clearly appropriate to change the 2050 target. These are:³⁴

- A significant change in scientific knowledge relating to climate change.
- A significant change in international law (for example, the Paris Agreement becoming more ambitious).

Generation Zero does not support being able to revise the 2050 target in response to 'economic changes'. Permitting revision in such circumstances would contribute to a higher risk of economic instability, because a long-term target which is perceived to be easily changed is more likely to promote inefficiencies, misguided investments, and stranded assets. An inflexible target will not force the Government of the day into an incoherent policy pathway. To the contrary, each Government retains the ability to modify its policy plans in response to changing circumstances and new technology.

Review mechanism

Any revision to the 2050 target should require the Government to take into account advice from the Climate Change Commission, and obtain Parliamentary approval.

We support active consideration of a mechanism whereby the Commission is periodically required to review the ambitiousness of the Zero Carbon Act target, premised on the Paris Agreement 'no backsliding' principle, which means that the target can only increase in ambition.

Emission budgets

Q5. The Government proposes that three emissions budgets of five years each (ie, covering the next 15 years) be in place at any given time. Do you agree with this proposal? Yes or No

Yes. Legally-binding emission budgets, set 10-15 years in advance so that 3 budgets are in effect at all times, at a level recommended by the Climate Change Commission and approved by Parliament, are a cornerstone of the Zero Carbon Act. We support the budgets being 5 years in duration, and the first 3 emission budgets being set shortly after the introduction of the Zero Carbon Act.

While it is not necessary for emission budgets to be set in primary legislation, it is important that proposed budgets are put before the House of Representatives for parliamentary approval.

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34. For a model clause, see UK Climate Change Act 2008, sections 2 and 3.

Staying on track to meet budgets

We support the general intent underlying the Parliamentary Commissioner for the Environment’s recommendation for a 3 year mid-point budget review.³⁵ We agree that each Parliament should be required to turn its mind to long-term climate change policy at least once during its term. However, we submit that this objective would be better fulfilled through an annual review process, as follows:³⁶

- Every year, the Climate Change Commission must submit a progress report to Parliament which clarifies whether or not New Zealand is on track to meet future emission budgets. Each report will also set out criticisms and recommendations regarding the Government’s policy plans.
- No more than 6 months after the Commission’s report, the Minister must submit a written report to Parliament responding to each point raised by the Commission and, in the event that we are not on track to meet future budgets, how this will be rectified.
- Upon receipt of the Minister’s written response, Parliament must scrutinise both reports in the House.

The Parliamentary Commissioner for the Environment has observed that the UK experiences a loss of policy momentum in the period between setting each emission budget.³⁷ Evidently, the UK Act’s review mechanisms are not ensuring that Parliament is regularly considering these matters. However, rather than introducing a 3 year mid-point budget review, we recommend strengthening the reporting processes described above. This approach is vastly preferable to waiting up to 3 years for Parliament to have an opportunity to scrutinise inadequate policy plans.

Accountability mechanisms

We submit that emission budgets (and other legal duties in the Zero Carbon Act) must be capable of legal enforcement. This will increase certainty for communities and businesses, and promote accountability, which drives action.

It is generally understood that the targets and duties in the UK Climate Change Act are legally binding. However, this has not yet been tested in the courts, and the UK Act’s vague drafting means there is considerable uncertainty around what the courts could do.³⁸

We must learn from these oversights. In particular, the Zero Carbon Act should clarify the legal implications of the Government failing to (a) set an appropriate emissions budget; or (b) set policy plans capable of meeting future budgets. We recommend that the Zero Carbon Act is drafted to facilitate judicial review of these matters. This would allow the courts to compel compliance through the usual forms of relief for unlawful government decision-making. The Act should expressly state who has standing to bring a claim, and the parameters these legal duties should be reviewed against.³⁹

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35. PCE, *Consultation on the Zero Carbon Bill: Submission to the Ministry for the Environment* (2018).
36. For reference, see the UK Climate Change Act 2008, sections 36 and 37.
37. PCE, *A Zero Carbon Act for New Zealand: Revisiting Stepping stones to Paris and beyond* (2018), page 33.
38. See generally Church, J. “Enforcing the climate change act” (2015) *UCL Journal of Law and Jurisprudence*, 4, 109-134.
39. For a more detailed consideration of judicial review in relation to the Zero Carbon Act, see Generation Zero, *Making the Zero Carbon Act work: the Climate Commission and the Courts* (2017).

An advantage of the long-term nature of the Zero Carbon Act is that these accountability mechanisms can properly focus on addressing problems prospectively. In other words, it is more impactful to rectify, by legal means if necessary, a poorly set budget or an inadequate policy plan well in advance of New Zealand going off-track, as opposed to retrospectively dealing with an emissions budget being exceeded. However, it is also necessary to guard against the latter. We recommend that the Zero Carbon Act contain an internal penalty regime for this purpose. One possible penalty for failing to meet a budget is requiring the Government to invest additional funds (equivalent to the cost of purchasing international carbon credits to remedy the emission overshoot) into domestic mitigation policies and/or infrastructure.⁴⁰

Q6. Should the Government be able to alter the last emissions budget (ie, furthest into the future)?

- *yes, each incoming Government should have the option to review the third budget in the sequence*
- *yes, the third emissions budget should be able to be changed, but only when the subsequent budget is set*
- *no, emissions budgets should not be able to be changed.*

No. Emission budgets should only be revised in exceptional circumstances. It is not appropriate for a new Government to 'have a say' on an upcoming budget which has already been set. This would risk uncertainty and instability. See our response to Questions 4 and 7.

Q7. Should the Government have the ability to review and adjust the second emissions budget within a specific range under exceptional circumstances? Yes or No

Under exceptional circumstances, yes. It may be appropriate for the list of circumstances in which an emission budget can be changed to be slightly wider than the limited circumstances in which the 2050 target can be revised. For example, we submit that it may be appropriate to change an upcoming budget after an exceptional natural disaster, such as a major earthquake. Revising a budget in this situation would not necessitate changing the long-term 2050 target unless, of course, the emission budget being revised is that which concludes at 2050.

Any revision to an emissions budget should require the Government to take into account advice from the Climate Change Commission, and obtain Parliamentary approval. Generation Zero does not support being able to revise an emissions budget in response to 'economic changes', for the reasons outlined in response to Question 4.

Q8. Do you agree with the considerations we propose that the Government and the Climate Change Commission take into account when advising on and setting budgets? Yes or No

Generation Zero generally agrees with the proposed list of considerations in the discussion document which must be taken into account when setting emission budgets.

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40. See the penalty options set out in Church, J. "Enforcing the climate change act" (2015) *UCL Journal of Law and Jurisprudence*, 4, 109-134, at pages 130-133.

We submit that all decisions made under the Zero Carbon Act should be informed in the first instance by (a) the core principles outlined in Part I: Zero Carbon Act framework, including honouring Te Tiriti o Waitangi, and (b) the centrality of the long-term target. This means emission budgets must be set consistently with a fair, cost-effective and environmentally sustainable pathway towards the 2050 target. In addition to these core principles, we submit that the following matters should also be considered by the Government and the Climate Change Commission when setting budgets:

- Scientific knowledge about climate change.
- Relevant technology.
- Tikanga Māori, and Māori interests.
- New Zealand’s social circumstances, in particular the likely impact of the decision on fuel poverty and employment.
- New Zealand’s economic circumstances, including the competitiveness of particular sectors of the economy.
- New Zealand’s fiscal circumstances.
- Synergies with adaptation policies to address climate risks.
- Energy policy, including energy supply and the carbon intensity of the economy.
- Co-benefits of emissions reduction measures.
- Minimising cumulative emissions of long-lived greenhouse gases.
- New Zealand’s international aviation and shipping emissions.
- International circumstances, including (but not limited to):
 - the human and economic cost of disruptive climatic events globally but in particular across the Pacific;
 - New Zealand’s international legal and diplomatic obligations;
 - the likelihood of carbon leakage from domestic policies;
 - the carbon embodied in imported products consumed by households, firms and government activity in New Zealand.

Government response

Q9. Should the Zero Carbon Bill require Governments to set out plans within a certain timeframe to achieve the emissions budgets? Yes or No

Yes. A notable weakness of the UK Climate Change Act is that it does not set clear timeframes for the Government to make policy plans to meet future emission budgets.⁴¹ Generation Zero supports the Zero Carbon Act introducing a strict time frame of 6 months to publish policy plans after setting an emission budget.

Q10. What are the most important issues for the Government to consider in setting plans to meet budgets? For example, who do we need to work with, what else needs to be considered?

The Government’s policy plans to meet emission budgets should be comprehensive, fair, cost-effective, environmentally sustainable, and reflect a commitment to Te Tiriti o Waitangi. For a detailed explanation of these principles, see Part I: Zero Carbon Act framework. We also submit that public education in relation to climate change is an important issue which the Government should consider when setting policy plans under the Zero Carbon Act. We support the active consideration of ways in which the Zero Carbon Act could be designed to promote better public education.

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41. See Grantham Research Institute, 10 years of the UK Climate Change Act (April 2018), page 32.

Part III: Climate Change Commission

An independent Climate Change Commission is essential to our climate change response. We need an independent body to provide accountability and advice on New Zealand's climate change commitments. The UK's arrangement, where an independent advisory commission is fully integrated into Government and Parliamentary processes, provides a useful model.

A long-term perspective and honest and robust advice is missing from New Zealand's climate change discourse. Under our current institutional arrangements, there is no framework requiring independent reflection on our progress towards a resilient, zero carbon economy. Given the gravity of climate change in human and economic terms, the communities and businesses of Aotearoa New Zealand should be able to find out from impartial experts whether we are likely to meet our targets, and whether the Government's policy plans are working effectively.

Functions of the Commission

Q11. The Government has proposed that the Climate Change Commission advises on and monitors New Zealand's progress towards its goals. Do you agree with these functions? Yes or No

Yes. Generation Zero supports the Climate Change Commission having two functions: (a) providing expert advice, and (b) monitoring our progress and holding the Government to account. We agree that the UK Climate Change Committee model is a strong starting point. The Commission should not be a decision-making body, for the following reasons:⁴²

- **Democratic accountability:** Elected officials should be ultimately responsible for making plans and meeting Zero Carbon Act targets. The Commission is not democratically elected or accountable to the public. Similarly, the Government should not be able to 'pass the buck' on difficult decisions to the Commission. The Commission's role is to provide expert advice and oversight, and it is the Government that should hold ultimate responsibility and be held to account under the Zero Carbon Act.
- **Compromised watchdog:** A Commission with decision-making powers will be a less effective watchdog. It would have a conflict of interest in holding itself to account over its own policy decisions.
- **Comprehensive policy plans:** Transitioning to a zero carbon economy will require comprehensive and coordinated policies across all sectors of the economy. The Government needs to assume overall responsibility for these plans. Delegating some decision-making powers to the Commission (such as ETS settings) risks these policies being made without properly coordinating with policies elsewhere.

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42. We echo the Productivity Commission's findings on this point; see *Low Emissions Economy: Draft Report* (2018), pages 186-187.

It is critically important that the Commission’s functions are woven into the core decision-making processes of the Zero Carbon Act. There is no point the Commission providing advice in a vacuum. The Government must be legally required to consider and respond to the Commission’s advice regarding budgets and policy plans. Further, when the Commission prepares annual reports assessing whether New Zealand is on track to meet future emission budgets, the Government must be required to respond.

It is also particularly important that the Commission fulfils its role in accordance with the Government’s obligations under Te Tiriti o Waitangi. We submit that the Government must pay particular regard to any input from Māori on this issue.

We now set out our detailed design recommendations for the Commission’s advisory and monitoring functions in relation to key aspects of the Zero Carbon Act.

Emission budgets

The Commission should advise the Government on the level of emissions budgets before they are set. Similarly, the Commission’s advice must be sought before the Government considers any revisions to a budget.

For the matters which should be considered by the Commission when providing advice on emission budgets, see our response to Question 8. The Government’s discussion document suggests that the Commission should take these matters into account when “undertaking its work”, but we suggest that, like the UK Climate Change Act, these matters should only inform the Commission’s advice in relation to budgets. Different matters may be relevant to the exercise of the Commission’s other functions. The only mandatory considerations for the Commission’s wider functions should be the core principles set out in Part I: Zero Carbon Act framework.

We strongly support the Commission having only advisory functions regarding emission budgets. A budget will have significant effects. It will dictate government policy and have profound economic and social impact on the lives of many New Zealanders. We believe it is imperative that the decision to set budgets lies in the hands of New Zealand’s elected representatives who remain accountable to voters.

There are, however, several ways the Zero Carbon Act can ensure that the Commission’s advice in relation to budgets is not ignored by the Government. Firstly, the Government should be required to publish reasons for departing from the Commission’s advice.⁴³ Secondly, the Government should set budgets by legislative instrument which should then be subject to the affirmative resolution of the House of Representatives.⁴⁴ This procedure will allow Parliament to scrutinise any departure from the Commission’s advice.

For the sake of clarity, we submit the Commission would feed into the emission budget decision-making process as follows:

- First, in its advisory capacity, the Commission makes recommendations about the forthcoming budget, having considered (a) the Zero Carbon Act core principles, (b) the long-term target, and (c) the other mandatory factors.

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43. See UK Climate Change Act 2008, section 9(4).
44. See UK Climate Change Act 2008, section 8(3).

- Secondly, the Minister receives that advice from the Commission, which they presumptively will transform into a proposal for parliamentary approval by undertaking Government scrutiny and public consultation. The Minister must review the same mandatory factors as the Commission, and give fulsome reasons based on these factors in order to depart from the Commission's advice.
- Finally, following that consultative window, the Minister introduces the emission budget to the House for parliamentary approval.

Through those three steps, the independent expertise of the Commission plays a key role in shaping the emission budget, the Government is responsible for consulting with the public to ensure the Commission's recommendations should be implemented, and ultimately Parliament approves the final budget.

Independent expert advice

When giving advice on an emissions budget, the Commission should be required to recommend sectoral and policy focus areas for the Government to achieve the budget.⁴⁵ We caution, however, that the development of the detailed policy needed to meet each budget should be driven by the Government.⁴⁶ The Commission will have a further opportunity to provide expert advice on the Government's policy plans through its annual progress reports. We discuss this mechanism below.

The Commission should also be able to provide advice to the Government or Parliament on specific climate change issues when requested.⁴⁷

To fulfil these duties well, the Commission must be properly resourced. This should include the ability to draw on information from other areas of government.⁴⁸ We address the Commission's funding below.

Generation Zero also submits that the Commission's independent expertise should be drawn on to influence New Zealand's evolving international obligations, for example, when the Government is negotiating, signing or ratifying treaties that affect climate change policy required to reach the long-term target. This would include international environmental treaties as well as trade, investment and economic integration treaties that could pose challenges for mitigation or adaptation measures, in light of Te Tiriti and Zero Carbon Act principles, such as a just transition. Options to incorporate the Commission's expertise in this area include (a) amending the Standing Orders relevant to the examination of international treaties, or (b) including a statutory requirement in the Zero Carbon Act for the Ministry of Foreign Affairs and Trade to seek advice from the Commission on matters relevant to climate policy and the future implementation of mitigation and adaptation measures.

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45. We submit that sections 9 and 34 of the UK Climate Change Act 2008 provide a suitable model for Commission advice in relation to emission budgets.

46. The possible parameters of the Commission's advisory function and the Government's policy-making responsibilities is helpfully discussed by the Productivity Commission in *Low Emissions Economy: Draft Report* (2018) at page 188.

47. See UK Climate Change Act 2008, section 38.

48. See PCE, *Stepping stones to Paris and beyond: Climate change, progress, and predictability* (2017), page 27; and PCE, *A Zero Carbon Act for New Zealand: Revisiting Stepping stones to Paris and beyond* (2018), pages 26-27. The present powers of the Office of the Ombudsman under the Ombudsmen Act 1975 also provide a helpful point of reference.

2050 target

Generation Zero supports a consensus-based 2050 target being set in legislation now. However, we also recognise that there is value in seeking advice from the Commission on complex aspects of the long-term target, such as the target level to which New Zealand’s short-lived greenhouse gases should be reduced. See our responses to Question 1 and 2. The Commission’s advice must be sought before the Government considers any revisions to the long-term target. We also support a review mechanism to increase the ambition of the Zero Carbon Act. See our response to Question 4.

International carbon credits

The Zero Carbon Act should require New Zealand to meet its domestic emission reduction targets without the use of international credits. See our ‘firewall’ proposal in response to Question 3.

If the Zero Carbon Act ultimately permits the use international carbon credits, the Commission should advise on the extent to which international reductions should be relied upon. As international trading may have significant economic impacts on New Zealand, independent scrutiny from the Commission would be important. The Commission should also monitor and report on the use (and over-use) of international credits, including their environmental integrity.

Adaptation

We support the inclusion of adaptation in the Zero Carbon Act and believe the Commission’s functions should extend to these issues. We discuss this in more detail below, in response to Questions 14 and 15.

Monitoring and reporting

One of the Commission’s most important functions will be to monitor the Government’s responsibilities under the Zero Carbon Act, track our progress, and hold the Government to account. The Commission should routinely submit two types of report to Parliament:

- **Annual progress reports:** Every year, the Commission must report on New Zealand’s progress towards upcoming emission budgets and the long-term target. This report will state whether we are on track, highlight any problems with the Government’s approach, and set out recommendations in relation to the Government’s policy plans. These reports should also assess the Government’s adaptation progress in relation to the risks identified in the national climate change risk assessment.⁴⁹
- **Emission budget reports:** One year after an emission budget ends, the Commission must prepare a report about how the emission budget was or was not met, what action was taken by the Government to reduce emissions, and highlight any problems with the Government’s approach.

We submit that the Government must table a written response in Parliament no later than 6 months after the publication of each Commission report. Well-designed monitoring and reporting mechanisms will drive robust action and policy momentum. See our response to Question 5.

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49. Under the UK Climate Change Act 2008, section 59, progress reports in relation to adaptation progress are only submitted to Parliament every second year. Generation Zero agrees that preparing adaptation progress reports every year may be unnecessary.

The Commission's role regarding the ETS

Q12. What role do you think the Climate Change Commission should have in relation to the New Zealand Emissions Trading Scheme (NZ ETS)?

- *advising the Government on policy settings in the NZ ETS*
- *makes decisions itself, in respect of the number of units available in the NZ ETS.*

Generation Zero believes it is a fundamental constitutional principle that public bodies making significant decisions about people's economic and social lives should be democratically elected and accountable to voters. The ETS has substantial distributional consequences. It affects people's rights and resources. Consequently, it would be inappropriate for the Commission to have decision-making functions in relation to the ETS.

In addition, the policy settings of the ETS often involve politically charged issues. It is reasonable to assume that, if the Commission was a decision-maker, it would be subject to considerable political pressure and criticism (regardless of the merits of the decisions). Such pressure, whether justified or not, could erode public confidence in the Commission, which would compromise its effectiveness in discharging its other functions, such as holding the Government to account.

Finally, dividing decision-making powers between Government and the Commission risks undermining the comprehensiveness and coherence of economy-wide policy plans under the Zero Carbon Act. It is possible, for example, that ETS policies set by the Commission could be in conflict with policies set elsewhere by the Government, resulting in unfairness, perverse incentives, and uncertainty.

Expertise of the Commission

Q13. The Government has proposed that Climate Change Commissioners need to have a range of essential and desirable expertise. Do you agree with the proposed expertise? Yes or No

We broadly agree with the proposed list of essential and desirable expertise for Climate Change Commissioners in the Government's discussion document:

"Essential expertise:

- *climate change policy (including emissions trading)*
- *resource economics and impacts (including social impacts, labour markets and distribution)*
- *te Tiriti o Waitangi, te reo me ona tikanga Māori and Māori interests*
- *climate and environmental science including mātauranga Māori*
- *experience with addressing adaptation challenges like planning, insurance and local government risk management*
- *engineering and/or infrastructure*
- *community engagement and communications.*

Desirable, but non-essential, expertise could include:

- *business competitiveness*
- *knowledge of the public and private innovation and technology development system."*

We submit that expertise in public health should also be included. It is of particular importance that the Zero Carbon Act should require the Commission to have expertise in te ao Māori and tikanga.

Additional matters

In addition to the questions in the Government’s discussion document, we submit the following recommendations in relation to the design of the Climate Change Commission.

Cross-party appointment

The Commissioners should be appointed with cross-party consultation within Parliament.⁵⁰ This will enhance the Commission’s independence and minimise the risk of political interference with its functions. The Commission’s functions will require it to assess the effectiveness of policy plans designed by one Government, but implemented some time later by another Government with different political stripes. The Commission must be able to rise above these political issues.

A cross-party consultation appointment process would be a departure from the norm for Independent Crown Entities, whose members are typically appointed by the relevant Minister.⁵¹ In our view, Ministerial appointments will not guarantee a sufficient level of independence in our tight-knit political context. New Zealand only has a small pool of experts, and there is a risk of those experts being unwilling to challenge the dominant political views of the day.

Legal structure

A related issue is the Commission’s legal structure. Independence is essential to the Commission’s accountability function, but collaboration with government will assist its advisory role. There is a degree of tension between preserving independence whilst permitting collaboration, and this informs its ideal legal form. What matters ultimately is not the Commission’s institutional clothing, but that the Commission has the necessary independence to hold the government to account, whilst being sufficiently engaged with government to give robust advice on emission budgets and policy plans. Important considerations include, for example, cross-party appointment processes, and that the Commission reports to Parliament rather than Government. The optimal approach may well be a unique or hybrid legal structure.

Adequate funding

It is imperative that the Commission remains adequately funded to fulfil its functions. It must not feel constrained from criticising a wayward Government by threats of funding cuts.⁵² The salaries for the Commissioners should be funded by standing appropriations in the Zero Carbon Act, at rates set by the Remuneration Authority.⁵³ This will be supplemented by appropriations for the cost of operating the Commission’s office and employing support staff. The Commission should also be empowered to borrow money if necessary to perform its functions. This would be a clear signal from Parliament of the significance of the Commission being politically independent and adequately funded.

Climate impact oversight

Finally, we support the proposed introduction of climate impact disclosure statements to highlight the implications of any new legislation on New Zealand’s pathway to a zero carbon economy. While the Ministry for the Environment and the government department responsible for the draft legislation are best placed to prepare these climate impact statements, there may be scope for the Commission to provide oversight over this process.

50. See PCE, *A Zero Carbon Act for New Zealand: Revisiting Stepping stones to Paris and beyond* (2018), page 39.

51. Under the UK Act, members of the UK Climate Change Committee are also appointed by the Minister.

52. The UK Committee’s lack of financial independence is a weakness of the UK model which requires urgent attention. See Grantham Research Institute, *10 years of the UK Climate Change Act* (April 2018), page 32.

53. The Remuneration Authority is the independent body set up by Parliament to handle the payment of key office holders.

Part IV: Adapting to the impacts of climate change

In order to effectively adapt to the impacts of climate change, such as droughts and sea level rise, we need to (a) understand the unique risks New Zealand faces, and (b) prepare a proactive plan in response to these risks.

Generation Zero submits that the Zero Carbon Act is the ideal legislative vehicle for this adaptation framework.

Including adaptation in the Zero Carbon Act

Q14. Do you think the Zero Carbon Bill should cover adapting to climate change? Yes or No

Yes. We support the Climate Change Adaptation Technical Working Group's recommendation that a strong mandate for adaptation, including clear central government responsibilities, should be set out in primary legislation.⁵⁴ There are important synergies between mitigation and adaptation. Addressing both areas through the same governance framework will promote coordination, co-benefits and efficiencies.

Including an adaptation framework in the Zero Carbon Act will also mean that New Zealand's response to the impacts of climate change is developed in accordance with the same principles (fairness, cost-effectiveness, comprehensiveness, environmental sustainability, and a commitment to Te Tiriti o Waitangi) and in pursuance of the same outcomes (long-term certainty, policy coherence, expertise, transparency, and accountability) as our mitigation strategy. This is consistent with the Zero Carbon Act's overarching objective of facilitating New Zealand's transition to a resilient, zero carbon economy.

Te Tiriti o Waitangi must be a central pillar of our adaptation response. We agree with the Technical Working Group that early and meaningful engagement with iwi and hapū is essential to the overall effectiveness of the framework.⁵⁵

Role of the Climate Change Commission

Generation Zero submits that the following considerations should inform the Climate Change Commission's functions and composition in relation to adaptation.

- **Core functions:** The Commission's core functions to (a) provide expert advice; and (b) monitor progress and hold the Government to account, are equally valuable in an adaptation context. The Commission should not be a decision-making body, for the reasons outlined in Part III: Climate Change Commission.

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54. Climate Change Adaptation Technical Working Group, *Adapting to climate change in New Zealand* (May 2018), Recommendations 1, 2, 3, 4, 5, 18, and 19.

55. *Ibid*, page 49.

- **Flexibility:** The relative importance and required resourcing of mitigation and adaptation workstreams may change as time progresses. Similarly, new technologies and scientific knowledge in relation to mitigation or adaptation may emerge. The Commission’s institutional arrangements should be sufficiently flexible to cope with shifts in its primary focus.
- **Capacity:** Mitigation and adaptation require different expertise. The Commission must have sufficient expertise and support to fulfil its adaptation functions. This includes a skilled secretariat. However, caution should be exercised with respect to staff being transitioned to the Commission at the detriment of other central or local government bodies. The Commission’s composition in relation to adaptation, including support staff, requires careful consideration.
- **Coherence:** Adaptation should be addressed by the Commission in coordination with adaptation and mitigation policy plans from across all of government, including work by the National Security System and Ministry for Civil Defence and Emergency Management. This will avoid inefficiencies and promote co-benefits. The Commission’s oversight can help to ensure that mitigation and adaptation policy workstreams are not siloed from each other.
- **Regional equity:** Ideally, all local and regional councils should have access to adaptation expertise and resources. Smaller councils may struggle in this respect. Again, the Commission’s oversight can help to ensure that sufficient resource and central government direction is available for all regions. This will promote a more equitable response to climate change risks across New Zealand.

Adaptation working group

We submit that the Commission should be given the power to create working groups. Using this power, it could create an adaptation working group similar to the UK’s Adaptation Subcommittee,⁵⁶ to give adaptation the policy focus it deserves, while simultaneously promoting coordinated mitigation and adaptation oversight through a common governance structure.

We caution against naming an adaptation working group a ‘sub-committee’ as this may suggest that the Commission’s adaptation work is of lesser importance.

The specific composition of working groups should not be set legislation. This will allow the Commission to reorganise itself as new challenges come to light, such as adaptation emerging as a more prominent area of focus in later decades. It will also allow labour and resources to be redeployed flexibly according to situational need, to maximise the Commission’s capacity.

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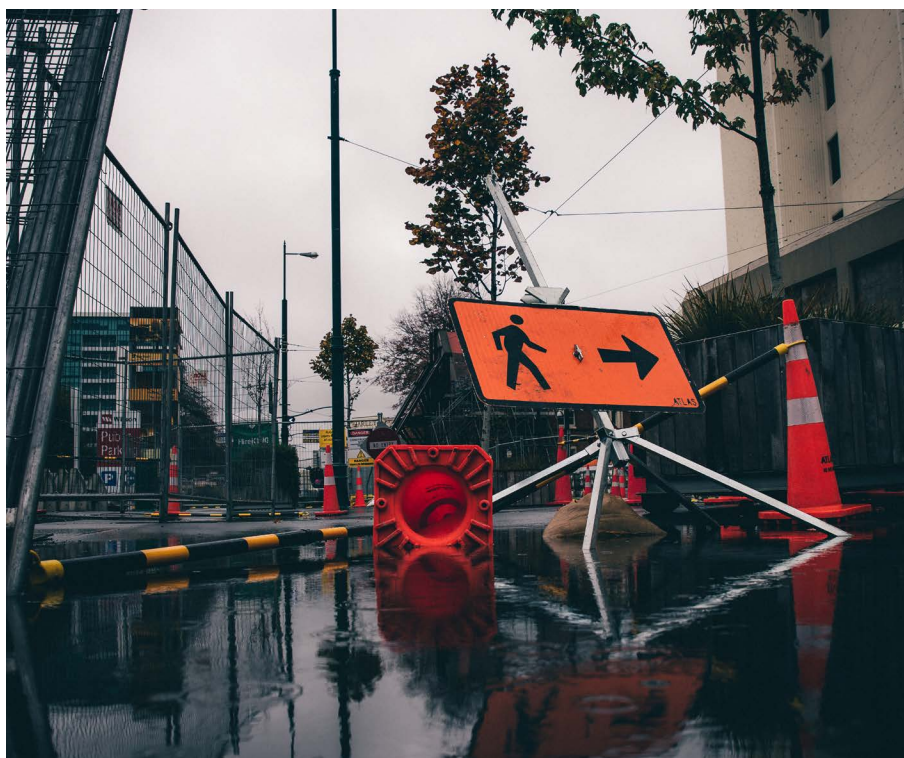
56. The UK Climate Change Act 2008, Schedule 1, section 16, establishes a mandatory Adaptation Subcommittee as part of the UK Committee on Climate Change.

Risk assessments and policy plans

Q15. The Government has proposed a number of new functions to help us adapt to climate change. Do you agree with the proposed functions? Yes or No

Yes. Generation Zero supports the Government being required to prepare a national climate risk assessment, and a national policy plan to address these risks. Progress reviews, in contrast, should be led by the Climate Change Commission.

Our current adaptation approach to climate risk is ad-hoc, uncoordinated, and reactive. New Zealand is one of the few OECD nations without a national adaptation strategy.⁵⁷ The absence of clear signals from central government creates uncertainty for private actors (including insurance providers) about who should bear the costs of risk prevention and compensation.⁵⁸ Local authorities face significant disparities in their ability to effectively plan and fund adaptation measures.⁵⁹ They also lack the incentives to prioritise long-term strategy over short-term electoral pressures when faced with decisions on adaptation.⁶⁰ Our current approach increases the likelihood of adaptation decisions being unfair, cost-inefficient, and subject to the whims of short-term political pressures rather than a principled, long-term framework.



57. PCE, *A Zero Carbon Act for New Zealand: Revisiting Stepping stones to Paris and beyond* (2018).

58. Boston, J. & Lawrence, J. "Funding climate change adaptation: The case for a new policy framework" (2018) *Policy Quarterly*, 14(2), 40-49.

59. Ibid.

60. Hunter et al. "Local government adapting to climate change: Managing infrastructure, protecting resources, and supporting communities", in Nottage, R.A.C. et al. (eds) *Climate change adaptation in New Zealand: Future scenarios and some sectoral perspectives* (2010) New Zealand Climate Change Centre, Wellington.

National risk assessment

A national risk assessment will allow government, communities and businesses to better understand the nature and magnitude of climate change related risks. This information is crucial to developing effective plans in response.

Responsibility for the national risk assessment

The discussion document proposes that the Commission should be responsible for the national risk assessment. We disagree. For the reasons set out below, we recommend that the Government should take overall responsibility for the national risk assessment, after taking into account expert advice from the Commission.

- **Democratic accountability:** The Government has a constitutional duty to identify and address significant risks facing its citizens. It should not shift this responsibility to an independent unelected body. This may enable the Government to avoid responsibility for failing to correctly identify the nature and magnitude of adaptation challenges.
- **Legal and political risk:** Relatedly, agencies which undertake risk assessment are exposed to legal and political risk. Legal risk can arise if the agency fails to identify a risk, or inadequately evaluates its magnitude. Experience has shown that identification of climate risks can prompt litigation by those negatively affected.⁶¹ Political risk can arise if the identification of a particular risk bears financial consequences, such as changes to insurance premia or property values. Giving the Commission ultimate responsibility in relation to the national risk assessment would expose it to legal and political reprisals, compromise its longevity, and undermine its capacity to fulfil its other functions, such as holding the Government to account.
- **Resource intensity:** Producing a national risk assessment is a massive task. It will require large numbers of highly-skilled technical experts and substantial input from across government and external agencies, including local government, MfE, MBIE, and NIWA. Only the Government has the capacity to coordinate these actors.
- **Integrate existing work:** Initial national risk assessments should be coordinated with existing work in this area, including information held by the National Security System and Ministry for Civil Defence and Emergency Management. Central government is best placed to integrate the work currently done by these organs of government. There may be scope in future to rationalise these efforts into a singular comprehensive register.

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61. See, for example, *Weir v Kapiti Coast District Council* [2013] NZHC 3522 where a resident challenged the local authority's decision to identify expected changes to the shoreline caused by sea level rises.

We submit that the Commission's core functions should apply in relation to the national risk assessment:

- **Expert advice:** No less than 6 months before the national risk assessment is due, the Commission should provide advice to the Government on what they perceive to be the key risks, challenges, and opportunities in relation to adaptation.⁶²
- **Hold the Government to account:** Following publication of the national risk assessment, the Commission should assess the Government's assessment of climate change risk. This could be undertaken in conjunction with the Commission's wider watchdog functions in relation to adaptation.

National policy plan

The Zero Carbon Act should require the Government to prepare a national adaptation plan, updated at least every five years, which addresses the risks identified in the national risk assessment. We agree with the national policy plan proposal in the discussion document, including (a) identifying priority policy actions based on scientific evidence and national risk assessments; (b) providing clear signals on the roles of relevant actors and identifying collaborative opportunities, including with iwi; and (c) developing a learning system based on continual independent monitoring, evaluation, and revision. Consistent with the lattermost point, we recommend that the policy plan sets out measurable targets to benchmark successful implementation.

Responsibility for the national policy plan

We agree that the Government should be responsible for adaptation policy planning, for the same reasons that the Government should ultimately be responsible for mitigation policy. These reasons are set out in Part III: Climate Change Commission. In brief, planning for the future is a constitutional duty of government. This should not be outsourced to an unelected body. There are significant ethical, distributional and political implications inherent in adapting to climate change. For example, at some point, sea level rise will likely require the managed retreat of some coastal communities. These decisions rightfully belong to citizens and those elected to represent them.

Review of progress

The Zero Carbon Act should require the Commission to report on the Government's adaptation progress. The review should set out whether the Government's performance is exceeding, meeting, or failing its duty to address the climate risks identified in the national risk assessment. It may also include policy recommendations. The Government should be statutorily required to respond to the Commission's review of progress. Adaptation progress reviews could be incorporated into the Commission's annual progress reports relating to mitigation policy plans.⁶³

Progress reviews serve two important functions in the institutional response to adaptation. First, they promote accountability. Secondly, they encourage regular improvements to the policy response by identifying areas of concern and newly emerging risks.

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62. See UK Climate Change Act 2008, sections 56-57.

63. Under the UK Climate Change Act 2008, section 59, progress reports in relation to adaptation progress are only submitted to Parliament every second year. Generation Zero agrees that preparing adaptation progress reports every year may be unnecessary.



Responsibility for progress reviews

The Commission should be responsible for reviewing our adaptation progress, for the following reasons.

- **Independence:** For a review of progress to be credible, it should be undertaken by an independent body at arm's length from policy development and the political consequences of poor performance.
- **Expertise:** The review of adaptation progress requires a high level of technical knowledge. The Commission, with a wide range of expertise, will be well-equipped to advise on the suitability of policy plans and risk assessments.
- **Policy coherence and momentum:** Progress reviews should support a learning-system model that produces continuous improvements. The Commission should be designed to act as a long-term steward of New Zealand's adaptation and mitigation strategy, that outlives any particular Government. It should be tasked with reviewing our policy plans in a long-term adaptation context, advising Governments on the lessons learned over time, and helping to prevent adaptation policy from being waylaid by political short-termism.

Adaptation reporting power

Q16. Should we explore setting up a targeted adaptation reporting power that could see some organisations share information on their exposure to climate change risks? Yes or No

Yes. Generation Zero supports the establishment of an adaptation reporting power. We believe this reporting power will:

- Provide information to better enable the Government to understand the scope of climate change risks and plan accordingly.
- Incentivise organisations to devote their own resources to developing high-quality adaptation plans. These reports are beneficial to the organisations themselves. The first round of reporting under the UK Act triggered organisational change in 78% of reporting authorities, including the embedding of climate risk and adaptation issues.⁶⁴ It also led to many organisations considering climate risks for the first time, and provided the impetus for organisations to plan to assess climate risks in the future.⁶⁵
- Promote positive flow-on effects to other organisations by providing 'good practice' examples of how to assess and address climate risks. This can lead to cross-sector information networks for sharing adaptation risk.

We submit that the UK Climate Change Act provides a useful model for this reporting power.⁶⁶ Crown entities, state-owned enterprises, local and central government, and private companies that provide public services should be subject to the reporting power. In light of the benefits set out above, including for the organisations themselves, the reporting power should be mandatory rather than voluntary.

With compliance costs in mind, the Government should be required to issue guidance to reporting organisations.⁶⁷ Allowing for joint reports would permit reporting organisations to pool resources together, avoid 'doubling up' on assessments, and provide for greater scope in their reports. Standardised adaptation metrics should be explored to allow the reports to undertake comparable assessments. This would also increase the value of the reports for the purposes of informing the Government's risk assessments and national policy plans.

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64. Jude et al. "Delivering organisational adaptation through legislative mechanisms: evidence from the Adaptation Reporting Power (Climate Change Act 2008)" (2017) *Science of the Total Environment*, 574: 858-871.

65. Ibid.

66. See UK Climate Change Act 2008, sections 62 and 70.

67. See UK Climate Change Act 2008, section 61.

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