

SUMMARY OF CCC SUBMISSION FORM

This is a copy of the submission form that is on the CCC website.

The first part of our consultation gives you the opportunity to upload a pre-prepared submission, or to tell us the one big thing that you feel is really important that we know.

The second part of our consultation focuses on what we call the 'six big issues'. These issues have framed our thinking as we have developed a path for Aotearoa to meet its domestic targets and international obligations. These are:

- The pace of change
- Future generations
- Our contribution
- Role and type of forests
- Policy priorities to reduce emissions
- Technology and behaviour change

The third part of our consultation is more detailed. You will be given the opportunity to answer specific questions on:

- Our approach: the principles we used for our analysis
- Our emissions budgets numbers, including the levels and break down by gas
- Our advice on what we need to enable an enduring climate transition
- Our path: the key actions required in our first three budgets for each sector, including our advice on the multi-sector actions
- Our advice on the Nationally Determined Contribution, as requested by the Minister for Climate Change
- Our advice on potential reductions in biogenic methane, as requested by the Minister for Climate Change

You can choose which of the above sections you wish to respond to, depending on how much detail you want to engage with on these topics.

Do you want to continue with the consultation questions or do you want to submit a pre-prepared response?

I want to submit a pre-prepared response

I want to continue with the consultation questions

File upload - Please make sure your file is under 25MB

Are you here to tell us your one big thing?

If you're here because you have one big thing to tell us, you can do that here. If this is all you want to provide by way of your submission, that's fine by us. We will consider all the submissions we receive.

Our six big issues - the pace of change

1. Our six big issues - the pace of change

Our emissions budgets will chart a course for Aotearoa to meet its 2050 targets. The level at which they are set will determine how fast emissions will need to be reduced, what actions are needed to achieve them, and by when.

We need to make a decision about how fast Aotearoa should transition in the next 15 years (over the next three emissions budgets). We have proposed emissions budgets that are technically and economically achievable, as well as ambitious.

We must reduce emissions with pace while allowing the country to continue to grow so that future generations inherit a thriving, climate-resilient and low emissions Aotearoa.

The transition to a low emissions society needs to be well-signalled, equitable, and inclusive. This will help us to maximise the opportunities, minimise disruption and inequalities, and create an enduring result. It is essential that the transition is fair and equitable for people and the environment.

The transition to a low emissions Aotearoa needs to be both accelerated and predictable – acting too hastily will result in abrupt and disruptive changes. Delaying action carries the risk of a sharper and more disruptive transition later, locking in emissions intensive infrastructure that could become stranded and contribute to more severe climate change. Planning ahead so that technologies, assets and infrastructure can be replaced with low emissions choices on as natural a cycle as possible will help business and industry keep up with the transition.

The table below shows the emissions budget levels out to 2035. It shows that we are taking gradual, but bold steps to reaching our 2050 targets.

	2018	Emissions budget 1 (2022 – 2025)	Emissions budget 2 (2026 – 2030)	Emissions budget 3 (2031 – 2035)
All gases, net (AR4)		271 Mt CO ₂ e	286 Mt CO ₂ e	223 Mt CO ₂ e
Annual average	69.2 Mt CO ₂ e	67.7 Mt CO ₂ e/yr	57.3 Mt CO ₂ e/yr	44.6 Mt CO ₂ e/yr
Average reductions on 2018 levels		2%	17%	36%

[Related information](#)

2. Top of Form

Do you agree that the emissions budgets we have proposed would put Aotearoa on course to meet the 2050 emissions targets?

☐ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly disagree ☐ Do not know

Please explain your answer (1000 word limit)

3. Bottom of Form

2. Our six big issues - future generations

- Climate change is an issue that affects both present and future generations of New Zealanders.
- We believe we should meet the 2050 emissions targets in a way that does not put unnecessary burden onto future generations.
- We propose a path that would avoid pushing the cost of meeting the 2050 emissions targets to future generations. We call this 'locking in net zero'.
- This means taking actions now to decarbonise the economy and reduce gross emissions to ensure a thriving, productive and climate-resilient economy.
- Our approach prioritises actions that reduce gross emissions within our borders. Relying heavily on forestry before 2050 is likely to make maintaining net zero long-lived greenhouse gas emissions after 2050 difficult. It would delay action, lead to higher cumulative emissions and make the job ahead of us more difficult.
- Our approach also aligns closely with taking a long-term intergenerational view and the concept of tiakitanga and manaakitanga.

[Related information on our approach to locking in net zero](#)

Do you agree we have struck a fair balance between requiring the current generation to take action, and leaving future generations to do more work to meet the 2050 target and beyond?

☐ Strongly agree ☐ Agree

3. Our six big issues - our contribution

- The Climate Change Response Act 2002 requires emissions budgets be set with a view to contributing to the global goal to limit warming to within 1.5°C of pre-industrial levels. At the same time, emissions budgets must be ambitious but achievable and have a focus on domestic actions.
- Aotearoa has signed up to the global effort to address climate change through its obligations under the Paris Agreement and the submission of its Nationally Determined Contribution (NDC).
- Aotearoa has already committed to keep net emissions to 30% below 2005 levels by 2030, after accounting for removals from forestry. To meet the NDC, Aotearoa can reduce its own emissions, plant trees, or support other countries to reduce their emissions (through purchases of international emissions units).
- The Commission was asked to determine if the first NDC for Aotearoa is compatible with contributing to global efforts to limit global warming to 1.5°C above pre-industrial levels.
- Our analysis has found that the Government's commitment to reduce net emissions by an average of 30% from 2005 emissions levels over the 2021-2030 period is not compatible with global efforts.
- If Aotearoa is to play its part as a developed nation, the NDC would need to be strengthened to reflect emission reductions of much more than 35% below 2005 levels by 2030.
- **See Chapter 4: Contributing to the global to 1.5°C goal and Chapter 8: The global 1.5°C goal and Nationally Determined Contribution for Aotearoa of the Advice report for more information.**

Do you agree with the changes we have suggested to make the NDC compatible with the 1.5°C goal?

☐ Strongly agree ☐ Agree

4. Our big six issues - Role and type of forests

- Reducing emissions from long-lived gases is needed to prevent further warming of the atmosphere, and to meet our 2050 targets.
- Our approach suggests a different, but important role for forestry in meeting the 2050 target than has been outlined in previous analyses. We propose that by 2050, carbon removals from forests should only be used when there are no technologies or changes which could avoid creating emissions in the first place.
- Aotearoa needs to build a long-term carbon sink large enough to offset residual long-lived gas emissions without ongoing land use conversion. This means starting now to grow new native forests on relatively less productive land so that carbon removals can be used to offset the remaining long-lived gas emissions from 2050 onwards.
- Establishing new native forests on less productive land offers a way for Aotearoa to build up an enduring carbon sink while delivering wider benefits for erosion, soil health, water quality and biodiversity.
- Native forests can create a long-term carbon sink while providing a range of other benefits, like improving biodiversity and erosion control. Incentives are needed to get more native trees planted.
- Pine trees will still play an important role in meeting our 2050 targets and could support a future bioeconomy, as bioenergy to replace fossil fuels and as timber for building.
- Existing forests, small blocks of trees, soils and wetlands can all store more carbon. Work is needed to better understand this potential and how to include this in accounting systems.
- We have heard through our engagement about concerns that the speed and potential extent of afforestation could have negative impacts on rural communities and provincial centres that are reliant on the food and fibre industry for employment. There is a risk that forest sequestration could be used to offset emissions rather than making gross emissions reductions. This would make it difficult for Aotearoa to maintain net zero long-lived greenhouse gas emissions beyond 2050, in addition to the potential impacts on communities and the wider food and fibre sector. We have factored this into our emissions budgets analysis. This is in line with our principle to focus on decarbonising the economy.
- [Related information](#)

Do you agree with our approach to meet the 2050 target that prioritises growing new native forests to provide a long-term store of carbon?

☐ Strongly agree ☐ Agree

5. Our six big issues - policy priorities to reduce emissions

- The Government must develop an emissions reduction plan outlining how it will meet the emissions budgets. This includes actions needed to deliver the first emissions budget, and subsequent emissions budgets and the 2050 targets. Policies to reduce emissions should also focus on creating a thriving and climate-resilient Aotearoa.
- We need a comprehensive and mutually reinforcing package of policies to achieve the deep emissions reductions required. Such a package should include three different types of intervention to enable change:
- **Action to address barriers**, such as regulation, education and support to help people and businesses to reduce emissions.
- **Emissions pricing and other market incentives** to influence investments and choices. In Aotearoa, the NZ ETS is the main pricing tool to incentivise choices, but there are others such as taxation or subsidies.
- **Investments to spur innovation and system transformation**, such as in technology or infrastructure.
- [Related information](#)

Top of Form

What are the most urgent policy interventions needed to help meet our emissions budgets? (Select all that apply)

- ☐ Action to address barriers
- ☐ Pricing to influence investments and choices
- ☐ Investment to spur innovation and system transformation
- ☐ None of them

6. Our six big issues - technology and behaviour change

- We need to recommend emissions budgets which can put Aotearoa on track to meet the 2050 targets, and which are both ambitious and achievable. The path we have proposed to meet our emissions budgets will need a mix of changing behaviours and adopting new technologies.
- In recommending emissions budgets we suggest some changes will be needed to individual, business and organisational behaviours to help meet the budgets. These include changes to the way we travel – such as reducing private car use and increasing the use of walking, cycling and public transport. These also include changes to the behaviour of businesses to adopt more energy efficient practices. While there is great potential for behaviour change to help reduce emissions, in recommending the first three budgets we have been cautious about how large a change we can expect.
- There is also uncertainty around how fast technology will develop in the next 15 years. Some technologies are already available to be used, but could get better or cheaper in the future. An example would be electric vehicles. Other technologies are not yet ready to be used, so we are more uncertain about when they might be ready, what they might cost, and how much they could reduce emissions by.
- We want to ensure that our emissions budgets can be met under a range of different possible circumstances. We have proposed emissions budgets which are achievable using technologies that are available to use today and by relying on changes to individual, businesses and organisational behaviours which we think could reasonably occur over the next 15 years.

Do you think our proposed emissions budgets and path to 2035 are both ambitious and achievable considering the potential for future behaviour and technology changes in the next 15 years?

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree

Would you like to end your submission here, or move on to the detailed section of our consultation?

☐ I want to continue with the consultation questions ☐ I would like to end my submission here

Detailed questions on our advice

The next set of questions are about the recommendations in our draft Advice report.

In total, there are 24 consultation questions, grouped as follows:

Our approach and emissions budgets

- Our approach – the principles we used for our analysis (one question)
- Emissions budgets numbers – including the levels and breakdown by gas (three questions)

Our enabling recommendations

- Our advice on what we need to enable an enduring climate transition (five questions)

Our path to 2035

- Locking in net zero (two questions)
- The path to meeting the budgets (one question)
- An equitable, inclusive and well-planned transition (one question)

The direction of policy in the Government's emissions reduction plan

- Our advice on the actions required for each sector (one question per sector):
 - Transport
 - Heat, Industry, Power
 - Agriculture
 - Forestry
 - Waste
- Our advice on a multi-sector strategy (one question)
- Our advice on the rules for measuring progress (one question)

Advice on the Nationally Determined Contribution (NDC) and potential reductions in biogenic methane

- Our advice on the NDC (three questions)
- Our advice on potential reductions in biogenic methane (one question)

1. How we developed our advice

Principles to guide our advice

We have developed a set of key principles to help guide our advice and the transition to a thriving, climate-resilient and low emissions Aotearoa. Our key principles are:

- Align with the 2050 targets.

- Focus on decarbonising the economy.
- Create options.
- Avoid unnecessary cost.
- Transition in an equitable and inclusive way.
- Increase resilience to climate impacts.
- Leverage co-benefits.

See Section 2.2 of the Advice report for more information.

[Click for more information](#)

Detailed information on the principles:

Principle 1: Align with the 2050 targets. Aotearoa must adopt actions that set it on a path to meet the 2030 and 2050 emissions reduction targets, sustain those targets and set Aotearoa up for net negative emissions later, and contribute to the global effort to limit warming to 1.5°C. Meeting these targets requires a long-term view of investments and infrastructure developments. Assets and investments with long lifetimes will need to be transformed, and planning for and developing new low emissions infrastructure will take time. For these reasons, actions taken in the next five years will need to set Aotearoa up to deliver the deeper reductions required in subsequent emissions budgets and to meet and sustain the 2050 targets.

Principle 2: Focus on decarbonising the economy. Aotearoa should prioritise actions that reduce gross emissions within our borders, as well as removing emissions by sequestering carbon dioxide in forests. Aotearoa should focus on decarbonising its industries rather than reducing production in a way that could increase emissions offshore. Forest sequestration should not displace making gross emissions reductions. Relying heavily on forestry before 2050 is likely to make maintaining net zero long-lived greenhouse gas emissions after 2050 challenging. It would delay action, lead to higher cumulative emissions and put the burden of addressing gross emissions on to future generations. This would require significantly more land to be converted to forestry in the future.

Principle 3: Create options. There is much uncertainty in embarking on this decades-long transition. Uncertainty is not a reason for delay. There is value in creating options for meeting the targets and having the ability to adjust course as the transition proceeds. The decisions taken now should open up a wide range of future options and keep options open for as long as possible. This needs to be balanced with the need to take advantage of key windows of opportunity, where making significant investments in key technologies could ultimately make the transition to low emissions cheaper and faster.

Principle 4: Avoid unnecessary cost. The actions Aotearoa takes to meet emissions budgets and targets should avoid unnecessary costs. This means using measures with lower costs and planning ahead so that technologies, assets and infrastructure can be replaced with low emissions choices on as natural a cycle as possible. This will help to avoid scrapping assets before the end of their useful lives or being left with stranded assets.

Principle 5: Transition in an equitable and inclusive way. How Aotearoa responds to climate change should consider who will be most impacted, how those impacts can be mitigated and how existing inequities can be reduced. It should consider equity across different groups of society, regions and communities and generations. The climate transition should be well planned and signalled in advance to give communities, businesses and individuals time to innovate and adapt, build new markets and retrain. Aotearoa will need to build new markets, invest in peoples' skills, and provide opportunities for environmentally and socially sustainable work. It should not penalise early movers.

Principle 6: Increase resilience to climate impacts. The actions Aotearoa takes to reduce emissions should avoid increasing the country's overall exposure to climate risks such as drought, flooding, forest fires and storms. Where possible, actions should increase the country's resilience to the impacts of climate change that are already being experienced and that will increase in the future.

Principle 7: Leverage co-benefits. The actions Aotearoa takes to meet emissions budgets and targets should consider the wider benefits, including benefits to health, broader wellbeing and the environment. Co-benefits can provide

further reason to take particular actions where the initial emissions reductions may be modest or appear relatively costly.

Do you support the principles we have used to guide our analysis?

☐ Fully support ☐ Partially support ☐ Neutral ☐ Do not support ☐ Do not know

Please explain your answer (400 word limit)

2. Emissions budgets numbers

Section one: Stepping stones to our 2050 target

Emissions budgets chart the course for stepping down emissions. They set the maximum amount of greenhouse gases Aotearoa can emit over a five-year period. Each budget must be met, as far as possible, through domestic emissions reductions and removals.

We must provide advice on the level of the first three emissions budgets. We are required under the Climate Change Response Act 2002 to provide emissions budgets that include all greenhouse gases expressed as a net quantity of carbon dioxide equivalent.

We have proposed the first three draft emissions budgets at a level that we think is achievable, but also ambitious enough to put us on track to meet the 2050 target of being net zero for long-lived gases.

What do our emissions budgets propose?

For net emissions in Aotearoa, the annual average reduction from 2018 is about 2% between 2021-25, 17% between 2026-30 and 36% between 2031-35.

Carbon dioxide emissions from fossil fuels would reduce by around 6%, 15% and 26% across the first three budgets. Biogenic methane from livestock will need to reduce around 7%, 11% and 16% across the first three budgets.

Our analysis shows a range of ways that Aotearoa can meet the 2050 targets. This gives us confidence that the budgets we are proposing are achievable under a variety of possible futures.

See section 2.3 of the draft Advice Report for more information.

[Click for more information](#)

Do you support budget recommendation 1? Is there anything we should change and why?

Too ambitious

About right

Not ambitious enough

Don't know

Please explain your answer (1000 word limit)

3. Breakdown of emissions budgets

We have assessed the contribution of the different greenhouse gases and the proportions of domestic emissions reductions and domestic removals needed to meet the emissions budgets and targets. At the core of this assessment is the need to set Aotearoa up to meet the 2050 emissions reduction targets and sustain them beyond 2050.

The split-gas nature of the 2050 target means that forestry removals cannot be used to offset biogenic methane emissions in emissions budgets. Gross biogenic methane emissions need to be reduced by at least 10% below 2017 levels by 2030 and 24-47% below 2017 levels by 2050.

See section 2.4 of the draft Advice Report for more information.

Do you support our proposed break down of emissions budgets between gross long-lived gases, biogenic methane and carbon removals from forestry? Is there anything we should change, and why?

[Click to see Budget recommendation 2](#)

[Click to see Budget recommendation 3](#)

	Too ambitious	About right	Not ambitious enough	Don't know
Gross long-lived gases	☐	☐	☐	☐
Biogenic methane	☐	☐	☐	☐
Forestry	☐	☐	☐	☐

Please explain your answer (1000 word limit)

4. Limit on offshore mitigation for emissions budgets and circumstances justifying its use

Section one: Emissions budgets recommendations

We need to advise the Government on the circumstances and limit to using offshore mitigation (buying emissions units or emissions reductions and removals from overseas) to meet emissions budgets.

We recommend that offshore mitigation should only be used if there is an unforeseeable 'force majeure' event, and that the limit set now on its use should be zero.

See section 2.5 of the draft Advice Report for more information.

4. Do you support budget recommendation 4? Is there anything we should change, and why?

[Click to see Budget recommendation 4](#)

Fully support Partially support Neutral Do not support Don't know

Please explain your answer (1000 word limit)

Enabling an enduring climate transition - intro

Section two: Recommendation for enabling an enduring climate transition

Climate change is an intergenerational and cross-system issue. Taking actions to address it will require unprecedented coordination, an inclusive approach and a step change in climate policy in Aotearoa to drive emissions reductions.

Many of the changes that will need to be made will take time to implement. It will, therefore, require Aotearoa to look forward not just to the next few years, but to 2050 and beyond. Taking a long-term view and sending signals early will help to provide communities, businesses and investors with the predictability that they need to plan.

Climate change touches on the lives of everyone that lives in Aotearoa. This means all New Zealanders, businesses, industries, communities and regions will need to play their part in addressing it. Ensuring that the actions Aotearoa takes to reduce emissions are enduring will require an inclusive and transparent approach with all New Zealanders working together.

We have developed five enabling recommendations that will be crucial for ensuring that the climate transition is enduring.

These are:

1. Cross-party support for emissions budgets
2. Coordinate efforts to address climate change across Government
3. Genuine, active and enduring partnership with iwi/Māori
4. Central and local government working in partnership
5. Establish processes for incorporating the views of all New Zealanders

See Section 2.6 of the draft Advice report for more information.

5. Cross-party support for emissions budget

It is critical that emissions budgets are non-partisan and set transparently to ensure enduring progress. While the Minister for Climate Change is already required under the Climate Change Response Act 2002 to consult with other political parties on emissions budgets before they are notified, debating the budgets in parliament is important to ensure transparency and to ensure that cross-party deliberations are on the parliamentary record.

See Section 2.6.1 of the draft Advice Report for more information.

[Click to see the full recommendation](#)

5. Do you support enabling recommendation 1 on cross-party support for emissions budgets? Is there anything we should change and why?

☒ Fully support ☐ Partially support ☐ Neutral ☐ Do not support ☐ Do not know

Please explain your answer (1000 word limit)

6. Coordinate efforts to address climate change across Government

It is important that the Government coordinate its efforts to address climate change in its emission reduction plan, which outlines the policies and strategies to meet the first emissions budget. As it will take time for government actions to take effect, Government should also focus on policies for delivering future emissions budgets to 2050 and beyond.

Integrating climate change initiatives across government would be strengthened by consolidating funding for these initiatives within a dedicated Vote Climate Change. Creating a separate appropriation for climate change is appropriate given the gravity of the issue and the scale of response required from government and the whole of society.

We have provided progress indicators for this recommendation.

See Section 2.6.2 of the draft Advice report for more information.

[Click to see the full recommendation and progress indicators](#)

6. Do you support enabling recommendation 6 on coordinating efforts to address climate change across Government? Is there anything we should change and why?

Fully support Partially support Neutral Do not support Do not know

Please explain your answer (1000 word limit)

7. Genuine, active and enduring partnership with iwi/Māori

The Commission serves in more of a tiaki or a stewardship capacity. Acknowledging our respective roles and maximising our ability to work collaboratively in partnership is essential for the transition to a thriving, climate-resilient and low emissions Aotearoa.

This can be achieved through a genuine partnership with iwi/Māori that emphasises rangatiratanga and prioritises a kaitiaki approach to resource management. In more recent times, engagement and advocacy within the Crown/Māori partnership have improved. However, further effort should be made to remove barriers and progress actions that give real effect to a genuine and enduring Treaty partnership.

We have recommend that the Government published by 31 December 2022, a plan to partner with iwi/Māori and local government to implement emissions reducing pathways.

See Section 2.6.3 of the draft Advice Report for more information.

[Click to see the full recommendation and progress indicator](#)

7. Do you support enabling recommendation 3 on creating a genuine, active and enduring partnership with iwi/Māori? Is there anything we should change and why?

Fully support Partially support Neutral Do not support Do not know

Please explain your answer (1000 word lim

8. Central and local government working in partnership

Local government plays an important role in facilitating the transition to a thriving, climate-resilient and low emissions Aotearoa. Our engagement over the past 12 months has consistently highlighted the importance of coordination between central and local government.

Delivering on emissions budgets and targets will require central and local government to work in partnership. Policy alignment and funding will be important for delivering low emissions outcomes. Alignment will be needed across the Local Government Act, the Building Act and Code, the Resource Management Act (RMA), national direction under the RMA, proposed RMA reforms and the infrastructure plan.

See Section 2.6.4 of the draft Advice Report for more information.

[Click to see the full recommendation](#)

8. Do you support enabling recommendation 4 on central and local government working in partnership? Is there anything we should change and why?

☒ Fully support ☐ Partially support ☐ Neutral ☐ Do not support ☐ Do not know

Please explain your answer (1000 word limit)

9. Ensuring inclusive and effective consultation, engagement and public participation

Taking action on climate change inevitably involves making choices, judgements and trade-offs that touch on the lives of all New Zealanders. In making these decisions, it is helpful to understand a wide range of perspectives, not just of the highly engaged.

A collective and coordinated response will require the views and perspectives of people from all parts of society. Government needs to engage with audiences in ways that suit them, are culturally appropriate and ensure they can contribute.

At the same time, there is a need to avoid over-consultation. Aotearoa needs to ensure consultation is genuine collaboration or co-design between government and citizens rather than a tick box exercise.

There are a number of tools that could be used to address these issues. In our engagement, some stakeholders suggested that an ongoing public forum or citizens' assembly for climate change should be established.

See Section 2.6.5 of the draft Advice Report for more information.

[Click to see the full recommendation and progress indicator](#)

9. Do you support enabling recommendation 5 on establishing processes for incorporating the views of all New Zealanders? Is there anything we should change and why?

☐ Fully support ☐ Partially support ☐ Neutral ☐ Do not support ☐ Do not know

Please explain your answer (1000 word limit)

10-11. Locking in net zero

We need to avoid pushing the burden of climate action to future generations. In analysing how we can meet the 2050 targets, we have designed pathways that avoid pushing the burden to future generations. We call this 'locking in net zero'.

This aligns with the requirement in the Climate Change Response Act 2002 to consider the impacts on future generations, and the need for Aotearoa to contribute to the global goal to limit warming to within 1.5°C of pre-industrial levels and reduce the cumulative emissions of long-lived gases as far as possible.

Focusing on reducing gross long-lived gas emissions and seeking to 'lock in net zero' by 2050 requires two key transformations.

1. **Decarbonise the sources of long-lived gas emissions wherever this is feasible.** This means setting a path that would achieve near-complete decarbonisation in a number of areas.
2. **Build a long-term carbon sink large enough to offset residual long-lived gas emissions without ongoing land use conversion.** This means starting now to grow new native forests on relatively less productive land so that carbon removals can be used to offset the remaining long-lived gas emissions from 2050 onwards.

Achieving both of these key transformations will require strong, accelerated and sustained action to 2050.

See Chapter 3 or Section 3.3 of the draft Advice Report for more information.

10. Do you support our approach to focus on decarbonising sources of long-lived gas emissions where possible? Is there anything we should change and why?

☐ Fully support ☐ Partially support ☐ Neutral ☐ Do not support ☐ Do not know

Please explain your answer (400 word limit)

12. Our path to 2035

To arrive at our proposed emissions budgets, we have created a path to 2035. This was developed by looking at all the available options for reducing emissions, their possible deployment in the next 15 years and whether this would put Aotearoa on a path to meet the domestic 2030 and 2050 targets.

We have tested our recommended emissions budgets to understand whether it would be possible to meet them in different ways.

The table below provides a summary of key actions in our path across the first three budget periods.

		Budget 1	Budget 2	Budget 3
Transport	Road transport	Accelerate EV uptake Improve average efficiency of new ICE vehicles		Phase out new light ICE vehicles Electrify medium and heavy trucks
	Reducing travel demand	Encourage remote working for those who can Encourage switching to walking, cycling and public transport		
Heat, Industry and Power	Non-road transport	Electrification of rail	Biofuel blending Start electrification of ferries and coastal shipping	
	Buildings	No new gas heating systems installed after 2025 Improve thermal efficiency		Start phase out of gas in buildings
	Electricity	Phase out fossil base-load generation	Transmission and distribution grid upgrades Reduce geothermal emissions	Expand renewable generation base Achieve ~95% renewable generation
	Industrial process heat	Replace coal with biomass and electricity		Replace gas with biomass and electricity
	Agriculture	Adopt low emissions practices on-farm	Adopt low emissions breeding for sheep	Encourage the adoption of new low methane technologies when available
Land	Native Forests	Ramp up establishing new native forests		Establish 25,000 hectares per year
	Exotic Forests	Average 25,000 hectares per year of new exotic plantation forests		Ramp down planting new exotic plantation forests for carbon storage
Waste and F-gases	Waste	Divert organic waste from landfill Improve and extend landfill gas capture		
	Hydrofluorocarbons (HFCs)	Reduce import of HFCs in second-hand products Increase end-of-life recovery		

See Chapter 3 or Section 3.6-7 of the draft Advice Report for more information.

12. Do you support the overall path that we have proposed to meet the first three budgets?
Is there anything we should change and why?

☐ Fully support
 ☐ Partially support
 ☐ Neutral
 ☐ Do not support
 ☐ Do not know

Please explain your answer (1000 word limit)

13. An equitable, inclusive and well-planned climate transition

Aotearoa must have an equitable and fair transition to a low emissions economy and society, with benefits shared by all people.

The transition to a low emissions society will bring opportunities, benefits, challenges and costs. Different groups of society, regions and sectors will be affected in different ways and impacts will not always be evenly distributed.

The Government will need to address this through careful policy design and targeted support. Any change needs to be well-signalled, equitable, and inclusive to make sure that it maximises opportunities while minimising disruption and inequities.

See Chapter 5 or Section 5.10 of the draft Advice Report for more information.

[Click to see the recommendation, progress indicator and necessary actions](#)

13. Do you support the package of recommendations and actions we have proposed above to ensure an equitable, inclusive and well-planned climate transition, and is there anything we should change?

☐ Support all the actions ☐ Support some of the actions ☐ Do not support these actions ☐ Do not know ☐ Neutral

Please explain your answer (1000 word limit)

The direction of policy

Direction of the emissions reduction plan

The Government is required to develop an emissions reduction plan outlining how it will meet the emissions budgets. It sets out the recommended policies and strategies for meeting our emissions budgets, looking at what's needed across different sectors.

Our analysis has found that current policies will not be enough to meet the emissions budgets – a comprehensive package of policies will be needed to achieve the deep emissions reductions required.

The following questions will specifically relate to our draft recommendations for the Government's emissions reduction plan. They are divided by sector-specific policies on:

Transport
Heat, Industry, Power
Agriculture
Forestry
Waste

We also provide advice on multi-sector strategy policies. We have developed two time critical necessary actions:

Aligning investments for climate outcomes
Drive low emissions choices through the NZ Emissions Trading Scheme (NZ ETS)

See Chapter 6 or Section 6.1 of the draft Advice Report for more information.

14. Transport

About the sector

Transport emissions have been a major and growing contributor to total greenhouse gas emissions in Aotearoa.

In 2018, transport emissions made up 36.3% of total long-lived gases. This is 16.6 Mt CO₂-e.

Reducing transport emissions is crucial to meeting our climate targets. Action here will have an immediate and lasting impact. Aotearoa can cut almost all transport emissions by 2050. The technology already exists and it is improving fast.

In Aotearoa we need to change the way we build and plan our towns and cities and the way people and products move around. This includes making walking and cycling easier with good cycleways and footpaths. It means moving freight off the road and onto rail and shipping. It means reliable and affordable public and shared transport systems. And it means an electric or low emissions transport fleet.

What does our advice say?

An integrated national transport network should be developed to reduce travel by private car. There needs to be much more walking, cycling and use of public and shared transport.

Electric vehicles are key and need to be widely adopted. We want to see the majority of cars, vans and SUVs that are imported electric by 2035. The Government will need to provide support and incentives to make this happen.

Use of low carbon fuels, such as biofuels and hydrogen, needs to increase, particularly in heavy trucks, trains, plane, and ships, which are harder to make electric at the moment.

See Chapter 6 or Section 6.1.1 Transport of the draft Advice Report for more information.

[More information on accelerating light electric vehicle uptake](#)

14. Do you support the package of recommendations and actions for the transport sector? Is there anything we should change and why?

[More information on developing an integrated national transport network](#)

[More information on low carbon fuels for trains, ships, heavy trucks and planes](#)

☐ Support all the actions ☐ Support some of the actions ☐ Do not support these actions ☐ Do not know ☐ Neutral

Please explain your answer (1000 word limit)

15. Heat, industry and power

About the sector

Heat, industry and power emissions come from using fossil fuels, such as coal and gas, to generate electricity (22%); producing heat and chemical reactions to manufacture products (47%); fossil fuels used in our buildings and homes (7%); oil refining, oil and natural gas production and the operation of coal mines (12%); and the use of off-road vehicles and machinery (11%).

What does our advice say?

Our analysis looks at how we can reduce emissions across these sectors. Our advice recognises Aotearoa must move at a pace that allows business and industry to keep up with the transition. We have balanced the need to move quickly with economic cost.

Decarbonising energy

Aotearoa needs to decarbonise its energy use and production. This means drastically reducing the use of fossil fuels and increasing the amount of renewable energy, combined with substantial improvements in energy efficiency. The transition away from fossil fuels to a low emissions energy system will be dramatic and will occur in the coming decades. Ensuring a smooth and appropriately sequenced phase down of fossil fuels, alongside a scale up of renewable energy will need to be carefully managed.

Government can provide industry with greater certainty by clearly signalling the timing and direction of travel as the energy system decarbonises, so that industry is able to plan. To support this, the Government could develop a National Energy Strategy and set a target for renewable energy.

Maximise the use of electricity as a low emissions fuel

Aotearoa has one of the lowest emissions electricity systems in the world and this can be further used to reduce emissions from transport, process heat and space heating.

This would result in a steep increase in demand for electricity. The industry will need to build more renewable generation to meet this in a timely manner. It will be critical that electricity remains affordable and reliable as we expand its production and increasingly use it to decarbonise other sectors.

Scale up provision of low emissions energy sources

Some activities, such as aviation, will be hard to electrify. Aotearoa will need a range of energy sources to support decarbonisation. Diverse energy sources will also be needed to maintain energy security.

Our analysis shows that there are opportunities to develop and use alternative low emissions energy, for example bioenergy or hydrogen. This could enable further decarbonisation options in the future.

Reduce emissions from process heat

Reducing emissions from process heat and changing how Aotearoa produces commodities for the world will be critical for meeting the 2050 target. Improving energy efficiency, optimising processes and switching to cleaner energy sources like electricity and biomass are key opportunities.

Support innovation to reduce emissions from industrial processes

Aotearoa has several single company industries with industrial processes that are unique to this country. These industrial processes create emissions that can be challenging to abate.

If the Government decides these hard-to-abate industries are critical national infrastructure, it could work collaboratively to support innovation to potentially reduce emissions in these sectors in the future.

Efficiently use energy in buildings

The homes, buildings and infrastructure we build now will still be here in 2050. We need to think about our choices with climate change in mind. That means using low emissions heating technologies and prioritising energy efficiency.

Our advice

Achieving the emissions reductions that are aligned with our preferred path will require action across many different parts of the heat, industry and power sector.

We have developed one time critical necessary action and six necessary actions required in the heat, industry and power sector.

See Chapter 6 or Section 6.1.2 Heat, Industry and Power of the draft Advice Report for more information.

[Click for recommendation and progress indicator on decarbonising energy](#)

Do you support the package of recommendations and actions for the heat, industry and power sectors? Is there anything we should change and why?

[Information on maximising the use of electricity as a low emissions fuel](#)

[Information on scaling up the provision of low emissions energy sources](#)

[Information on reducing emissions from process heat](#)

[Information on innovation to eliminate emissions from industrial processes](#)

[Information on energy efficiently use in buildings](#)

[Information on transport, buildings and urban form](#)

☐ Support all the actions ☐ Support some of the actions ☐ Do not support these actions ☐ Do not know ☐ Neutral

Please explain your answer (1000 word limit)

16. Agriculture

About the sector

In 2018, agriculture emissions made up 90% of biogenic methane and 18% of long-lived gas emissions. This is 1.2 Mt CH₄ and 8.3 Mt CO₂-e, respectively.

Agriculture has a large role to play in reducing emissions and farming needs to become even more efficient. There have been improvements in the last few decades, but more can happen.

Aotearoa has been an agricultural world leader over recent decades. We must adapt and improve our use of our land to keep this status. This means developing, adopting and using practices and technologies that lower emissions and address climate change.

What does our advice say?

The Government needs a cohesive strategy that includes water, biodiversity and climate. There are multiple benefits to taking a holistic view of how we use and protect our land.

There are changes farmers can make now to reduce emissions on their farms while maintaining, or even improving, productivity. This includes reducing animal numbers and better animal, pasture and feed management. Policy support is needed to make this happen.

Our advice advocates for a long-term plan for targeted research and development of new technologies to reduce emissions from agriculture.

See Chapter 6 or Section 6.1.3 Agriculture of the draft Advice Report for more information.

16. Do you support the package of recommendations and actions for the agriculture sector, and is there anything we should change?

[Information on options for alternative farming systems and practices](#)

☐ Support all the actions ☐ Support some of the actions ☐ Do not support these actions ☐ Do not know ☐ Neutral

Please explain your answer (1000

17. Forestry

About the sector

In 2018, forests removed 9.5 Mt CO₂ from the atmosphere. Our emissions would be 14% higher without this.

Forests remove carbon dioxide from the atmosphere as they grow and emit it when they burn or decompose after harvest or clearance.

By 2035, our path shows that net forestry removals reach 14.5 Mt CO₂. This puts us on track to meeting our 2050 target.

What does our advice say?

The path we are recommending is focused on reducing emissions at the source. Aotearoa cannot continue to rely as heavily on forestry to meet its targets.

We need to manage our forests to provide a long-term carbon sink. Getting to net zero emissions of long-lived gases will require removals of carbon dioxide from the atmosphere. Forestry, both native and exotic, will play an important role.

New native forests can continue to remove carbon dioxide for centuries, balancing those hard to reduce emissions (such as aviation or heavy transport) so we can reach net zero emissions of long-lived gases by 2050 and stay at zero (or go negative emissions) beyond.

Protecting our native forests has the flow on effect of our protecting our biodiversity, wetlands and soil, all of which store carbon. These carbon stores help reduce emissions and expanding these areas, working in tandem with plantation forestry, will support our future bioeconomy.

Pine trees will still play an important role in getting to 2050 and could support a future bioeconomy, as bioenergy to replace fossil fuels and as timber for building. But we need to stop our over-reliance on pine trees to balance gross emissions.

Existing forests, small blocks of trees, soils and wetlands can all store more carbon. Work is needed to better understand this potential and how to include this in accounting systems.

Incentives are needed to get more native trees planted and create a long-term carbon sink.

See Chapter 6 or Section 6.1.4 Forestry of the draft Advice Report for more information.

[Click to see the recommendation and progress indicator on managing forests to provide a long-term carbon sink](#)

17. Do you support the package of recommendations and actions for the forestry sector? Is there anything we should change and why?

[Information on the necessary actions to manage forests to provide a long-term carbon sink](#)

☐ Support all the actions ☐ Support some of the actions ☐ Do not support these actions ☐ Do not know ☐ Neutral

Please explain your answer (1000 word limit)

18. Waste

About the sector

Waste makes up around 10% of our biogenic methane emissions.

The majority of waste emissions are from biogenic methane, with smaller amounts of carbon dioxide and nitrous oxide also being generated from composting, incineration and wastewater treatment.

What does our advice say?

Aotearoa can reduce waste emissions (and emissions across the wider economy) by reducing waste at source, reusing and recycling waste, and capturing methane from any remaining waste.

Aotearoa needs to invest in resource recovery and reuse. There needs to be investment in measuring and increasing the circularity of the economy.

Aotearoa needs strengthened product stewardship schemes so that manufacturers, importers and retailers are required to provide options for consumers and communities to reuse, recycle or appropriately dispose of products when they are no longer needed.

We have developed two necessary actions to reduce emissions in the waste sector, and to manage the transition from hydrofluorocarbons.

See Chapter 6 or Section 6.1.5 Waste of the draft Advice Report for more information.

[Information on the two necessary actions in the waste sector](#)

18. Do you support the package of recommendations and actions for the waste sector? Is there anything we should change and why?

☐ Support all the actions ☐ Support some of the actions ☐ Do not support these actions ☐ Do not know ☐ Neutral

Please explain your answer (1000 word limit) \

19. Multi-sector strategy

Taking a multi-sector view

As well as sector-specific policies, we have considered a multi-sector strategy for reducing emissions. This means taking a whole-of-government approach and looking across different policy areas.

We have identified **two time critical actions** in our multi-sector strategy:

- *Align investments for climate outcomes*

It is important that policy decisions and investments made now do not lock Aotearoa into a high emissions development pathway. Safeguards and signals will be needed to prevent this, including a focus on ensuring long-lived assets such as infrastructure are net-zero compatible. Although there is work on developing a consistent approach to incorporating the cost of climate change action into government decision making, it is still not widely embedded within government processes.

- *Drive low emissions choices through the NZ ETS*

Pricing emissions is a powerful tool, and is an essential part of an effective policy package for reducing emissions. In Aotearoa, the New Zealand Emissions Trading Scheme (NZ ETS) is the main emissions pricing instrument.

The NZ ETS will need adjusting on an ongoing basis to keep it fit for purpose. Since 2016, a series of reforms have been undertaken. The NZ ETS now has much of the architecture it needs to be effective, but further improvements are needed.

We have also developed **five necessary actions** that look across different policy areas:

- Continued NZ ETS improvements
- Integrate Government policy making across climate change and other domains
- Support behaviour change
- Require entities with large investments to disclose climate related risks
- Build a Māori emissions profile

See Chapter 6 or Section 6.2 of the draft Advice Report for more information.

19. Do you support the package of recommendations and actions to create a multisector strategy, and is there anything we should change?

[Information on driving low emissions choices through the NZ ETS](#)

[Information on aligning investments for climate outcomes](#)

[Information on integrating Government policy making across climate change and other domains](#)

[Information on supporting behaviour change](#)

[Information on requiring entities with large investments to disclose climate related risks](#)

[Information on building a Māori emissions profile](#)

☐ Support all the actions ☐ Support some of the actions ☐ Do not support these actions ☐ Do not know ☐ Neutral

Please explain your answer (1000 word limit)

20. Rules for measuring progress

‘Rules for measuring progress’ refers to the system of accounting for greenhouse gas emissions that will be used to track the progress Aotearoa makes towards emissions budgets and the 2050 target.

In Aotearoa, various emissions accounting methods are already in use, for example to prepare the national Inventory, to track the Nationally Determined Contribution (NDC) and other targets, and to produce emissions accounts that align with economic statistics. Our task is to determine which of these existing methods are best suited for setting emissions budgets and delivering the 2050 target.

See Chapter 7 of the draft Advice Report for more information.

[Click for more information](#)

20. Do you agree with Budget recommendation 5 on the rules for measuring progress? Is there anything we should change any why?

[Click to see the full recommendation](#)

☐ Support all the actions ☐ Support some of the actions ☐ Do not support these actions ☐ Do not know ☐ Neutral
Please explain your answer

21-23. Our Nationally Determined Contribution (NDC)

The Commission was asked to determine if the first Nationally Determined Contribution (NDC) for Aotearoa is compatible with contributing to global efforts to limit global warming to 1.5°C above pre-industrial levels.

Our analysis has found that the first NDC is not compatible with Aotearoa making a contribution to global efforts under the Paris Agreement to limit warming to 1.5°C above pre-industrial levels.

If Aotearoa is to play its part as a developed nation, the NDC would need to be strengthened to reflect emission reductions of much more than 35% below 2005 levels by 2030.

The Commission's proposed emissions budgets are already ambitious – but the NDC goes further.

To achieve our NDC, Aotearoa will need some offshore mitigation. We are not using this to do less domestically – but to bridge the gap while our policies take effect at home.

See Chapter 8 of the draft Advice Report for more information.

21. Do you support our assessment of the country's NDC? Do you support our NDC recommendation?

[Click to see the NDC recommendations](#)

☐ Fully support ☐ Partially support ☐ Neutral ☐ Do not support - too ambitious ☐ Do not support - not ambitious enough ☐ Do not know
Please explain your answer (1000 word limit)

24. Eventual reductions in biogenic methane

Current Aotearoa targets require methane emissions to reduce by 10% below 2017 levels by 2030 and between 24-47% by 2050.

The Commission has been asked to provide advice on how much biogenic methane emissions may need to be reduced by in the future for Aotearoa to meet its international obligations.

Our analysis shows that by 2100, Aotearoa could need to reduce methane emissions by 49-60% below 2017 levels.

Aotearoa has a world-leading agricultural sector that has made extraordinary advances over the last 60 years, and improvements can and should continue.

Our analysis for our emissions budgets shows Aotearoa can achieve methane reductions of 24% by 2050 without any technology developments, such as vaccines or inhibitors. It is likely these technologies will become available, and this would increase the speed and efficiency of reducing methane emissions.

See Chapter 9: Eventual reductions in biogenic methane of the draft Advice Report for more information.

[More information on our findings](#)

24. Do you support our assessment of the possible required reductions in biogenic methane emissions?

[Click to see the recommendation on biogenic methane](#)

☐ Fully support our assessment ☐ Somewhat support our assessment ☐ Do not support our assessment ☐ Do not know ☐ Neutral

Please explain your answer (1000 word limit)

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