Ministry for Cities, Environment, Regions & Transport

PROACTIVE RELEASE COVERSHEET

Minister	Hon Todd McClay Hon Simon Watts	**Portfolio**	Climate Change
Name of package	Papers on the review of New Zealand's 2050 emissions reduction targets.	**Date to be published**	6 January 2026

List of documents that have been proactively released		
Date	***Title***	***Author***
26 February 2025	BRF-5775: Responding to the Climate Change Commission's advice on the 2050 target and emissions budgets	Ministry for the Environment, Ministry for Primary Industries
13 March 2025	BRF-5923: 2050 target options and initial analysis	Ministry for the Environment, Ministry for Primary Industries
30 May 2025	BRF-6017: Final policy decisions on the 2050 target	Ministry for the Environment, Ministry for Primary Industries
6 June 2025	BRF-6320: Further 2050 target advice: policy impacts	Ministry for the Environment, Ministry for Primary Industries
10 July 2025	BRF-5983: Draft Cabinet paper: Resetting the 2050 domestic emissions reduction target	Ministry for the Environment, Ministry for Primary Industries
	Draft Cabinet paper: Resetting the 2050 domestic climate change emissions target	Ministry for the Environment, Ministry for Primary Industries
22 August 2025	BRF-6279: 2050 target – additional legislative changes and implications of decisions	Ministry for the Environment
28 August 2025	BRF-6741: Options to maintain the currency of ERP2	Ministry for the Environment
18 September 2025	BRF-6389: Policy decisions on including international shipping and aviation emissions in the 2050 target	Ministry for the Environment, Ministry of Transport
23 September 2025	CAB-592: Updating the 2050 domestic climate change emissions target	Ministry for the Environment, Ministry for Primary Industries
25 September 2025	BRF-6866: 2040 biogenic methane target review	Ministry for the Environment, Ministry for Primary Industries

Information redacted **YES** **NO**

Any information redacted in this document is redacted in accordance with the Official Information Act 1982. Where this is the case, the reasons for withholding information are listed below. Where information has been withheld, no public interest has been identified that would outweigh the reasons for withholding it.

Summary of reasons for redaction

Some information has been withheld under Section 9(2)(a) of the Official Information Act 1982 to protect the privacy of natural persons, including that of deceased natural persons.

Some information has been withheld under Section 9(2)(h) of the Official Information Act 1982 for the reason of maintaining legal professional privilege.

Some information has been withheld under Section 9(2)(f)(iv) of the Official Information Act 1982 to maintain the constitutional convention protecting the confidentiality of advice tendered by Ministers and officials.

© Crown Copyright, Creative Commons Attribution 4.0 International (CC BY 4.0)

Responding to the Climate Change Commission's advice on the 2050 target and emissions budgets

Date submitted: 26 February 2025
Tracking number: BRF-5775 (MfE) / B25-0076 (MPI)
Sub Security level: CLASSIFICATION
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
Hon Todd MCCLAY **Minister of Agriculture** Hon Simon WATTS **Minister of Climate Change**	**Agree** to a preferred timeframe option for receiving advice and advancing changes to the 2050 target	3 March 2025

Actions for Minister's office staff
Return the signed briefing to the Ministry for the Environment (advice@mfe.govt.nz). **Forward** the briefing to Hon Meager as Acting Minister of Transport (Aviation) and Associate Minister of Transport (Maritime).

Appendices and attachments
Appendix one: Timeframe proposals for decisions on 2050 target / EB4 and ETS Settings Appendix withheld in full under section 9(2)(f)(iv) of the Act

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Principal Author	Katie Lund		
Responsible Manager	Stephen Goodman	9(2)(a)	✓
Deputy Secretary	Sam Buckle		
Key contacts at the Ministry for Primary Industries			
Principal Authors	Shania Brooks		
Responsible Manager	Beth Hampton	9(2)(a)	✓
Acting Deputy Director-General	Stephanie Preston		

Minister's comments

Responding to the Climate Change Commission's advice on the 2050 target and emissions budgets

Key messages

1. The Minister of Climate Change is required to respond to the Climate Change Commission's (the Commission) advice on the 2050 target, including international shipping and aviation (ISA), by 21 November 2025.

2. You also received an independent panel's review of the methane science and biogenic methane target for consistency with no additional warming in December 2024. Cabinet has invited you to report back on a proposal to confirm the methane component of the 2050 target in Q1.

3. The 2050 target aims to provide stable, long-term direction for New Zealanders, markets and the economy. There are a range of factors you may wish to consider when determining a process for the 2050 target. This includes appetite for public consultation, time for analysis, providing certainty to sectors, impact on emissions budgets, and managing risks to the annual Emissions Trading Scheme (ETS) settings processes.

4. Officials have developed two broad options for making decisions on the 2050 target and we seek direction on your preferred approach:

5. **Option one** has final policy decisions in Q2, with options to introduce the legislation via the planned CCRA Amendment Bill in December 2025 and passed by June 2026 or accelerated through a bespoke Bill in 2025. This option enables earlier decisions and announcements in Q2, but provides less time for testing decisions with different sectors and stakeholders. Public consultation would occur only through the Select Committee process. Taking decisions during the ETS settings process could create uncertainty in the ETS market but officials would work to manage this.

6. **Option two** has initial or final policy decisions in Q3 with legislation passed in mid-2026 via the planned CCRA Amendment Bill. This manages the risks associated with the ETS settings process by enabling decisions on ETS settings to be completed first. It enables more time to engage with stakeholders and to test decisions. This option would allow Ministers an opportunity for public consultation in Q3 and additional time to test their views with colleagues.

7. The Minister of Climate Change is also required to set EB4 (2036 – 2040) by 31 December 2025. EB4 must be set to achieve the current legislated 2050 target. If target change this year is desirable, we will provide you with further advice on the feasibility of setting EB4 based on the new target, rather than the current target.

8. Following your joint direction on the options above, we will provide you with supporting material for your Q1 Cabinet report. We will also work at pace to develop initial advice on 2050 target policy options and progress work on regulatory impact analysis. If you wish to progress option one, we expect to provide you with initial advice in March.

Responding to the Climate Change Commission's advice on 2050 target and emission budgets

Purpose

1. The purpose of this brief is to seek your agreement to a process and timeframes for responding to the Climate Change Commission's 2050 target recommendations, and for setting the fourth emissions budget (2036-2040).

Decisions are needed this year on the 2050 target

2. The Climate Change Response Act 2002 (CCRA) requires the Minister of Climate Change to respond this year to the Climate Change Commission's (the Commission) advice on:

   - Amending the 2050 target
   - Inclusion of international shipping and aviation (ISA) in the 2050 target
   - Setting emissions budget four
   - Revising emissions budget one, two and three.

3. You published the second emissions reduction plan (ERP2) in December. ERP2 shows that with current and planned policies, we are on track to meet the first two emissions budgets, the net-zero 2050 target as early as 2044 (and sustained from 2050), and the lower end of the 2050 biogenic methane target by 2050. ERP2 also shows there is a gap of 9.2 Mt to meeting the third emissions budget.

The Climate Change Commission's advice

4. In November 2024, the Commission completed a review of the 2050 target and emissions budgets as required under the CCRA. The Commission has made the following recommendations:

   - reaching at least net negative 20 Mt CO2e by 2050, including emissions from international shipping and aviation (ISA)
   - reducing biogenic methane emissions by at least 35 – 47 per cent by 2050
   - setting the fourth emissions budget at 160 Mt CO2e (down from 240 Mt for emissions budget three)
   - tightening the first three emission budgets: EB1 from 290 Mt to 283 Mt, EB2 from 305 Mt to 290 Mt and EB3 from 240 Mt to 222 Mt.

The independent methane science and target review

5. The independent methane science and target review was completed in November 2024. The panel chose sets of methane reduction targets to test what levels of reduction in New Zealand's emissions would meet the principle of 'no additional warming' across global emissions scenarios, with key results including:

   - Global emissions scenario of limiting temperature increase to 1.5°C - New Zealand biogenic methane emissions reduced by 24% by 2050;
   - For a mid-range global emissions scenario - New Zealand's biogenic methane emissions reduced by 14-15% by 2050; and
   - In a high global emission scenario – New Zealand's biogenic methane emissions levels can remain at 2022 levels.

6. As part of noting receipt of the report, Cabinet invited you both to report back on a proposal to confirm the methane component of the 2050 target in Q1 2025 [CAB-24-MIN-0645 refers].

The Government's response

7. The Minister of Climate Change must respond to the Commission's advice on the 2050 target and the inclusion of emissions from ISA by 21 November 2025. Both the methane report and the Commission's advice will inform the Government response to the Commission. The response must be written and presented to the House of Representatives.

We seek your direction on the preferred timeframes

8. In determining a process for responding to the Commission and progressing any changes necessary, you may wish to consider:

   - Providing certainty about the 2050 target to sectors, to the extent possible. In particular, several agriculture sector bodies have expressed publicly that they want a quick decision on the revised biogenic methane target to give farmers certainty (including to clarify what the sector will be required to contribute towards Nationally Determined Contribution 2). Other sectors may also want earlier certainty to inform their investment decisions. However, officials have not engaged with other sectors, nor have their views been canvassed in the media, and so their positions on certainty are currently unknown.
   - Understanding the system implications to potential changes to the 2050 target including for emissions budgets and ETS settings. Given the complexity and long-term implications of the 2050 target, you may wish to understand what any change might mean for existing and future emissions budgets and the impact on ETS and non-ETS sectors when taking decisions, particularly if your decisions depart from parts of the Commission's advice.

9. 9(2)(f)(iv) [redacted] We understand that key members of the aviation industry have advised the Ministry of Transport that they would like to be consulted if the 2050 target is proposed to be amended to include ISA.[1] We anticipate there are other stakeholders that would expect to be consulted as well. If engagement is desirable, we will work closely with your offices on how best to progress this within your desired timeframes.

10. Depending on your decisions, changing the 2050 target may have flow on effects potentially requiring amendments to emissions budgets and impacts on ETS sectors. Advice on these impacts will be sequenced.

11. How best to manage risks to the annual ETS settings process. Ideally, a public announcement that the target will be amended, or public consultation on potential changes would occur before the ETS settings process in April or after Cabinet has confirmed and announced its annual ETS settings decisions, currently planned for August. If you choose to announce or consult on changes earlier, communications will need to be carefully managed. However, the risk of market uncertainty is greater if decisions are taken to change the 2050 target during the ETS settings process as it could confuse market participants. This risk can be managed through clear communication to market participants about when reconciliation of ETS settings will happen with any new target. Any reconciliation of ETS settings that is needed, as may arise from any amendment to the 2050 target or emissions budgets, could occur from 2026.

12. Officials have developed two broad options for making decisions about the 2050 target (more detail included in **Appendix one**), and we seek your direction on your preferred approach.

Option one (final policy decisions in Q2, with legislation passed in 2025 or 2026)

13. Under this option, Ministers could make an early announcement on the target in the first half of 2025. To enable this, final policy decisions would be needed in Q2, which would not provide an opportunity for public consultation. Legislation to amend the target, if required, could be incorporated into a CCRA Amendment Bill already planned to be introduced in 2025 and passed in 2026. Alternatively, a bespoke Amendment Bill could be introduced in June, and passed by December 2025, with a shortened Select Committee process. A bespoke Bill would need to be given Royal Assent after September to prevent significant impacts to the ETS settings process.

14. Option one aligns with the public commitment to confirm a target in 2025, provides more immediate certainty to sectors on the 2050 target and their expected role in reducing emissions, and provides more time for the Government to implement its climate change objectives this term.

[1] The international shipping sector has been consulted on measures to reduce emissions to inform New Zealand's participation in International Maritime Organisation negotiations and has expressed interest in being consulted on decisions of the scope of the 2050 target.

15. Ministers' decisions may have implications for different sectors of the economy. An accelerated timeframe provides less time for Ministers to test their views with different sectors and stakeholders. This option would not allow time for public consultation. Some targeted engagement prior to policy decisions in April could be undertaken instead, but would delay timeframes and may put pressure on your ability to pass legislation this year.

16. This timeframe allows officials to complete modelling of the impacts of any potential target changes but does not enable modelling refinements or stakeholder input. 9(2)(g)(i) [redacted]

17. 9(2)(g)(i) [redacted] Since the Commission recommended including ISA in the 2050 target, the Minister of Climate Change is still required to respond to the Commission this year, even if ISA is not included in the target, this response must include reasons for any departures to the Commission's recommendations.

18. This option is more feasible for straightforward changes to the 2050 target but could be challenging for substantial departures from the Commission's advice. If the Government's decisions deviate greatly from the Commission's recommendations, you will need to provide reasons for any departure from their recommendations. We will provide advice to support decisions that consider the Commission's recommendations and alignment with the Government's climate strategy.

19. Decisions on the 2050 target will interact with decision making processes for emissions budgets and the annual ETS settings process. Taking policy decisions, and making announcements, during the ETS settings process in May-August, carries significant risks of uncertainty to the ETS market as market participants may react to this new information. Ideally any policy decisions on the targets would be announced in either April or September 2025.

20. If this option is preferred, we will work to mitigate this risk as far as possible through careful communication and engagement across the system. This may be needed if there is a change to the overall level of emissions reduction by 2050, or the relative share of emissions reduction between ETS covered sectors and non-ETS covered sectors.

Option two (initial or final policy decisions in Q3, with legislation passed in 2026)

21. This option would seek initial Cabinet decisions on all components of the target no later than late July 2025. Should you choose to undertake a public consultation, this could run for six weeks and occur after Cabinet has confirmed and announced ETS settings decisions in early August. Final Cabinet decisions could be made in October. If required, legislation could then be introduced through the planned CCRA Amendment Bill in late 2025 and passed in Q2 2026. If a decision is made to not consult, then final decisions could be made soon after the ETS settings decisions are made in August.

22. As option two timeframes are longer than under option one, it might provide less short-term clarity. However, this option would allow sectors who have not been engaged on the 2050 target to have an opportunity to share feedback and sector-specific impacts.

23. It would allow time for modelling to be refined to consider any additional target scenarios that may be identified as part of public consultation or sector feedback. Separate analysis, consultation, and modelling of ISA could also occur.

Setting the fourth Emissions Budget

24. EB4 must be set with a view to achieving the 2050 target that is legislated at the time. Under option one there may be a small window of opportunity this year to set EB4 that is consistent with a new 2050 target. The ability to set both a new target and EB4 depends on the extent the 2050 target changes, the speed of the parliamentary process, and whether the Minister of Climate Change considers it necessary to consult on EB4. Under option two, EB4 will be set based on the current target rather than a potential new 2050 target, and then potentially reconsidered once any new 2050 target is legislated.

25. The Commission has provided advice on the level of EB4, which must be gazetted by 31 December 2025. The Commission also recommended adjustments to the first, second and third emissions budgets. Since EB1 has already begun, amendments can only be made before 31 December 2025, which is the end of the EB1 period, and if there are exceptional circumstances. Our subsequent advice will help the Minister of Climate Change consider whether this threshold has been achieved. EB2 and EB3 can be revised before they begin and must take into account the Commission's advice and a broad suite of other matters set out in the CCRA.[2] If there is a change to the 2050 target, the delay in passing corresponding legislation means that EBs would need to be reconsidered after 2025.

26. Depending on your decisions, there is an option to not set EB4 until 2026. This would require a CCRA amendment this year but would enable you to set EB4 based on a potential new 2050 target rather than revising EB4 after a new target has been set.

27. You have obligations to consider the need for consultation when setting, or amending, emissions budgets. Before the Minister sets an emissions budget, the Minister must be satisfied that there has been adequate consultation. If the Minister is not satisfied that there has been adequate consultation, the Minister must (a) make the proposed emissions budget publicly available; and (b) allow adequate time and opportunity for any submissions to be received, heard, and considered by the Minister.

28. There are options around whether you might want to consult on both the 2050 target and EB together or separately. Consulting together or separately will require further consideration based on the extent of the decisions made by Government in response to the Commission's advice on the 2050 target and EB4. For example, if the 2050 target is substantially changed, it may not be appropriate to consult on EB4 at the same time. Officials will provide further advice on this based on your preferred option.

---

[2] If EB2 is revised any time after 31 December 2025, then the 'exceptional circumstances' criteria applies as the EB period would have begun. If EBs are reconsidered after 31 December 2025, EB1 cannot be revised, EB2 can be revised if the circumstances are exceptional, and EB3 and EB4 can be revised.

Indicative implications for other decisions

29. To help inform your decisions around timeframes, officials have undertaken some initial analysis to highlight likely implications and any trade-offs you may wish to consider.

Economic considerations and the Government's economic growth agenda

30. Decisions on targets and emissions budgets are likely to have economic implications which will not be felt evenly across regions, households or sectors. In light of the Government's focus on economic growth, it will be important to understand the economic implications through robust modelling. Any changes to the target may shift the share of emissions reduction costs and benefits across different parts of the economy.

International aspects

31. Climate change is a strand of New Zealand's foreign and trade policy, as it is for our like-minded partners, key trading partners and the Pacific.[3] Ensuring New Zealand is well positioned to fulfil its international responsibilities will be important to support our economic achievements and shift to a low emissions global economy.

32. There are a number of multilateral and bilateral meetings this year where mitigating international aviation and maritime emissions (referred to in this brief as ISA) are expected to be discussed or negotiated. 9(2)(f)(iv) [redacted]

Consultation

33. The Treasury, Ministry of Transport, Ministry of Foreign Affairs and Trade and Ministry for Business, Innovation and Employment were consulted on this brief.

9(2)(h) [redacted]

[redacted]

[3] In September 2024 the Minister of Foreign Affairs, Minister for Trade and Minister of Climate Change, agreed New Zealand's core interests for international engagement on climate change:

i. to navigate the global economic transition taking place, ensuring New Zealand is well placed to succeed;
ii. to support the agreed international cooperation framework to be effective in reducing the impact of climate change, while ensuring rules favourable to our interests and a least cost approach; and
iii. to improve Pacific resilience and stability in the broader Indo-Pacific region, including for New Zealand's security.

9(2)(h) [redacted]

[redacted]

[redacted]

[redacted]

Next steps

38. We seek your direction on how you wish to progress and sequence upcoming Cabinet decisions, and also on your preferences for the Q1 methane report back. Options for this report back include:

    - A written or oral update on the overall approach to confirm the 2050 target; and/or
    - deferring or superseding the report back

39. Following your direction, we will then work at pace to develop initial advice on 2050 target policy options, and progress work on regulatory impact analysis.

Recommendations

We recommend that you:

a. **provide** feedback on the proposed timeline options to officials.

b. **agree** to either of the following proposed timeframes for receiving advice and advancing changes to the 2050 target:

   i. **Option 1** (final policy decisions in Q2, legislation passed in 2025 or 2026, if required)

   Yes | No

   ii. **Option 2** (initial or final policy decisions in Q3, legislation passed in 2026, if required)

   Yes | No

c. **discuss** and agree the approach for the Q1 Cabinet report back on a proposal to confirm the methane component of the 2050 target.

   Yes | No

Signatures

Sam Buckle
Deputy Secretary
Climate Change Mitigation and Resource Efficiency
Date: 26 February 2025

9(2)(a)

Stephanie Preston
Acting Deputy Director-General
Policy and Trade
Date: 26 February 2025

Hon Simon WATTS
Minister of Climate Change
Date:

Hon Todd MCCLAY
Minister of Agriculture
Date:

Ministry for the Environment
Manatū Mō Te Taiao

Ministry for Primary Industries
Manatū Ahu Matua

Briefing: 2050 target options and initial analysis

Date submitted: 13/03/2025
Tracking number: MFE BRF-5923; MPI B25-0144
Sub Security level: CLASSIFICATION
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Todd MCCLAY **Minister of Agriculture** To Hon Simon WATTS **Minister of Climate Change**	**Agree to provide feedback** on options for the 2050 emissions target **Agree** to defer decisions on whether to include International Aviation and Shipping in the 2050 target until later this year	20 March 2025

Actions for Minister's office staff
Return the signed briefing to the Ministry for the Environment (advice@mfe.govt.nz).

Appendices and attachments
Appendix 1: Options for changes to the 2050 emissions target and an initial assessment of those options (subject to further economic modelling)
Appendix 2: International comparison of climate targets
Appendix 3: Key assumptions and implications of the Climate Change Commission's advice on the 2050 target

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Principal Author	Joe Beaglehole	9(2)(a)	
Responsible Manager	Stephen Goodman	9(2)(a)	
General Manager	Hemi Smiler	022 0871 268	✓
Key contacts at the Ministry for Primary Industries			
Principal Author	Mele Tabukovu		
Responsible Manager	Beth Hampton	9(2)(a)	✓
Director	Jane Chirnside	9(2)(a)	

Minister’s comments

2050 target options and initial analysis

Key messages

1. The 2050 emissions target in the Climate Change Response Act 2002 (CCRA) sets the ambition of domestic efforts to mitigate climate change and provides certainty for the economy about long-term direction of climate change policy.

2. You have recently received two reports on the 2050 emissions target:

   i. the Climate Change Commission's review of the 2050 emissions target (including its advice on whether or not International Aviation and Shipping should be included in this target)

   ii. the Independent Panel's review of the methane science and target (the Methane Review).

3. This briefing seeks your initial feedback on potential changes to the 2050 emissions target. It provides a range of options drawn from both the Climate Change Commission's report and the Methane Review and an initial assessment of those options using available evidence. We have commissioned further economic modelling to finalise this analysis, and this will be provided to you in advance of seeking decisions.

4. The options reflect a spectrum of potential changes to New Zealand's domestic climate change ambition. We have provided an initial assessment of the options against three criteria:

   i. Alignment with the government's economic growth agenda (including fiscal and economic impacts and international competitiveness)

   ii. Contribution to the Paris Agreement temperature goal of limiting warming to 1.5°C (as per the purpose of the Climate Change Response Act 2002)

   iii. Implementation feasibility (including availability of technology and implications for government policy)

5. Key aspects of our initial assessment, subject to further modelling, are as follows:

   i. **Option 1 (status quo)**: No change. With current policies as outlined in Emissions Reduction Plan 2 (ERP2), in particular the Emissions Trading Scheme (ETS) and an agriculture pricing system to drive uptake of mitigation technologies and practices, New Zealand is on track for approx. 25% reduction of methane in 2050 and net zero long-lived gases in 2044 (maintained from 2050).

   Option 2: reduced methane target (14% less than 2017 emissions), status-quo for long-lived gases (net zero): A reduction in New Zealand's domestic ambition that may be perceived to be out of step with international partners 9(2)(h) This option is feasible to achieve with current policies. It may either shift the burden of emissions

reduction efforts to ETS sectors or require emissions budgets to be amended. It may have a small positive impact on GDP.

Option 3: clarify methane target at the lower end of the current range (24% less than 2017 emissions); status quo for long-lived gases (net zero): Consistent with the current emissions trajectory projected through ERP2; no additional impact on GDP; provides clearer expectations of what is expected of the agricultural sector. This option may be perceived as reducing the current target 9(2)(h) [redacted].

ii. **Option 4: clarify methane target (24% less than 2017 emissions), increase target for long-lived gases (net negative 10MtCO2 emissions):** Increases domestic ambition for long-lived gases; provides clearer expectations of what is expected of the agricultural sector; some overall economic costs; feasibility depends on adopting new domestic policies beyond ERP2, including measures in addition to the ETS, and greater private sector innovation and uptake of new technologies.

iii. **Option 5: strengthening both the Methane and long-lived gases targets as recommended by the Climate Change Commission (35-47% less than 2017 levels for methane, net negative 20Mt CO2e for long-lived gases)**: A significant increase in domestic ambition; brings New Zealand's approach to our net-zero target in line with international partners that have set net zero targets that cover all-gases[1]; some overall economic costs; feasibility depends on adopting new domestic policies beyond ERP2, including measures in addition to the ETS, and greater private sector innovation and uptake of new technologies.

6. While the Commission recommended including International Shipping and Aviation emissions within scope of the 2050 domestic target, multilateral processes addressing these emissions are currently advancing. We recommend deferring decisions on whether to include these emissions in our domestic policy framework until later in the year when we have more clarity about the outcomes of these processes and officials have undertaken further analysis.

[1] The upper end of the Commission's recommended target range for methane and their recommended target for long-lived gases is consistent with net zero all gases.

2050 target options initial analysis

Purpose

1. This briefing seeks your initial feedback on potential changes to the 2050 emissions target.

Background

2. You recently agreed to a process for considering the Climate Change Commission's review of the 2050 emissions target and the results of the Methane Review, and for progressing any changes necessary (MfE BRF-5775; MPI B25-0076 refers).

3. We are working at pace to meet your preferred timeframe of Cabinet policy decisions and a public announcement of your intention to progress this policy change in Q2. The Minister of Climate Change has indicated a preference for any legislative amendments to the target, if required, to be progressed as part of other changes to the Climate Change Response Act 2002 (CCRA) later in the year. This recognises pressure on the Government's legislative programme.

Analysis and advice

4. The Minister of Climate Change is required to respond to the Commission's advice on the 2050 target by November this year. We provide an assessment of this advice below, with more detail included in **Appendix 1** and **Appendix 3**.

5. We also provide an assessment of the results of the independent methane science and target review (Methane Review).

The current domestic 2050 emissions target

6. New Zealand's domestic emissions target is legislated under the CCRA and is a significant part of the climate policy architecture. The target sets the long-term ambition of New Zealand's domestic climate change response. The current target was established in 2019.

7. The domestic 2050 emissions target has two components:

    i. Net accounting emissions of greenhouse gases in a calendar year, other than biogenic methane, are zero by calendar year beginning on 1 January 2050 and for each subsequent calendar year; and

    ii. Emissions of biogenic methane in a calendar year –

        a. are 10% less than 2017 emissions by calendar year beginning on 1 January 2030; and

b. are 24% to 47% less than 2017 emissions by the calendar year beginning on 1 January 2050 and for each subsequent calendar year

8. The domestic target takes a split gas approach, reflecting that methane is a “short-lived” gas and has a different warming impact compared to other greenhouse gases, such as carbon dioxide. The current methane target range was drawn from Intergovernmental Panel on Climate Change (IPCC) scenario analysis of likely global biogenic methane reductions needed to remain consistent with limiting warming to 1.5 °C.

9. The domestic 2050 emissions target is implemented through emissions budgets, emissions reduction plans and the ETS. ERP2 was launched in December 2024 and projected New Zealand to be on track to meet the 2030 biogenic methane and 2050 target (both net zero and biogenic methane components[2]), recognising uncertainty associated with modelling and projections.

Relationship between domestic and international targets

10. New Zealand’s domestic 2050 target is separate from our Nationally Determined Contribution (NDC) under the Paris agreement on climate change, but the two are linked in that domestic efforts to reduce emissions support achieving our international commitments. Compared to NDC 1, NDC 2 closes the gap in ambition between domestic action and our international target. As such, any changes to the target will need to be reconciled with NDC 2 to understand the implications of this change and what this means for how New Zealand intends to meet it.

The Climate Change Commission Advice on the 2050 Emissions Target

The results of the Commission’s review of the 2050 emissions target

11. The Commission’s analysis as part of its review of the domestic 2050 target included economic modelling, analysis of a range of scenarios for technological and systems change, and public consultation.

12. The CCRA prescribes the reasons the Commission may recommend a change to the target, including whether or not there has been significant change in global action, scientific understanding, and New Zealand’s economic and fiscal circumstances, among other things.

13. The Commission recommended strengthening of the current target in response to the changes it found. Its main points were:

    i. *Scientific understanding*: The impacts of global warming are greater, in both severity and scale, than was understood by the global science community when the target was set.

[2] ERP2 modelling projected net zero emissions from long-lived gases will be reached as early as 2044 and maintained from 2050; biogenic methane emissions are projected to have reduced by 24.9 per cent in 2050, which is within the target band of a 24 to 47 per cent reduction. These projections assume emissions pricing is in place to drive adoption of new technologies.

ii. *Global action:* Globally we are off track to meet the Paris temperature goals of limiting warming to 1.5 °C. The UN Emissions Gap Report 2023 shows - in the most optimistic scenario – with all commitments and pledges under the Paris Agreement implemented - the world has only a 66% chance of limiting warming to 2.0°C (range: 1.8°C to 2.5°C); and with only current policies continuing, a 66% chance of limiting warming to 3.0°C (range: 1.9°C to 3.8°C). This implies that even greater reductions in global emissions are needed in the near and longer terms to limit as much as possible the amount by which the world exceeds 1.5°C, and then to bring the temperature down again.

New Zealand's fair share: Many comparable countries have now set net zero all gases domestic emissions targets that are more ambitious than New Zealand's split gas approach (see further detail in Appendix 2). IPCC equitable burden sharing principles suggest New Zealand should do more and our national circumstances do not warrant reduced effort.

iii. *Intergenerational equity:* Delaying increased action transfers costs and risks to future generations. Because of the decreasing likelihood that the world is on track to limit average warming to 1.5°C above pre-industrial levels, and because the impacts of climate change are more severe and widespread than previously understood, future generations will face a greater burden from climate change. Not only are they likely to face more severe climate impacts, it is likely they will also have to do more to reduce emissions.

14. The Commission proposed strengthening the target as follows:

i. reaching at least net negative 20 Mt CO2e by 2050, including emissions from international shipping and aviation (ISA).

ii. reducing biogenic methane emissions by at least 35 – 47 per cent by 2050.

iii. there are further reductions and removals of greenhouse gases beyond these levels after 1 January 2050.

Assessment of these results

15. The Commission is required to consider a range of criteria set out in section 5T of the CCRA when recommending a change to the 2050 target (Ministers' decisions to retain or change the target are not bound by the CCRA in the same way). Officials' assessment of the Commission's advice is that they have applied these criteria appropriately in forming their recommendations.

16. **Appendix 1** includes an assessment of the Commission's recommendations and **Appendix 3** provides further information about the assumptions and implications of the Commission's advice.

The Climate Change Commission Advice on including International Aviation and Shipping in the 2050 target

The results of the Commission's review of International Aviation and Shipping

17. The Commission also conducted a review of whether International Aviation and Shipping emissions should be included in the net zero component of the 2050 target. It advised they should be included because:

    i. Warming from IAS needs to be addressed. IAS is currently 9% of NZ's domestic net emissions and could grow to a significant amount by 2030. 98-99% of emissions from the sectors are from CO2.

    ii. Options are available to reduce emissions, although they would likely require domestic policy support.

    iii. This would align with international partners efforts to address these emissions.

Advice on taking forward the Commission's recommendations

18. Officials agree that ISA emissions need to be addressed either by international or domestic processes, or some combination of the two. We are considering the Commission's advice and have identified a number of issues requiring further analysis:

    i. The current state of international processes addressing ISA emissions: The International Maritime Organisation and the International Civil Aviation Organisation currently have processes underway seeking to address ISA emissions, and the results of these processes will impact what actions it makes sense for New Zealand to take domestically.

    ii. Implications for our domestic policy settings: If ISA emissions were to be included in the domestic emissions target, accompanying domestic policy action should also be considered. These domestic policy levers require further analysis, including the potential for emissions to be included in the ETS.

    iii. The availability of technologies to reduce ISA emissions, and what domestic policy is needed to support their uptake.

19. Officials will provide you further advice on whether to include ISA emissions in the 2050 target over the coming months. Including these emissions in the 2050 target (and the ETS) will increase the burden on other sectors of the economy to do more, by implication increasing the ambition of the target.

Implications of the Methane Review

The results of the Methane Review

20. The independent methane science and target review was completed in November 2024. The panel chose sets of methane reduction targets to test the levels of reduction in New Zealand's emissions that would be required to meet the principle of "no additional warming" across global emissions scenarios, with the following key results:

i. In a global emissions scenario of limiting temperature increase to 1.5°C – reducing New Zealand's biogenic methane emissions by 24% by 2050 would meet the principle of "no additional warming";

ii. For a mid-range global emissions scenario of limiting temperature increase to 2.0°C – 2.7°C – reducing New Zealand's biogenic methane emissions by 14-15% by 2050 would meet the principle of "no additional warming; and

iii. In a high global emission scenario – with a temperature increase well over 2.0°C and as high as approximately 4.5°C – New Zealand's biogenic methane emissions levels can remain at 2022 levels to meet the principle of "no additional warming".

Implications of these results

21. Officials have considered the results of the Methane Review and have incorporated the relevant scenarios identified into the options analysis below.

22. While the principle of no additional warming is a useful concept to understand the longer-term warming impact of New Zealand's emissions, taking a no-additional warming approach on its own has limitations in a target-setting context as:

i. The purpose of the CCRA (and therefore the basis of the 2050 target) is to "contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels". A no-additional warming approach is not linked to achieving a temperature goal such as 1.5 degrees as it seeks to maintain a particular level of historical warming rather than looking forward to what level of emissions reductions might be required in the future to contribute to achieving a particular temperature goal and what might be feasible to achieve it.

ii. The amount by which New Zealand's biogenic methane emissions must be reduced to achieve no-additional warming is not a single fixed number, and strongly depends on actions undertaken by the rest of the world.

23. Assessing the target options discussed in the Methane review against other relevant criteria for target setting – including whether they reflect a sufficient domestic contribution to the Paris agreement, alignment with the government's economic growth agenda and implementation feasibility – helps to overcome these limitations, and to inform decisions on the 2050 target.

Options for changes to the 2050 emissions target and assessment

24. We have identified five options for changes to the 2050 emissions target, which we seek your feedback on ahead of officials developing further advice and seeking final policy decisions. These options are drawn from both the Climate Change Commission's report and the Methane Review. Other options are possible, and we welcome your feedback as to the range of options identified. We have not included fundamental changes to the target in the options set, such as a move away from a split-gas approach, or removing the target altogether.

25. Ministers will need to determine which option represents an appropriate domestic response to climate change. To support provision of initial feedback, we have provided an initial assessment of the options against three criteria:

i. Alignment with the government's economic growth agenda (including. fiscal and economic impacts and international competitiveness)

ii. Contribution to the Paris Agreement temperature goal of limiting warming to 1.5 °C (as per the purpose of the CCRA)

iii. Implementation feasibility (including likely availability of technology and consistency with current government policy).

26. The options reflect a spectrum of changes to New Zealand's domestic climate change ambition. More ambitious options are technically achievable but will require new domestic policies to drive technology and systems change.

27. Economic modelling to support your consideration of potential changes to the 2050 target is underway and will be incorporated in subsequent advice.

Summary of options analysis

28. Our initial assessment of the options, based on currently available evidence, is included in Appendix 1. Key points from this assessment are as follows:

i. **Option 1 (status quo, biogenic methane emissions are 24% to 47% less than 2017 emissions; net zero long-lived gases)**: No change. With current policies as outlined in ERP2, in particular the ETS and an agriculture pricing system to drive uptake of mitigation technologies and practices, New Zealand is on track for approx. 25% reduction of methane in 2050 and net zero long-lived gases in 2044 (maintained from 2050).

ii. **Option 2: reduced methane target (14% less than 2017 emissions), status-quo for long-lived gases (net zero):** A reduction in New Zealand's domestic ambition that may be perceived to be out of step with international partners 9(2)(h) [redacted] This option is feasible to achieve with current policies. It may either shift the burden of emissions reductions efforts to ETS sectors or require emissions budgets to be amended. It may have a small positive impact on GDP.

iii. **Option 3: clarify methane target at the lower end of the current range (24% less than 2017 emissions); status quo for long-lived gases (net zero):** Consistent with the current emissions trajectory projected through the government's ERP2; no additional impact on GDP; provides clearer expectations of what is expected of the agricultural sector. This option may be perceived as reducing the current target 9(2)(h) [redacted].

iv. **Option 4: clarify methane target (24% less than 2017 emissions), strengthen target for long-lived gases (net negative 10MtCO2 emissions):** Increases domestic ambition for long-lived gases; provides clearer expectations of what is expected of the agricultural sector; some overall economic costs; feasibility depends on adopting new domestic policies beyond ERP2, including measures in addition to the ETS, and greater private sector innovation and uptake of new technologies.

v. **Option 5 (strengthening both the Methane and long-lived gases targets as recommended by the Climate Change Commission, 35-47% less than 2017 levels for methane; negative 20Mt CO2e for long-lived gases)**: A significant increase in domestic ambition; brings New Zealand's approach to our net-zero target in line with international practice where developed country net zero targets cover all-gases; some overall economic costs; feasibility depends on adopting new domestic policies beyond ERP2, including measures in addition to the ETS, and greater private sector innovation and uptake of new technologies.

Developing a response to the Climate Change Commission

29. If you chose to depart from the Climate Change Commission's advice, you are required to specify your reasons for doing so. We will develop a response to the Commission based on the analysis in this paper, as well as the more detailed modelling currently underway.

Te Tiriti analysis

30. Changes to emissions targets have a disproportionate impact on Māori given the concentration of collectively held Māori assets in the agriculture and forestry sectors. These impacts may be both positive and negative and will be identified in regulatory impact analysis.

31. There are no specific requirements in Treaty settlement legislation or the CCRA to consult with post-settlement governance entities or Māori in general on changes to the 2050 emissions reduction target.

32. Given the joint work programmes you, the Minister of Climate Change, have agreed between the Ministry for the Environment and Te Pou Take Āhuarangi and Te Tai Kaha on climate change-related matters, we recommend you provide the chairs of these groups notice of any proposed policy change after Cabinet has approved it and prior to public announcement. 9(2)(j)

33. The Ministry for the Environment has a wide range of varying obligations arising from Treaty settlement relationship agreements and accords to engage with post-settlement governance entities on policy changes within the Ministry's portfolios. Following a public announcement of any policy change, the Ministry will inform these post-settlement governance entities.

Other considerations

9(2)(h)

34. 9(2)(h)

9(2)(h)

37. 6(a), 9(2)(d)

9(2)(g)(i)

Consultation and engagement

38. We are working on the basis that you wish to make final policy decisions in April and do not wish to undertake public engagement on options or a proposed policy change.

39. Given the significant role of the 2050 target in the domestic climate policy framework, you may want to engage with key stakeholders in advance of public announcements of the proposed policy change. We seek your direction on this. Otherwise, engagement will occur through the legislative process.

9(2)(h)

Financial, regulatory and legislative implications

40. Progressing changes to the 2050 target will require an amendment to the CCRA. The Minister of Climate Change has indicated a preference for progressing this change as part of other changes to improve the efficiency of processes under the CCRA later in the year.

41. Changes to the target may require emissions budgets, the emissions reduction plan and ETS settings to be revised. We will advise you further on these matters once we understand whether and how you wish to change the target.

9(2)(h)

Next steps

43. The table below sets out next steps for seeking Cabinet policy decisions to change the 2050 emissions reduction target.

Milestone	Date
Feedback on options (subject to further economic modelling)	17 March
Further advice on options provided (incorporating results of economic modelling)	9 April
Draft Cabinet paper to Ministers office	9 April
Ministerial consultation on draft Cabinet paper	11 April – 17 April
Final Cabinet paper to the Ministers office	22 April
Lodge Cabinet paper	24 April
Cabinet Business Committee	28 April

Recommendations

We recommend that you:

1. **note** that we have provided you with an assessment of the Climate Change Commission's advice on the 2050 target

2. **note** that confirming or changing the 2050 emissions target, and responding to the Climate Change Commission, will require Government decisions on New Zealand's domestic climate change ambition

3. **note** that to support decision-making, economic modelling of potential 2050 target options is underway and will be incorporated in subsequent advice

4. **provide feedback** on the range of options identified for making changes to the 2050 emissions target, ahead of officials developing further advice and seeking final policy decisions, that is:

   i. **Option 1 (status quo)** – net zero long-lived gases, for biogenic methane – 10% less than 2017 levels by 2030, and 24-47% reduction from 2017 levels by 2050; or

   ii. **Option 2** – reduced methane target (14% less than 2017 emissions), status-quo for long-lived gases (net zero); or

   iii. **Option 3** – clarify methane target at the lower end of the current range (24% less than 2017 emissions); status quo for long-lived gases (net zero); or

   iv. **Option 4** – clarify methane target (24% less than 2017 emissions), strengthen target for long-lived gases (net negative 10MtCO2 emissions); **or**

   v. **Option 5** – strengthening both the methane and long-lived gases target as recommended by the Climate Change Commission (35 – 47 per cent less methane than 2017 levels, net negative 20mtCO2 for long-lived gases)

5. **agree** to defer decisions on International Aviation and Shipping until later this year when there is more clarity with regard to the outcome of international processes and officials have undertaken further analysis

Yes | No

6. **note** that if you choose to depart from the Climate Change Commission's advice, we will prepare a response to the Commission on the basis of the information provided to date and the further modelling of impacts currently underway

Yes | No

Signatures

9(2)(a)

Hemi Smiler
General Manager – Mitigation Policy
Ministry for the Environment
14/03/2025

Jane Chirnside
Director Resources and Rural Communities
Ministry for Primary Industries
14/03/2025

Hon Simon WATTS
Minister of Climate Change

Date

Hon Todd MCCLAY
Minister of Agriculture

Date

Appendix 1: Options for changes to the 2050 emissions target

Objective	Criteria	Option 1: Status quo *Our baseline for this analysis is the current targets in the CCRA and assumed policy mix as part of Emissions Reduction Plan 2*	Option 2: reduced methane target (14% less than 2017 emissions), status-quo for long-lived gases (net zero)	Option 3: clarify methane target at the lower end of the current range (24% less than 2017 emissions); status quo for long-lived gases (net zero)	Option 4: clarify methane target (24% less than 2017 emissions), strengthen target for long-lived gases (net negative 10mtCO2 emissions)	Option 5: Increase ambition of methane and long-lived gases as recommended by the Climate Change Commission (35–47% less than 2017 for methane; negative 20 MtCO2e for long-lived gases; further reductions and removals beyond 2050)
Alignment with the Government's economic agenda *(will be updated when CGE modelling is available)*	GDP impact	According to ERP2, the economy is expected to continue to grow with GDP 0.3% lower than a hypothetical "without measures" pathway.	Likely small positive impact on GDP (subject to further modelling).	Status quo, no additional impact.	Likely between ERP2 and CCC modelled pathway, i.e. economy likely to continue growing with small forgone GDP (between 0.3 and 1%) by 2050.	CCC modelling found that by 2040 economic growth continues, but GDP would be around 1% lower than the current target scenario. CCC analysis also points to potential productivity gains, direct financial savings and significant health among the benefits of increased action to reduce/remove emissions.
	Key impacts on sectors	ERP2 projections include: • Agriculture: Output (in GDP terms) is expected to be higher in 2050 than output today, but lower than it would have been without any mitigation actions • Forestry: Output is expected higher in 2050 than it would have been without any mitigation actions. • Energy: Expansion in renewables generation outweighs the reduction in gas generation of electricity (21 per cent lower).	Policies to address agriculture emissions will still be needed, but may be less stringent and less likely to negatively impact agriculture sector growth and international competitiveness. This change may also lead to a marginal reduction of land use change to forestry. This option may either shift the burden of emissions reduction efforts to ETS sectors or require emissions budgets to be amended. 9(2)(h) [redacted]	Policies addressing agriculture sector emissions will still be needed (as per ERP2). Reducing the current range of the methane target may provide more certainty for the agriculture sector, with flow on effects on investment. ETS sectors will face the same price signals for reducing long-lived gases. 9(2)(h) [redacted]	Anticipated impacts range between the status quo (including ERP2 measures) and CCC recommended target. Reducing the current range of the methane target may provide more certainty for the agriculture sector, with flow on effects on investment. ETS sectors face increased price signals to reduce long-lived gases. Specific impacts (e.g. afforestation response, energy transition) likely to depend on policy settings.	Mixed impacts on land-use change, include increased land area (and associated economic benefits) in horticultural, native afforestation and exotic afforestation, reduced land area for sheep, beef and dairy (in line with current trends). ETS sectors face increased price signals to reduce long-lived gases. Specific impacts (e.g. afforestation response, energy transition) likely to depend on policy settings.
The 2050 target contributes to limiting the global average temperature increase to 1.5° Celsius	Contribution to limiting warming to 1.5°C	Current policies, per ERP2, assume us to be on track for approx. 25% reduction of methane in 2050 and net zero long-lived gases in 2044 (maintained from 2050).	Lowering the biogenic methane target reduces our legislated ambition to reduce warming. The lower target reflects 4.1MtCO2e additional biogenic methane emissions in 2050 (over the period 2030-2050 the difference is ~43.5 Mt CO2e between). Preliminary analyses (assuming the 2030 interim target is met) suggest a relative increase in the cumulative warming associated with New Zealand's biogenic methane emissions of ~4% by 2050 and ~14% by 2100 (assuming a "no additional warming" approach is maintained to 2100). Offsetting the additional warming caused by lowering the biogenic methane target to 14% would likely require the net-zero	As for status quo - current policies assume us to be on track for approx. 25% reduction of methane in 2050 and net zero long-lived gases in 2044 (maintained from 2050).	An increase in domestic effort to reduce global warming (as methane reductions would remain as they are today, but the target for long-lived gases would be increased by 10MtCO2e).	Improved contribution to limiting warming to 1.5°C. Would see warming caused by New Zealand peak in the 2030's, as compared to the 2040's under the status quo.

			target to be ~10-20MtCO2e lower (i.e, net-negative 10-20MtCO2e). To be consistent with "no additional warming", this target assumes the world goes beyond 1.5°C.			
	International partners comparison (see further detail in Appendix 2)	Our current target is lower than comparable countries with net zero "all-gases" targets (see Appendix 2). Calculated as an "all-gases" target, our current target is: - 29MtCO2e in 2050 (assuming the lower end of the current methane range), or - 20.2 MtCO2e in 2050 (assuming the higher end of the current methane target range)	A lower biogenic methane target would result in a lower all gases target than comparable countries as many have now set net zero all gases targets, including those with a significant agriculture sector profile e.g. Ireland. Calculated as an all-gases target, this would be 32.8MtCO2e in 2050. May reopen the "gap" between domestic and international targets. Note: an all-gas net zero target is unclear with regard to the extent to which biogenic methane emissions are offset by greater reductions in other gases whereas the biogenic methane component of New Zealand's 2050 target requires a gross reduction in biogenic methane that cannot be offset by removals or other gases.	A lower target than comparable countries. Removing the upper end of the target would be equivalent to an all gases target of 29MtCO2e in 2050.	A higher target than status quo is more aligned with countries who have a net zero all-gases 2050 – calculated as an all-gases target this would be 24MtCO2e.	A higher target than the status quo is more aligned with comparable countries. The upper end of the range recommended by the Commission is consistent in terms of its warming impact with countries that have set net zero all gases targets.
	International fair share analysis	Our current target may be seen as insufficient from the perspective of IPCC fair share and burden sharing principles.	Less consistent with IPCC fair share and burden sharing principles.	As for status quo, although removing the upper end of the range may be perceived as reducing New Zealand's contribution.	Improved alignment with international burden sharing principles	Improved alignment with international burden sharing principles
The target can be feasibly implemented and support NZ's transition to 2050	Achievable pathway: ERP2 modelled technological developments, likely policy implications	ERP2 assumed policies that drive this transition include: the ETS; agricultural emissions pricing system; removing barriers to renewable energy development; carbon capture, utilisation and storage; and afforestation on Crown land. ERP2 technology assumptions include: electric vehicle/ zero emissions heavy vehicle uptake; new agriculture emissions mitigation technologies (e.g. nitrification and methane inhibitors); carbon capture, utilisation and storage.	As for status quo, feasible with current pipeline of technology and policies identified in ERP2.	As for status quo, feasible with current pipeline of technology and policies identified in ERP2.	Likely to require new policy measures in addition to ERP2 for long-lived gases, as the ETS is not currently configured to deliver net negative CO2 emissions, and/or further innovation and technology uptake by the private sector.	Likely to require significant policy change including a greater role for government in incentivising uptake of existing and new technologies, measures to phase out ICE light vehicles and fossil gas, and/or further innovation and technology uptake by the private sector. The ETS is not currently configured to deliver net negative CO2 emissions and new supporting policy measures will be needed.

Appendix 2: International comparison of climate targets

	Domestic targets		International targets		Agricultural emissions as a percentage of total gross emissions	Methane proportion of emissions (incld non-biogenic methane) as a percentage of total gross emissions
	Net Zero target	**Methane target**	**NDC1 target (by 2030)**	**NDC2 target (by 2035)**		
New Zealand	Spit gas: Net Zero of long-lived gases (other than biogenic methane) by 2050	By 2030: reduce biogenic methane 10% (2017 levels) By 2050 and beyond: reduce biogenic methane 24–47% (2017 levels)	50% below gross 2005 levels	51–55% below gross 2005 levels	53% from agriculture in 2022	49% from methane in 2022
Developed countries often compared to New Zealand						
Canada	All gases: Net Zero by 2050	By 2030: reduce methane more than 35% (2020 levels)	40-45% below 2005 levels	45-50% below 2005 levels	10% from agriculture in 2023	17% from methane in 2022
United States	All gases: Net Zero by 2050	By 2035: reduce methane at least 35% (2005 levels)	50-52% below 2005 levels	61-66% below 2005 levels[4]	9% from agriculture in 2022	12% from methane in 2022
Australia	All gases: Net Zero by 2050		43% below 2005 levels	Suggested[5] 65-75% below 2005 levels; or 49%-53% below 2005 levels	13% from agriculture in 2024	19% from methane in 2024
United Kingdom	All gases: Net Zero by 2050		68% below 1990 levels	81% below 1990 levels	12% from agriculture in 2022	13% from methane in 2022
European Union	All gases: Net Zero by 2050		55% below 1990 levels	6(b)(i)	11% from agriculture in 2022	12% from methane in 2022
Small advanced economies (similar population size and economic framework to New Zealand)						
Denmark	All gases: Net Zero by 2050 Proposed Net Zero by 2045, net negative by 2050	By 2030: reduce methane 70% (1990 levels)	EU NDC- 55% below 1990 levels	6(b)(i)	2% from agriculture in 2022	20% methane in 2022
Ireland	All gases: Net Zero by 2050	By 2030: reduce methane 25% (2018 levels)	EU NDC- 55% below 1990 levels	6(b)(i)	38% from agriculture in 2023	29% methane in 2023
Switzerland	All gases: Net Zero by 2050		50% below 1990 levels	65% below 1990 levels	16% from agriculture in 2022	12% methane in 2022
Finland	All gases: Net Zero by 2035 Net negative soon after		EU NDC- 55% below 1990 levels	6(b)(i)	13% from agriculture in 2022	8% methane in 2022
Countries that do not require net zero emissions						
Norway	All gases: 90-95% reduction by 2050 (1990 levels)		55% below 1990 levels	Consulting on a 55-80% range	9% from agriculture in 2021	10% methane in 2021
Israel	All gases: 85% reduction by 2050 (2015 levels)		26% below 2005 levels	TBD	3% from agriculture in 2020	10% methane in 2020

[4] The United States is still currently a Party to the Paris Agreement. However, the new administration has signed an executive order to withdrawal from the Paris Agreement. Article 28 requires Parties to submit a formal withdrawal notification which becomes effective one year after the depositary receives the notification.
[5] The Australian Climate Change authority suggests an ambitious and achievable target of 65-75% reduction by 2035 compared to 2005 levels. The Department of Climate Change, Energy, the Environment and Water suggests a range of 49%-53% reduction by 2035 compared to 2005 levels, based on BAU modelling.
[6] European Scientific Climate Advisory Board recommended 90% below 1990 levels by 2040. In practice, this means drawing a straight line from the 2030 target to the 2040 target and using the middle value as the NDC goal for 2035. This would amount to roughly a 73% below 1990 levels by 2035.

Appendix 3: Key assumptions and implications of the Climate Change Commission's advice on the 2050 target

The table below identifies key assumptions and implications of the Climate Change Commission's advice on the 2050 target for the economy and society. Option 5 above provides an assessment of the Climate Change Commission's advice based on the criteria adopted in this advice. An assessment of the Commission's advice on International Aviation and Shipping will be provided when decisions are sought on those matters.

Key assumptions	*Economic implications*	*Sector specific implications*	*Social, cultural and ecological implications*	*Long-term implications*
Key modelling assumptions - CCC focus on what is possible rather than defining an optimal mix of actions. - Overall assumption that government policy will incentivise gross emissions reductions to counterbalance the ETS incentive to use afforestation. - Modelling of mitigation technologies after 2040 is less certain. - Benefits and co-benefits are not quantified alongside costs. - Economic modelling does not include economic damage from warming, and we can expect this to be higher if warming is not limited **Key technology assumptions** - Adoption and uptake of new methane-reducing technologies (low-methane breeding, methane vaccines and methane inhibitors) - hydrogen steel production from 2040 - green carbon anodes for aluminium production from 2035 - 100% adoption of sustainable airline fuels from 2050 - Tiwai Point remains open until at least 2040. - A reduction in fossil gas production and a decline in estimated gas reserves. - conversion from coal use to biomass in electricity generation	- CCC finds their recommendations are consistent with economic growth - by 2040 GDP growth would be around 1% lower than the current target scenario - Costs and benefits fall unevenly across sectors (see sectoral implications column for more). - A wide range of co benefits of climate action identified across households, industry and business e.g. for the EB4 period CCC advice suggests health benefits valued at $2bn/pa by the end of EB4 from improved air quality - R&D, innovation and adoption of available technology important to limit negative impacts on economic growth. - Potential productivity gains from innovation due to signals from a strengthened target - Potential for strengthened target to support firms to respond to global customers' demands for lower emissions products. - On emissions leakage - CCC assessment is that risk of emissions leakage is highly uncertain but appears to be low for agriculture in New Zealand in the near term.	*Transport* - Decrease to 42bn in vehicle kilometres travelled vs 47bn in 2022. Phase out of ICE light and bus vehicles from 2030. - Household public transport travel increases from 6% in reference scenario to 17% in recommended target by 2050 *Energy* - NZ has capacity to meet most of its energy needs from domestic resources (incl. high levels of RE generation) /within national borders. Significantly reduces risk associated with imported fossil fuels. - Climate can impact renewable electricity generation and therefore there is a need to build resilience from extreme weather events *Forestry* - Exotic forestry increases under recommended target range from present day level to 2050, but slightly less in 2050 than compared to reference scenario. - Native forests (post 1989) increase under recommended target range between current day and 2050, slightly higher than reference scenario in 2050. *Agriculture and horticulture* - Dairy production is steady to 2050 under recommended target, slightly higher production in reference scenario. Land area remains steady under recommended target at 35% level, decreased marginally at 47% end. - Sheep and beef numbers follow current trends (decline in reference scenario, slightly higher declines in recommended target scenario). Dairy stock numbers peaked in 2014, sheep in 1982. - Horticulture has rapid increase in revenues from land use change, from $4bn-7.3bn (based on meeting lower or upper end of methane target respectively). - Opportunity to be a global leader e.g. food and biogenic methane reductions - Improving farm management practices can lower emissions while maintaining, or in some cases increasing farm profit	*Regional impacts* - Most regions would experience more jobs rather than fewer. Pattern of employment changes for the most part expected to happen gradually, opportunities for workers to transition through normal turn over and retirement. - Reduced employment in Taranaki and west coast (due to reduction in oil, fossil gas and mining sectors). CCC suggest recent offshore renewables and hydrogen interest could offset job losses. *Distributional impacts* - Current population would need to do more to reduce emissions - Reduces amount of warming caused by NZ, lowers risk of impacts of warming on future generations *Crown-Māori relationship, te ao Māori and specific effects on iwi and Māori* - CCC consider recommended target more consistent with what they have heard from iwi/Māori to date than status quo. - Land use change away from sheep and beef, towards lower emission land use may have negative impacts on iwi, Māori and Māori business may need further transition support. *Ecological impacts* - Modelling assumes large increase in new native afforestation on marginal and erosion prone land (planting and reversion). There are associated environmental co-benefits (water, biodiversity).	- Further emissions reductions beyond 2050 will be required to stay within a 1.5°C warming goal - The Commission's recommended target would reduce New Zealand's contribution to warming from 0.0025°C in 2050 to 0.0023°C in 2100. - Action past 2050 combined with earlier signalling of long-term goals, smooths transition/ transition costs across generations - Most countries are working towards 2050 commitments; three non-annex I countries under the UNFCCC framework have climate targets or commitments post 2050 (China, Brazil and Singapore).

Briefing: Final policy decisions on the 2050 target

Date submitted: 30/5/2025
Tracking number: MfE BRF-6017; MPI B25-0174
Sub Security level: CLASSIFICATION
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Todd MCCLAY **Minister of Agriculture** Hon Simon WATTS **Minister of Climate Change**	**Agree** to a preferred 2050 domestic emissions target	03/06/025

Actions for Minister's office staff
Return the signed briefing to the Ministry for the Environment (advice@mfe.govt.nz).

Appendices and attachments
Appendix 1: Agricultural mitigation technology pipeline Appendix 1 withheld in full under section 9(2)(b)(ii) of the Act
Appendix 2: Updated summary of options analysis for changes to the 2050 emissions target
Appendix 3: Warming impact of different 2050 target options
Appendix 4: Greenhouse gas emissions impacts
Appendix 5: Economic modelling results
Appendix 6: International comparison of climate targets
CLASSIFICATION Appendix 7: Appendix withheld in full under section 9(2)(h) of the Act

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Responsible Manager	Charlotte Harris-Miller	9(2)(a)	✓
General Manager	Hemi Smiler	022 087 1268	
Deputy Chief Executive	Sam Buckle	022 034 0311	
Key contacts at Ministry for Primary Industries			
Position	***Name***	***Cell phone***	***First contact***
Responsible Manager	Beth Hampton	9(2)(a)	✓

Director	Jane Chirnside	9(2)(a)	
Deputy Director-General	Julie Collins	9(2)(a)	

Minister's comments

Final policy decisions on the 2050 target

Key messages

1. This briefing seeks your agreement to a preferred option for amending the 2050 emissions target in the Climate Change Response Act 2002 (CCRA). It focusses primarily on four 2050 options, informed by the Methane Review and the Climate Change Commission's 2050 review, and feedback from Ministers:

    a. Biogenic methane 14% below 2017 levels; long-lived gases unchanged (net-zero)

    b. Biogenic methane 14-24% below 2017 levels; long-lived gases unchanged

    c. Biogenic methane 24% below 2017 levels; long-lived gases unchanged

    d. Biogenic methane 35-47 % methane below 2017 levels; net negative 20 $MtCO_2$-e for long-lived gases (as recommended by the Climate Change Commission).

2. For context, since 2014 agricultural emissions have decreased by 6%; with the sector reducing emissions by over 5% in just the last three years between 2020 and 2023. Total biogenic methane emissions from waste and agriculture are now sitting at 4.1% below 2017 levels. We have confidence in the pipeline of new mitigation technologies, with some effective tools already commercially available, and we expect this trajectory to continue provided there is some sort of incentive (private or public) to encourage ongoing innovation and practice change.

3. A 24% reduction of biogenic methane emissions below 2017 levels and retention of the net zero target for long-lived gases is officials' (MPI and MfE) preferred option. This option strikes a balance between economic growth and climate change objectives and provides for a greater level of policy stability and certainty than other options. The 24% target requires an approximate 0.7% annual reduction in biogenic methane emissions from 2030-2050, which we consider achievable with the current pipeline of technologies.

4. In addition, this level of reduction is consistent with the findings of the Methane Review as it meets the criteria of "no additional warming" under all background global temperature scenarios that were modelled, including a 1.5°C global scenario.

5. If Ministers are concerned about the potential for it to be achieved, then a target range of 14-24% would provide for a wider range of required technology uptake and global market scenarios. As per the findings of the Methane Review, a 14-15% reduction in biogenic methane emissions is consistent with stabilising the warming contribution of New Zealand's biogenic methane emissions at 2017 levels under global mid-range (2.0°-2.7°C) and high global temperature increase scenarios (temperature increase well over 2.0°C, and as high as approximately 4.5°C), but not a 1.5°C global scenario.

6. More detailed analysis of options, 9(2)(h) [redacted], is set out in paragraphs 19-52.

Background

7. The 2050 emissions target sets the level of domestic efforts to reduce emissions from greenhouse gases, and provides certainty for the economy about the long-term direction of climate change policy.

8. The Government has set its climate strategy, and is progressing key policies including:

    a. Strengthening the New Zealand Emissions Trading Scheme (NZ ETS);

    b. Introducing limits on whole farm conversions to exotic forestry on productive farmland registering in the NZ ETS;

    c. Taking agriculture out of the NZ ETS and committing to a fair and sustainable emissions pricing system by 2030;

    d. Investing in the development and commercialisation of agricultural mitigation technologies;

    e. Providing a pathway for further recognition of on farm sequestration and other non-forest removals; and

    f. Progressing work to support voluntary nature market activity (which could provide an additional revenue stream for landowners).

9. We have confidence in the pipeline of new mitigation tools (see **Appendix 1**), which will support New Zealand's economic growth while meeting climate commitments. Some tools are already commercially available, and we are confident that farmers will increasingly have options that fit their farm systems to support meeting New Zealand's longer-term emissions reduction targets. We are also seeing industry-led action in support of meeting climate commitments and/or meeting market demands. For example, Fonterra's incentive scheme, Synlait and Nestle's partnership[1], and Silver Fern Farm's Net Carbon Zero by Nature range, which should support the uptake of these technologies.

10. Between 2022 and 2023, New Zealand's gross emissions fell by 2% and net emissions fell by 4%. Notably, the 2025 Greenhouse Gas Inventory also showed that the agriculture sector reduced emissions by over 5% in the three years between 2020 and 2023. Total biogenic methane emissions from waste and agriculture are now sitting at 4.1% below 2017 levels. Overall forecast growth for the agriculture sector has remained positive on average throughout this period.

[1] New Zealand's first agritech tool for effluent ponds (which reduces methane from effluent ponds by around 95%) was deployed on-farm in May through a partnership between Synlait and Nestle. The Synlait – Nestle partnership aims to treat 50 farms by the end of the year, while a Fonterra EcoPond trial starting in August aims to treat a further 200 farms over two years.

Analysis and advice

Updated assessment of options incorporating additional analysis and modelling

11. You received initial advice on options for amending the 2050 emissions reduction target in the CCRA [MfE BRF-5923; MPI B25-0144 refers]. Since receiving feedback, we have refined the set of options and completed economic[2] and temperature impact modelling and further analysis to support your final decisions (see **Appendices 2-6**).

12. Refined options for changes to the target, as informed by the Methane Review and the Commission's report, and feedback from Ministers, are:

    a. **Option 1** – Methane 14% below 2017 levels; long lived gas unchanged (net-zero)

    b. **Option 2** – Methane 14 – 24% below 2017 levels; long lived gases unchanged

    c. **Option 3 –** Methane 24% below 2017 levels; long lived gas unchanged

    d. **Option 4** – Methane 35 – 47% below 2017 levels; net negative 20MtCO_2-e for long-lived gases) as recommended by the Climate Change Commission)

13. Options were assessed against three criteria:

    a. Alignment with the government's economic growth agenda (including economic impacts and international competitiveness)

    b. Contribution to limiting global warming (as per the purpose of the Climate Change Response Act 2002)

    c. Implementation feasibility (including availability of technology and implications for government policy)

14. New Zealand's domestic emissions reductions are set under the CCRA with the intent of contributing to global efforts to limit temperature increase to 1.5°C. The analysis undertaken in this paper shows that the more New Zealand reduces its emissions, the more it contributes to limiting global warming. This is the case when modelled under different background global warming scenarios, although there is a small marginal

---

[2] The economic modelling we have undertaken provides insights into where impacts are likely to occur and in what direction, although the magnitude of the impacts is uncertain. The modelling projects the current economic structure to 2050 without accounting for possible new goods, services, exports, or the impact of climate change. 9(2)(h)

In ERP2, policy, economic, and technology assumptions formed the basis for the projections that agricultural emissions pricing would not impact stock numbers or agricultural production. However, there is a risk of small production losses, which could result in some leakage of global emissions if less efficient producers fill the gap. This could reverse if other countries reduce emissions intensity below New Zealand's. The impact on global emissions is uncertain and depends on international trade, demand and supply developments.

reduction in the impact of our emissions in scenarios in which there are higher global temperatures.

15. Increases in global warming will intensify multiple and concurrent hazards, and recent evidence shows the impacts of climate change are more severe and occurring at lower global average temperatures than previously anticipated. For example, risks of extreme weather events and biodiversity loss as a result of climate change are assessed by the IPCC as high at 1.5°C and very high at 2.0°C.

16. The Methane Review focused on the level of emissions reductions that are required to stabilise New Zealand's contribution to warming from biogenic methane at 2017 levels, i.e. "no additional warming". The Methane Review found that even to stabilize warming at this level, significant emissions reductions are needed:

    a. In a global emissions scenario of limiting temperature increase to 1.5°C – reducing New Zealand's biogenic methane emissions by 24% by 2050;

    b. For a mid-range global emissions scenarios of limiting temperature increase to 2.0° - 2.7°C – reducing New Zealand's biogenic methane emissions by 14-15% by 2050; and

    c. In a high global emission scenario – with a temperature increase well over 2.0°C and as high as approximately 4.5°C – New Zealand's biogenic methane emissions levels can remain at 2022 levels in 2050.

17. From a target setting perspective, "no additional warming" as explored by the Methane Review sought to determine the level of biogenic methane emissions needed to maintain the same level of warming from biogenic methane as per a base year, in this case 2017. In preparing this advice, officials have considered the contribution to limiting warming of different target options, as well as economic implications and feasibility considerations.

18. Our assessment of the options uses our current baseline projections and the policies within the Government's second emissions reduction plan (ERP2) as the status quo. The GDP, warming and emissions impacts outlined in our analysis are compared against this baseline. Further information on the status quo is included in **Appendix 2.**

Option 1: Biogenic methane 14% below 2017 levels; long-lived gases unchanged

19. As per the findings of the Methane Review, a 14-15% reduction in biogenic methane emissions achieves "no additional warming" from New Zealand's biogenic methane emissions at 2017 levels under global mid-range and high temperature increase scenarios, but not a 1.5°C global scenario.

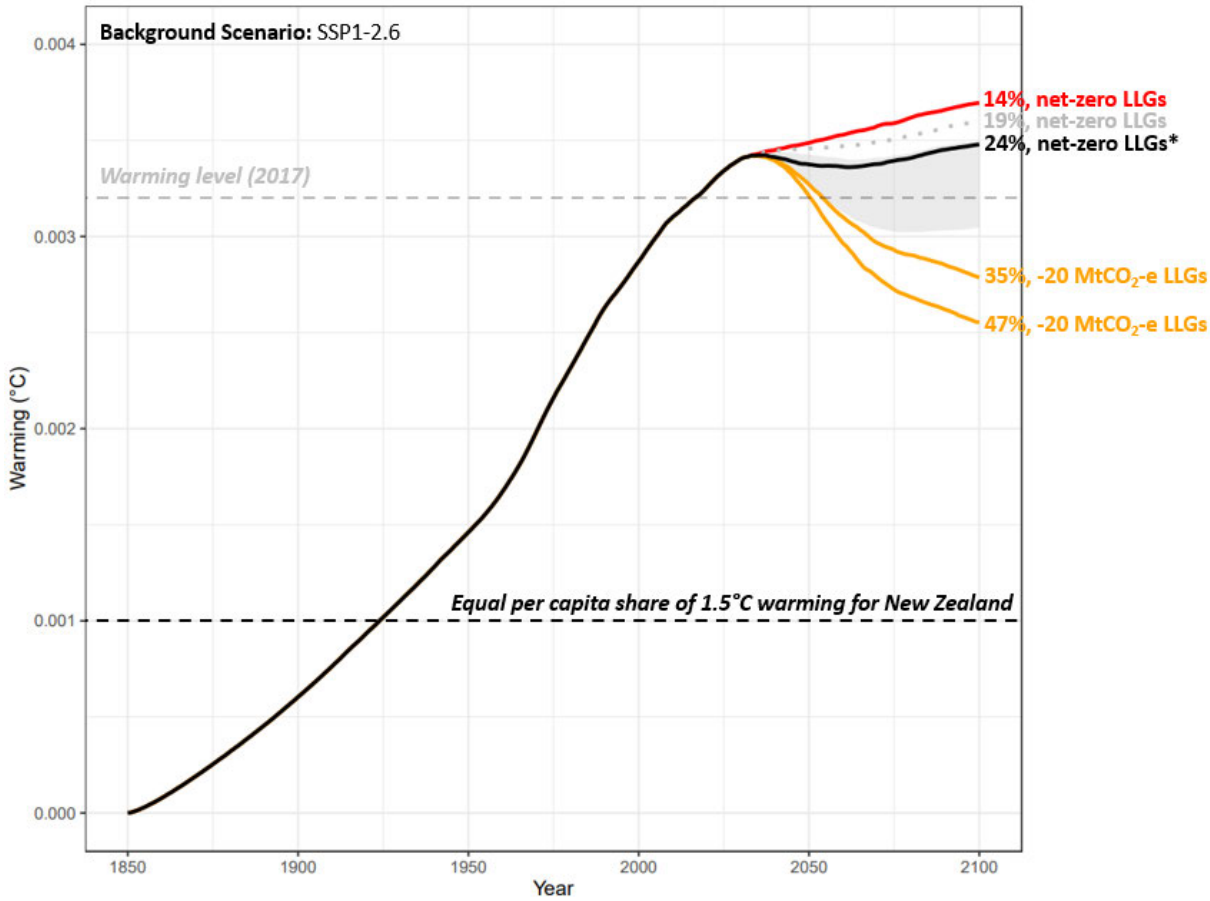
20. The main economic impact of lowering the biogenic methane target is shifting the pattern of economic activity - the overall modelled impact on GDP is negligible (in 2050, GDP is 0.01% higher than it would be otherwise). However, some sectors of the economy would grow more than they would under the status quo – for example, agricultural output was modelled to grow by about 1.1% more than it would under the status quo (the status quo

sees continued growth with the agricultural sector modelled as being about 21% larger than it is now by 2050).[3]

21. Option 1 would increase New Zealand's emissions and contribution to global warming relative to the status quo. This is shown in the chart below (grey shaded area illustrates the warming range based on achieving the lower and upper end of the current biogenic methane target) and further detail is included in **Appendix 3**.

22. This option would also lead to greater misalignment with comparable countries with net zero "all-gases" targets (see comparison in **Appendix 6**).

Chart 1: Warming impact of target options (including emissions from both biogenic methane and long-lived gases)



**Modelled based on the trajectory of ERP2 to 2050 which achieves a 24.9% reduction in biogenic methane emissions relative to 2017 levels.*

23. This option is more feasible than the status quo as the biogenic methane target is lower, although uptake of new technologies or other change is still likely to be required to achieve it. It would also improve certainty in terms of what level of reduction is required. From 2030, this option would only require a 0.2% decrease in methane per annum to reach the target.

[3] The reason for this result is that, in the modelling, resources (e.g. employment, investment) are diverted between sectors (e.g. resources that would have flowed to the services sector flow to the agricultural sector instead). The result of this is the overall impact on GDP is much smaller than the increase in agriculture.

24. This option may require revision of emissions budgets. It would result in a shift in the emissions reduction burden to the ETS sectors (energy, transport etc) of approximately 9 $MtCO_2$-e for Emissions Budget 3 (EB3)[4], unless the emissions budget is revised. This would result in an overall gap to achieving EB3 of 18.4 $MtCO_2$-e[5]. The shift in burden without a revision to the budget is close to the total amount of auctioned units estimated to be available for EB3 (12M units), 9(2)(g)(i) [redacted]

25. Achieving this level of emissions reductions from ETS sectors is likely to be challenging, particularly if removals from exotic forestry are constrained by other policy settings. Our high-level modelling suggests closing an 18.4 $MtCO_2$-e gap might require carbon prices about $30 higher over the 2030s (peaking at about $105 in 2035), which could itself require adjusted ETS policy settings. Increased costs would be passed through to businesses and households - every $10 increase in emission prices adds about $90 per annum to the average household's expenditure. In contrast, closing the current 9.2 $MtCO_2$-e gap might require carbon prices about $10 higher over the 2030s (peaking at about $80 in 2035).[6] There is a risk that prices may need to be considerably higher than the estimates above.

26. New Zealand's climate credentials also matter for our reputation internationally, as well as for exporters and certain trading partners, 9(2)(d) [redacted]

27. 9(2)(h) [redacted]

[redacted]

[4] An emissions budget is a total quantity of emissions that is allowed to be released during an emissions budget period. For EB3, this is 240 Mt CO_2-e over 2031-2035.
[5] This is because there is an existing 9.2 $MtCO_2$-e gap already.
[6] The carbon price estimates noted here are based on the Computable General Equilibrium (CGE) modelling used elsewhere in this document to estimate wider economic impacts. They are derived from a different modelling framework than that used to support ETS unit and price control setting consultation. These estimates do not consider the risk the stockpile could pose to achieving the time-bound budgets.

9(2)(h) [redacted]

Option 2: Biogenic methane 14-24% below 2017 levels; long-lived gases unchanged

29. Option 2 is to set a range from 14-24% below 2017 levels. For context, a range at this level would require a 0.2% per annum reduction in methane from 2030, up to a 0.7% per annum reduction.

30. The Methane Review found that a 14-15% reduction in biogenic methane emissions is consistent with stabilising the warming contribution of New Zealand's biogenic methane emissions at 2017 levels under global mid-range and high temperature increase scenarios, but not a 1.5°C scenario. A reduction of 24% is consistent with the findings of the Methane Review as it meets the criteria of "no additional warming" under all background global temperature scenarios that were modelled, including a 1.5°C scenario.

31. The economic impact of this option is likely to be small. It may increase GDP by 0.01% by 2050. It is also likely to have the same implications for our obligations under trade agreements as Option 1 (a 14% target).

32. The impact of this option on New Zealand's overall emissions and contribution to global warming (see Chart 1 above) depends on what reduction is achieved:

    a. If 14% is achieved, New Zealand's emissions and contribution to global warming would be increased; whereas

    b. If 24% is achieved, it would be similar to now (as we are currently projected to reduce biogenic methane emissions by 25% in 2050).

33. As for Option 1, if the target range was met at the lower end then this would lead to greater misalignment with comparable countries with net zero "all-gases" targets. If met at 24%, when quantified as an "all-gas" target, it would still be lower than comparable countries with net zero "all-gases" targets[7].

34. We consider this option would be equally as feasible as Option 1 above. Reaching a 24% target is considered achievable. However, if you were concerned about meeting a 24% reduction target, this option may be preferred.

35. An alternative to setting a target range would be to clarify the target at 24% now, with a commitment to review the biogenic methane component with a view to lowering it to 14%

[7] However, it is unclear the extent to which most countries with net-zero all-gases targets intend to drive gross reductions of biogenic methane as a way of achieving their targets)

if certain conditions (for example, related to technology availability and global progress) were not met.

36. 9(2)(h) [redacted]

Option 3: Methane 24% below 2017 levels; long-lived gases unchanged

37. The economic impact of Option 3 is similar to what we expect to occur now, which is for the economy to grow steadily between now and 2050. We expect all sectors of the economy to continue to grow – with modelling suggesting that the agricultural sector, for example, to be approximately 21% larger than it is now by 2050.

38. Clarifying the target at 24% will provide certainty to the relevant sectors about their contribution to New Zealand's climate change goals. This may also result in a corresponding lift in confidence to invest in emissions reduction efforts, and innovation.

39. This option would not result in any significant changes to our current contribution to warming and is aligned with current policies in ERP 2. However, removing the upper end of the current target range may make more stringent climate change policies less likely in the future.

40. When quantified as an all-gases target, Option 3 is lower than net-zero all gases targets set by comparable countries (this is the same as the status quo).

41. Meeting 24% requires approximately a 0.7% per annum reduction from 2030. We have confidence in the pipeline of mitigation tools, and consider this option is achievable and equally feasible as the status quo[8]. Since agriculture emissions are outside of the NZ ETS, removing the range and clarifying the biogenic methane target will not directly impact the NZ ETS.[9] This option is unlikely to require emissions budgets to be revised and so also supports stability in our climate policy settings, including the NZ ETS.

42. 9(2)(h) [redacted]

Option 4: Methane 35 – 47% below 2017 levels; net negative 20 MtCO_2-e for long-lived gases (as recommended by the Climate Change Commission)

43. Option 4 requires emissions reductions above current commitments, which results in economic costs. Our modelling suggests that GDP in 2035 would be about 0.4% lower than it would otherwise be, and in 2050 it would be about 2.2% lower. The GDP impacts in the 2040s are particularly high, as very high emissions reductions in the model are required in order to achieve to the -20Mt CO_2-e 2050 target.

---

[8] With the current pipeline of technology and policies identified and assumed in ERP2.
[9] This certainty may also enable better ETS settings processes, including the allocation of necessary emissions reductions/removals across ETS and non-ETS sectors.

44. Under this option, New Zealand's contribution to global warming by the end of the century is much lower compared to all other options considered. This option would also be more consistent with the net zero 'all gases' targets set by other comparable countries.

45. Option 4 would require significant policy change, market drivers, and private sector action to drive uptake of new technologies. NZ ETS sectors are likely to face increased price signals to reduce long-lived gases. Incentives to increase uptake of new technologies in the agriculture sector will also be needed, with policy impacts likely to be higher. Sector specific impacts will depend on policy settings, although we expect that existing trends for land use change related to financial returns will be accelerated.

46. Option 4 would close the current gap in EB3 (and overachieve it by ~ 6 $MtCO_2$-e).

Summary of Impacts Table (See Appendix 2 for more detailed analysis)

	Option 1: Methane 14% below 2017 levels; long lived gas unchanged	**Option 2: Methane 14-24% below 2017 levels; long lived gas unchanged**	**Option 3: Methane 24% below 2017 levels; long lived gas unchanged**	**Option 4: Methane 35 – 47 % methane below 2017 levels; net negative 20mtCO_2e for long-lived gases (as recommended by the Climate Change Commission)**
Change in GDP as of 2050 (compared to the status quo)	0.01%	0.01% to 0.0%	0.0%	-2.2%
New Zealand's Contribution to warming (compared to the status quo)	Increase Warming by ~3.3% by 2050 and by ~6.2% by 2100	A range from same as the current target (24% methane) to an increase in warming of ~3.3% by 2050 and ~6.2% by 2100 (14% methane)	Same as status quo target	A range from reducing warming by ~3.1 to ~4.9% by 2050 and ~19.9% to ~26.6% by 2100
Emissions impact – change in total net target accounting emissions in 2050 and EB3 compared with the status quo	Additional 4.1MtCO_2e in 2050 This option would result in an additional 9 Mt CO_2-e emissions in EB3, increasing the overall gap to 18.4 Mt CO_2-e	A range from the current target to an additional 4.1MtCO_2e in 2050 Depending on which end of the range is targeted, would either not increase the gap in current emissions in EB3, or increase the gap to 18.4 Mt CO_2-e.	Same as the current target in 2050 This option is unlikely to increase the current gap (approx. 9 Mt CO_2-e) of emissions over EB3.	23.8 to 28.4MtCO_2e less emissions in 2050 Would decrease the current emissions gap in EB3 (approx. 9 Mt CO_2-e) by 15.4 Mt CO_2-e resulting in overachieving EB3 by roughly 6 Mt CO_2-e.

International partners comparison when target is calculated as an 'all-gas' target (Annual net emissions in $MtCO_2$-e at 2050)	Calculated as an "all-gases" target, this option would be: 32.8 $MtCO_2$-e Lower than comparable countries	Calculated as an "all-gases" target, this option would be: 32.8 to 29 $MtCO_2$-e Lower than comparable countries	Calculated as an "all-gases" target, this option would be: 29 $MtCO_2$-e Lower than comparable countries	Calculated as an "all-gases" target, this option would be close to net zero (0.2 to 4.8 $MtCO_2$-e) Aligned with comparable countries
Achievable pathway: ERP2 modelled technological developments, likely policy implications	Feasible with current pipeline of technology and policies identified in ERP2.	Feasible with current pipeline of technology and policies identified in ERP2.	Feasible with current pipeline of technology and policies identified in ERP2.	Likely to require significant policy change

Officials' preferred option based on analysis undertaken

47. Each option has been considered in relation to the three policy objectives (related to alignment with the government's economic growth agenda; contribution to limiting warming; and feasibility). Based on this analysis, Option 3, a 24% reduction of biogenic methane emissions below 2017 levels and retention of the current target for long-lived gases, is preferred. This option strikes a balance between economic growth and climate change objectives, is feasible, and also provides for a greater level of policy stability and certainty than other options.

48. A 24% reduction in biogenic methane emissions is also consistent with the findings of the Methane Review as it meets the criteria of "no additional warming" under all background global temperature scenarios that were modelled, including a 1.5°C global scenario.

49. The 24% target requires an approx. 0.7% annual reduction in biogenic methane emissions from 2030-2050. This is achievable with the current pipeline of technologies, and can be achieved alongside sustained and ongoing sector growth. The sector has demonstrated its ability to reduce emissions, having achieved a 5% reduction in 2020-2023.

50. Option 3 aligns with the current trajectory of emissions reductions and policies. Emissions budgets would not need to be revised, further supporting policy stability, including for the NZ ETS. 9(2)(h) [redacted] This option will improve certainty about the emissions reductions the government expects, which may also result in a corresponding lift in confidence to invest in emissions-reduction activities.

51. While 24% is achievable with mitigation technologies[10], pressure for land use change will be driven by the relative economics between sheep and beef farming, dairy, forestry and horticulture. If Ministers are concerned about achievability, then a target range of 14-24% would provide for a wider range of technology uptake and international scenarios. As per the findings of the Methane Review, a 14-15% reduction in biogenic methane emissions is consistent with stabilising the warming contribution of New Zealand's biogenic methane emissions at 2017 levels under global mid-range (2.0°-2.7°C) and high global temperature scenarios (global temperature increase well over 2.0°C, and as high as approximately 4.5°C). A 24% reduction was found to be consistent across all scenarios that were modelled, including a 1.5°C global scenario.

52. Alternatively, if you were seeking to address sector concerns about a 24% methane target, you could consider committing to review the target in future taking into account, for example, domestic mitigation technology availability and international progress towards climate commitments.

Te Tiriti analysis

53. Māori hold significant investment potential and will continue to play a leading role in the economy with an estimated asset base worth NZ$126 billion and an estimated contribution of $32 billion to GDP in 2023.

54. Climate change is of significant interest to Māori and changing the 2050 target and subsequent climate change policies may have disproportionate impacts on Māori. This is due to the higher asset exposure to the primary industries, higher proportion of ownership of lower-quality land, barriers in obtaining capital due to the inability to use land as collateral, multiple ownership structures, and greater representation in lower-income groups making it harder to absorb rising costs.

55. Increases in global warming could have negative impacts on Iwi/Māori owned assets and land, which are often particularly vulnerable to the effects of climate change. This can increase impacts of climate change on ecosystems and Māori communities and have flow-on impacts on traditions, knowledge systems, taonga, and cultural sites. On the other hand, options which reduce or clarify the biogenic methane target at 24% could ease economic pressure on land-based activities producing biogenic methane.

56. Previous engagement with Māori suggests support for increasing climate mitigation action. ERP2 sets out actions and policies for mitigating impacts on Māori such as fostering partnership in climate action, supporting iwi, hapū and Māori-led solutions, and building resilient communities. We have outlined in paragraphs 58 - 59 a proposed approach to engaging with Māori.

[10] Mitigation technologies are one option that farmers could choose to employ to reduce emissions; we expect uptake will be influenced by factors such as farm system fit and the degree to which uptake is incentivised in some way. We also expect to see reductions from productivity improvements and other practice changes.

Other considerations

Consultation and engagement

57. 9(2)(g)(i) [redacted] To protect auction participants and maintain market credibility, the protocol for NZU market sensitive announcements requires market sensitive announcements to be made outside trading hours and outside of each ETS auction window.[11] This protocol was agreed by Cabinet on 31 March 2025, and we understand Minister Watts intends for it be released on 27 May.

58. The upcoming auction window is between 4 and 20 June 2025, with the auction taking place on 18 June. Therefore any announcement on changes to the 2050 target within this window would be inconsistent with the protocol. Officials can provide further advice on this and work with you to minimise the risk of an announcement in this period.

59. There are no specific requirements in Treaty settlement legislation or the CCRA to consult with post-settlement governance entities or Māori in general on changes to the 2050 emissions reduction target. However, following a public announcement, MfE will inform post-settlement governance entities (with relationship agreements and accords with MfE) of any policy change.

60. Given the joint work programmes you, the Minister of Climate Change, have agreed between the Ministry for the Environment and Te Pou Take Āhuarangi and Te Tai Kaha on climate change-related matters, we recommend you discuss the decisions with these groups after the announcement has been made public. 9(2)(j) [redacted] Subject to your approval, we will prepare material to support this engagement.

ETS settings

61. On 21 May, ECO agreed to consult via the annual ETS unit and price controls settings consultation on a provisional ETS cap for EB3. The cap is a core component of ETS settings and important for providing market confidence. It allocates the level of effort between ETS sectors (i.e., energy, transport, forestry) and non-ETS sectors (primarily agriculture). Cabinet will consider this on 26 May and the consultation will run through June.

62. The provisional cap was aligned with current projections, which are themselves based on the bottom end of the status quo (24%-47%) biogenic methane target. 9(2)(g)(i) [redacted]

[11] Market sensitive announcements can impact those who commit collateral to an auction and can also impact those who might have become involved if they had known the announcement information at an earlier time.

9(2)(g)(i)

9(2)(h)

Financial, regulatory and legislative implications

68. We understand you wish to progress changes to the 2050 target at pace. We will work with your offices on how best to progress legislative changes.

69. 9(2)(h)

9(2)(h) [redacted]

Next steps

70. Following your direction on your preferred option, we will work with your offices to support Cabinet decisions on 9 June and the subsequent legislative process.

71. We will also provide advice to the Minister of Climate Change on progressing a response to the Commission before the legislated deadline of November 2025. This will include advice on any outstanding issues, including international shipping and aviation emissions and consideration of further reductions and removals of emissions post-2050.

Recommendations

We recommend that you:

1. **note** the advice contained in this briefing
2. **agree** to your preferred option for making changes to the 2050 emissions target:

   a. **Option 1** – Methane 14% below 2017 levels; long lived gas unchanged; **or**

   Yes | No

   b. **Option 2** – Methane 14-24% below 2017 levels; long lived gas unchanged; **or**

   Yes | No

   c. **Option 3 –** Methane 24% below 2017 levels; long lived gas unchanged; **or**

   Yes | No

   d. **Option 4 –** Methane 35 – 47 % below 2017 levels; net negative 20 $MtCO_2$-e for long-lived gases (as recommended by the Climate Change Commission)

   Yes | No

Signatures

Sam Buckle
Deputy Chief Executive Climate Mitigation & Resource Efficiency
Ministry for the Environment
30/05/2025

Julie Collins
Deputy Director-General – Policy and Trade
Ministry for Primary Industries
30/05/2025

Hon Simon WATTS
Minister of Climate Change
Date

Hon Todd MCCLAY
Minister of Agriculture
Date

Appendix 2: Updated summary of options analysis for changes to the 2050 emissions target

Objective	Criteria	Status quo Our baseline for this analysis is the current targets in the CCRA and assumed policy mix as part of Emissions Reduction Plan 2	Option 1: Methane 14% below 2017 levels; long lived gas unchanged	Option 2: Methane 14-24% below 2017 levels; long lived gas unchanged	Option 3: Methane 24% below 2017 levels; long lived gas unchanged	Option 4: Methane 35 – 47 % methane below 2017 levels; net negative 20mtCO2e for long-lived gases (as recommended by the Climate Change Commission)
Alignment with the Government's economic agenda	GDP impact *Note: The benefits of climate mitigation have not been quantified or included in available modelling; nor have the co-benefits of mitigation policies*	Modelling suggests that ERP2 climate mitigation actions will lead to real GDP that is about 0.02% lower in 2030 and 0.15% lower in 2050.	Small positive impact on GDP (relative to the status quo). Modelling indicates that in 2050 GDP would be less than 0.1% higher than the current target.	Small unquantified positive impact on GDP (relative to the status quo.	Small unquantified positive impact on GDP (relative to the status quo).	Moderate negative impact on GDP. Modelling indicates that in 2035, GDP would be 0.4% lower than the status quo, and in 2050 GDP would be 2.2% lower (noting this 2050 figure is likely an over-estimate due to the limitations of the modelling). There would likely be co-benefits of further decarbonisation. These include energy security and improved health outcomes.
	Key impacts on sectors	ERP2 projections include: • Agriculture: Output (in GDP terms) is expected to be higher in 2050 than output today, but lower than it would have been without any mitigation actions • Forestry: Output is expected higher in 2050 than it would have been without any mitigation actions • Energy: Expansion in renewables generation outweighs the reduction in gas generation of electricity (21% lower).	Policies to address agriculture emissions will still be needed, but may be less stringent and less likely to negatively impact agriculture sector growth and international competitiveness. This change may also lead to a marginal reduction of land use change to forestry. This option may either shift the burden of emissions reduction efforts to ETS sectors or require emissions budgets to be amended. CGE modelling indicates that agriculture would have a 1.1% increase in output as of 2050 compared with the status quo. This is offset by reductions in other sectors including forestry with –0.3% output. Actual sector impacts will depend on Government policies. 9(2)(h) [redacted]	Regardless of which part of the range is met, policies to address agriculture emissions will still be needed (however their stringency/impact will depend on which part of the range is targeted). This option may either shift the burden of emissions reduction efforts to ETS sectors or require emissions budgets to be amended. Reducing the methane target may provide more certainty for the agriculture sector, however setting a range may impact policy certainty. Impacts on ETS prices or agriculture output will be the same as Option 1 or 3 depending on which end of the target range is targeted. 9(2)(h) [redacted]	Policies addressing agriculture sector emissions will still be needed (as per ERP2). Clarifying the current range of the methane target may provide more certainty for the agriculture sector. ETS sectors will face the same price signals for reducing long-lived gases. Sector output for this option is the same as the status quo. 9(2)(h) [redacted]	Likely mixed impacts on land-use change, include increased land area (and associated economic benefits) in horticultural, native afforestation and exotic afforestation, reduced land area for sheep, beef and dairy (acceleration of current trends). ETS sectors face increased price signals to reduce long-lived gases. Specific impacts (e.g. afforestation response, energy transition) likely to depend on policy settings. CGE modelling indicates that agriculture would have a 17% decrease in output as of 2050 compared with the status quo. Other sectors have increased output including forestry with 3.5%. Actual sector impacts will depend on Government policies.

			9(2)(h) [redacted]	9(2)(h) [redacted]		
The 2050 target contributes to limiting the global average temperature	Contribution to limiting warming	Current policies, per ERP2, assume us to be tracking towards approx. 25% reduction of methane in 2050 and net zero long-lived gases in 2044 (maintained from 2050). Would not result in any changes to New Zealand's current impact on warming relative to the warming associated with projected emissions under ERP2.	Lowering the biogenic methane target reduces our legislated domestic effort to contribute to limiting global warming. The lower target reflects 4.1MtCO_2e additional biogenic methane emissions in 2050 (over the period 2030-2050 the difference is ~70.7 Mt CO_2e between). This option would result in an additional 9 Mt CO_2-e emissions in EB3, increasing the overall gap to 18.4 Mt CO_2-e. This would increase New Zealand's contribution to warming by ~3.3% by 2050 (~6.2% by 2100) relative to the warming associated with projected emissions under ERP2.	The impacts on New Zealand's overall emissions and contribution to warming in 2050 are similar to Options 1 and 3 depending on which part of the target range is met in 2050. Depending on which end of the range is targeted, would either not increase the gap in current emissions in EB3, or increase the gap to 18.4 Mt CO_2-e.	Current policies as set in ERP2 assume us to be tracking towards approx. 25% reduction of methane in 2050 and net zero long-lived gases in 2044 (maintained from 2050). Would not result in significant changes to New Zealand's current impact on warming relative to the warming associated with projected emissions under ERP2. This option is unlikely to increase the current gap (approx. 9 Mt CO_2-e) of emissions over EB3.	Improved contribution to limiting global warming to 1.5°C. This would reduce global warming caused by New Zealand by ~3.1 to ~4.9% by 2050 (and ~19.9% to ~26.6% by 2100) relative to the warming associated with projected emissions under ERP2. Would decrease the current emissions gap in EB3 (approx. 9.2 Mt CO_2-e) by 15.4 Mt CO_2-e resulting in overachieving EB3 by roughly 6 Mt CO_2-e.
	International partners comparison	Our current target is lower than comparable countries with net zero "all-gases" targets (see Appendix 2). Calculated as an "all-gases" target, our current target is: • 29 MtCO_2-e in 2050 (assuming the lower end of the current methane range), or • 20.2 MtCO_2-e in 2050 (assuming the higher end of the current methane target range) Please note, under a net-zero all gases target it is possible to offset methane emissions through carbon removals. As a result, the warming impact of a net-zero all gases target will depend on how an individual country achieves this target and the extent to which they use carbon removals to offset gross emissions of different GHGs.	A lower biogenic methane target would result in a lower all gases target than comparable countries as many have now set net zero all gases targets, including those with a significant agriculture sector profile e.g. Ireland. Calculated as an all-gases target, this would be 32.8MtCO_2e in 2050. May reopen the "gap" between domestic and international targets. Note: an all-gas net zero target is unclear with regard to the extent to which biogenic methane emissions are offset by greater reductions in other gases whereas the biogenic methane component of New Zealand's 2050 target requires a gross reduction in biogenic methane that cannot be offset by removals or other gases.	A lower target than comparable countries (generally net zero all-gases). The range when presented as an all gases MtCO_2-e target would range from 29 to 32.8 MtCO_2-e. May reopen the "gap" between domestic and international targets.	A lower target than comparable countries. Removing the upper end of the target would be equivalent to an all-gases target of 29 MtCO_2-e in 2050.	A higher target than the status quo is more aligned with comparable countries. The upper end of the range recommended by the Commission is consistent in terms of emissions impact with countries that have set net zero all gases targets.
The target can be feasibly implemented and support NZ's transition to 2050	Achievable pathway: ERP2 modelled technological developments, likely policy implications	ERP2 assumed policies that drive this transition include: the ETS; agricultural emissions pricing system; removing barriers to renewable energy development; carbon capture, utilisation and storage; and afforestation on Crown land. ERP2 technology assumptions include: electric vehicle/ zero emissions heavy	As for status quo, feasible with current pipeline of technology and policies identified in ERP2.	This option is feasible with current pipeline of technology and policies identified in ERP2.	This option is feasible with current pipeline of technology and policies identified in ERP2.	Likely to require significant policy change including a greater role for government in incentivising uptake of existing and new technologies, and/or further innovation and technology uptake by the private sector.

		vehicle uptake; new agriculture emissions mitigation technologies (e.g. nitrification and methane inhibitors); carbon capture, utilisation and storage.				The ETS is not currently configured to deliver net negative CO_2 emissions and new supporting policy measures will be needed.

Appendix 3: Results of temperature response modelling

To understand how New Zealand might contribute to limiting warming we have modelled the temperature response from New Zealand's emissions out to 2100 (similar to the approach undertaken by both the Commission in their review of the 2050 target and the Methane Review Report). This is because the 1.5°C global goal that is referred to in the purpose of the CCRA and the approach taken under the Paris Agreement is based on limiting global warming to 1.5°C by the end of the century (2100) and the 2050 target provides information for the emissions target for biogenic methane and all other GHGs in 2050 and for each subsequent calendar year.

Table 1. Relative percentage change in New Zealand's global warming impact (all gases) of the different 2050 options considered relative to the global warming impact of (1) ERP2 and (2) ERP2 adjusted to achieve the upper end of the current biogenic methane target (47%)

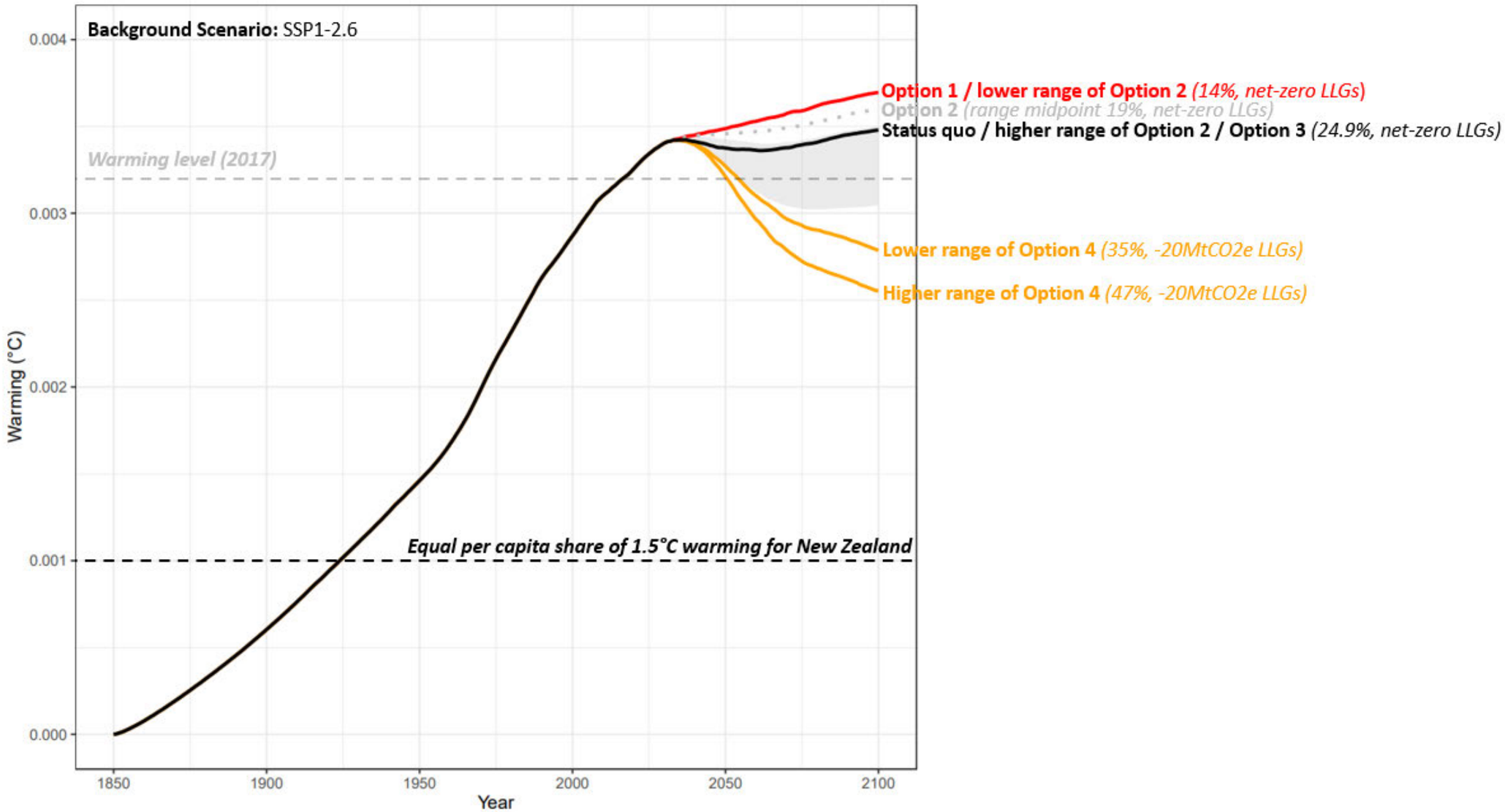
Positive percentages given in bold represent an increase in warming, negative percentages represent a decrease in warming. See section on temperature response modelling assumptions and limitations below for further details.

2050 Target Options and relevant Climate Change Commission comparison pathways from the 2050 Target Review/EB4 advice	**Relative change in New Zealand's global warming impact relative to ERP2 (all gases)**		**Relative change in New Zealand's global warming impact relative to ERP2 achieving upper end of biogenic methane range (47%) (all gases)**	
	By 2050 (%)	By 2100 (%)	By 2050 (%)	By 2100 (%)
Current target (a 24-47% biogenic methane target by 2050 relative to 2017)	-	-	-	-
Option 1 (based on a 14% biogenic methane target by 2050 relative to 2017)	**3.3**	**6.2**	**6.3**	**22.7**
Lower range of Option 2 (based on a 14% biogenic methane target by 2050 relative to 2017)	**3.3**	**6.2**	**6.3**	**22.7**
Midpoint range of Option 2 (midpoint based on achieving a 19% reduction in biogenic methane by 2050 relative to 2017)	**2.5**	**3.4**	**5.4**	**19.4**
Higher range of Option 2 (based on a 24% biogenic methane target by 2050 relative to 2017)*	**-**	**-**	**2.9**	**15.5**
Option 3 (based on a 24% biogenic methane target by 2050 relative to 2017)*	-	**-**	**2.9**	**15.5**
Lower range of Option 4 (based on a 35% biogenic methane by 2050 relative to 2017)	*-3.1*	*-19.9*	*-0.3*	*-7.5*
Higher range of Option 4 (based on a 47% biogenic methane by 2050 relative to 2017)	*-4.9*	*-26.6*	*-2.1*	*-15.2*

*****For the temperature response modelling, the input emissions of biogenic methane for Option 3 and the higher range of Option 2 are assumed to follow the trajectory of ERP2 (Status Quo) to 2050 achieving a 24.9% reduction by 2050 relative to 2017 levels.*

Figure 1. Warming from emissions from New Zealand (1850-2100) under the different 2050 target options (including ERP2 – labelled as status quo).

A sensitivity analysis was undertaken using different global background scenarios and there was minimal difference in the relative global warming impact of New Zealand's emissions between options under the different global background scenarios modelled. Grey highlighted area shows the warming impact based on a linear trajectory to the biogenic methane target range (24% and 47%) from 2030 to 2050 (assuming all other GHGs follow the trajectory as per ERP2) – representative of the upper and lower bound of the current 2050 target taken at face value. The warming level line (dashed grey) represents the warming from New Zealand's emissions (biogenic methane and net long-lived gases) in 2017. The equal per capita share of 1.5°C warming for New Zealand line (dashed black) represents New Zealand's share of 1.5°C warming based on New Zealand's proportion of the global population. See section on temperature response modelling assumptions and limitations below for further details.



Temperature response modelling assumptions and limitations

As part of the assessment criteria for New Zealand's contribution to the limiting global warming to 1.5°C we have modelled the warming from the country's past and possible future emissions. The main assumptions and limitations of this modelling are provided here; further details are available upon request.

Temperature response modelling uses a simplified climate model to convert emissions of greenhouse gases into concentrations, and then to the temperature effect directly. This allows us to compare the warming outcome from different targets and pathways and reflect how emissions of each gas contribute to warming. The temperature modelling relies on a relatively simple climate emulator, which does not represent all biogeochemical processes and feedbacks, including the temperature response to carbon dioxide emissions and removals from forestry and other land-uses compared to fossil carbon dioxide. The results presented are only for the best-estimate temperature outcome, and no analysis was undertaken of 'likely' ranges.

MfE used the FaIR model (Finite-amplitude Impulse Response simple climate model) to model the temperature response of ERP2 and the 2050 target options considered. MfE setup the model to mirror the input assumptions used by the Commission in their 2050 Target Review described in their technical annex to allow comparison between results (the relevant input assumptions for the model setup can be found here: Technical-Annex-Final-reports-on-the-fourth-emissions-budget-and-2050-target-review-Dec-2024.pdf – noting that while the assumptions applied by MfE to the input emissions data are the same as applied by the Commission, there are differences in the historical and projected input emissions data used by MfE compared to the modelling by the Commission). Input emissions data are based on the 2024 publication of New Zealand's Greenhouse Gas Inventory. Carbon dioxide removals are based on modified activity-based accounting, not using the methods applied in New Zealand Greenhouse Gas Inventory.

It is important to note that both the Commission's and MfE's temperature response modelling excludes historic deforestation emissions, i.e., emissions associated with land clearing since human settlement until 1990, and replanting prior to 1990.

FaIR is a simple climate model that can give an indication of the warming outcome from New Zealand's historic and future emissions and should be seen as an estimate only. This is because (1) the results are based on the best estimate of warming, not the uncertainty range of modelled results from FaIR and (2) FaIR is a simple climate model that emulates the response of complex models but cannot be claimed to fully reproduce all aspects.

The temperature response modelling was undertaken using the global background scenario SSP1-2.6. A sensitivity analysis was undertaken using the global background scenarios SSP1-1.9 and SSP2-4.5. While there was a marginal difference in the absolute warming for the individual options modelled using the different global background scenarios, the general trend and relative benefit to the climate at strengthened target levels is similar regardless of the global background scenario used.

The trajectory of how a target is met has a substantial impact on warming outcomes pre- and post-2050 - earlier action will lead to better warming outcomes than delayed action when achieving the same target level in 2050. The target options considered still leave flexibility on the pathway to meet them, and those choices will affect the contribution that New Zealand makes to global warming.

The input emissions scenarios for temperature response modelling post-2022 are based on the projected emissions modelled in ENZ for ERP2. The emissions trajectory for each option has been adjusted to closely match the input data for the CGE modelling (which is projected to 2050, assuming no changes to emissions in the third emissions budget period) and assumptions used to calculate the emissions impact for the CIPA, which are based on linear trajectories to respective target levels rather than the impact of policy assumptions or policy impacts. Due to these assumptions, the results presented here should be viewed as illustrative only, and the actual warming impact of New Zealand future emissions will vary depending on the trajectory of individual GHGs and the future composition of the atmosphere. Because the options for the CGE modelling were derived based on adjustments to the biogenic methane and aggregated gross long-lived GHGs – rather than at the level of individual GHGs (excluding biogenic methane) – assumptions were also required to estimate reductions for individual GHGs (other than biogenic methane) to meet the given 2050 target levels. Further details of these assumptions are available upon request. For all options, it is assumed that emissions of all gases remain constant at 2050 level post 2050.

The current 2050 target has no provision for further reductions and removals after 2050 (the Commission has recommended that the 2050 target is amended to reflect that further reductions and removals are required after 2050). Emissions reductions and removals before and after 2050 can have a substantial impact on the warming impact of New Zealand's emissions by the end of the century. All options have been modelled based on the assumption that emissions remain at a constant level after 2050, reflecting both the structure of the current 2050 target (and that this structure is not proposed to change under the options considered in this briefing due to deferral of this decision).

Appendix 4: Greenhouse gas emission impacts

2050 Target Options	Changes in net target accounting greenhouse gas emissions in tonnes of carbon dioxide equivalent ($MtCO_2$-e)							Total net target accounting emissions in 2050
	2022–25	2026–30	2031–35	2036–40 (Difference from 47% biogenic methane target)[4]	2041–45 (Difference from 47% biogenic methane target)[4]	2046–50 (Difference from 47% biogenic methane target)[4]	Total (Difference from 47% biogenic methane target)[4]	
ERP2 with additional measures (reference scenario) – **absolute emissions**	284.1	303.1	249.2	192.2	149.5	146.9	1,324.9	28.6
Status quo (Current 2050 target, 24-47% biogenic methane, net-zero LLGs)[1]	0	0	0	0	0	0	0	20.2 – 28.6[1,2]
Option 1 (14% for biogenic methane and net-zero for LLGs by 2050)	0	0	9.2	19.0 (24.9)	21.6 (40.7)	21.0 (56.5)	70.7 (131.0)	32.7
Option 2 (a biogenic methane target range from 14%-24%)	0	0	0 - 9.2	0 – 19.0 (5.9 – 24.9)	0 – 21.6 (19.2 – 40.7)	0 – 21.0 (35.6 – 56.5)	0 – 70.7 (60.7 – 131.4)	28.6 – 32.7[1,2]
Option 3 (24% for biogenic methane and net-zero LLGs by 2050)[1]	0	0	0	0 (5.9)	0 (19.2)	0 (35.6)	0 (60.7)	28.6[1]
Option 4 (35-47% for biogenic methane and net-negative 20MtCO2e for LLGs)	0	0	-15.4	-38.7 – -43.3	-69.1 – -81.3	-104.6 – -124.5	-228.0 – -264.5	0.2 – 4.8[2]

[1] These options assume that emissions reductions of biogenic methane follow the projected trajectory from New Zealand's second emission reduction plan (ERP2). The central estimate from the ERP2 projects that biogenic methane emissions will be ~24.9% below 2017 levels by 2050. For options with targets reclarified at 24% or where 24% forms the upper end of the biogenic methane range, this assumes a slight overachievement of the given biogenic methane target (by ~0.9%). Exact achievement of a biogenic methane target set at 24% would increase total net target accounting emissions in 2050 by ~0.3$MtCO_2$-e (28.9$MtCO_2$-e) and would also change the total cumulative change in emissions over the 2022-2050 period.

[2] Range represent the total net target accounting emissions in 2050 achieved based on the low and high end of the given option target range for biogenic methane in 2050.

[4] The numbers in brackets represent the difference between emissions under the relevant option and a scenario where biogenic methane achieved the top end of the current target (a 47% reduction, with the reduction starting in 2035), with net long-lived gas emissions achieving net-zero in 2050 based on the ERP2 trajectory.

Appendix 5: CGE Modelling

The tables below have further information on the impacts of different 2050 targets on households, sectors and regions. These costs have been estimated using the same computable general equilibrium (CGE) model used for ERP2. No additional policies are imposed beyond those in ERP2. Emissions reductions are achieved by varying emissions prices to drive abatement technology uptake. Technology assumptions are consistent across all scenarios.

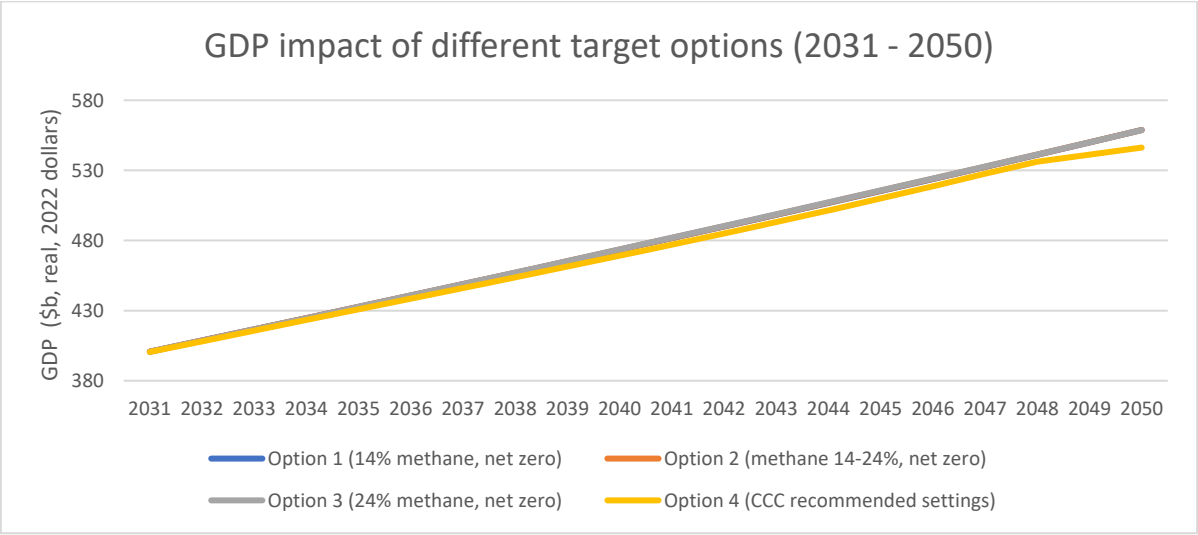
The modelling assumed that removals from forestry would be the **same** as projected under ERP2. Increased removals from relatively cheap exotic forestry could reduce the effort and cost required from other parts of the economy, although exotic forestry comes with other trade-offs.

As with all modelling, this work has limitations and there are many uncertainties. A key uncertainty is technological developments – if emissions reduction technologies become available sooner than expected (such as a methane inhibitor for dairy cows) or at a lower cost (such as significant price reductions for EVs) then the cost of a given level of emissions reductions would be lower.

In addition, the modelling does not include any co-benefits such as from reduced air pollution from decarbonising transportation. As noted by the Climate Change Commission in their advice, these co-benefits can be substantial.

Modelling results

The graph and table below shows modelled GDP levels across the options at various points in the future. Across all options the economy is expected to continue to grow – so GDP in 2050 is substantially higher than it is currently. Overall, there is negligible difference in GDP between Options 1, 2 and 3. The modelling shows a moderate difference between Option 4 and the other options (around $12.5 billion in 2050).



In the modelling, there is no difference in expected emissions between Option 3 and the status quo (which was taken to be the ERP2 new measures central emissions projections), because the status quo projections are already consistent with both 2050 targets (24% for methane, net zero for long lived gases). There is therefore no difference in model outputs.

	GDP ($b, 2022 prices)			
	2035	2040	2045	2050
Option 1 (14% + net zero)	432.7	473.3	515.3	558.8
Option 2 (14%-24% + net zero)	432.7	473.3-473.6	515.3-515.7	558.8-558.7
Option 3 (24% + net zero)	432.7	473.6	515.7	558.7
Option 4 (35-47% + net -20MTCO2e)	430.8	469.3	509.8	546.3
	Change in GDP (compared to the status quo)			
	2035	**2040**	**2045**	**2050**
Option 1 (14% + net zero)	0.0%	-0.1%	-0.1%	0.0%
Option 2 (14%-24% + net zero)	0.0%	-0.1% - 0.0%	-0.1% - 0.0%	0.0%
Option 3 (24% + net zero)	0.0%	0.0%	0.0%	0.0%
Option4 (35-47% + net -20MTCO2e)	-0.4%	-0.9%	-1.1%	-2.2%

The model results for employment and wages are broadly similar to the overall GDP impacts. Options 1 and 2 show small increases in wages and employment compared to the status quo, while Option 4 show decreases.

	Change in employment (compared to the status quo)			
	2035	2040	2045	2050
Option 1 (14% + net zero)	0.0%	0.0%	0.0%	0.1%
Option 2 (14%-24% + net zero)	0.0%	0.0%	0.0%	0.1%-0.0%
Option 3 (24% + net zero)	0.0%	0.0%	0.0%	0.0%
Option 4 (35-47% + net -20MTCO2e)	-0.4%	-0.6%	-0.6%	-1.6%

	Change in wages (compared to the status quo)			
	2035	2040	2045	2050
Option 1 (14% + net zero)	0.1%	0.1%	0.1%	0.2%
Option 2 (14%-24% + net zero)	0.1% - 0.0%	0.1% - 0.0%	0.1% - 0.0%	0.2% - 0.0%
Option 3 (24% + net zero)	0.0%	0.0%	0.0%	0.0%
Option 4 (35-47% + net -20MTCO2e)	-0.6%	-2.0%	-3.4%	-5.6%

Impact by sector

The table below shows how output of different sectors of the economy are modelled to change across the different options, as compared to the status quo. In Option 1, the agricultural sector has higher output owing to the lower biogenic methane target. In this option, electricity generation and utilities (which are gas and electricity supply) are also higher. Modelled emissions under Option 3 are the same as they are in the status quo, and so there is no difference in sector output.

In option 4, output in most sectors of the economy is lower, with the notable exception of electricity generation. This is because higher emissions prices under these options drives electrification of the economy, resulting is significant increases in electricity demand. The utilities sector likewise increases, since this includes electricity distribution.

It is important to highlight that these modelled results are only indicative of the potential impact of different target options – the actual economic impacts on different sectors will depend on the specific policies implemented in order to achieve the targets. The impact on agriculture, for example, would be impacted by the specific design of the agricultural pricing system.

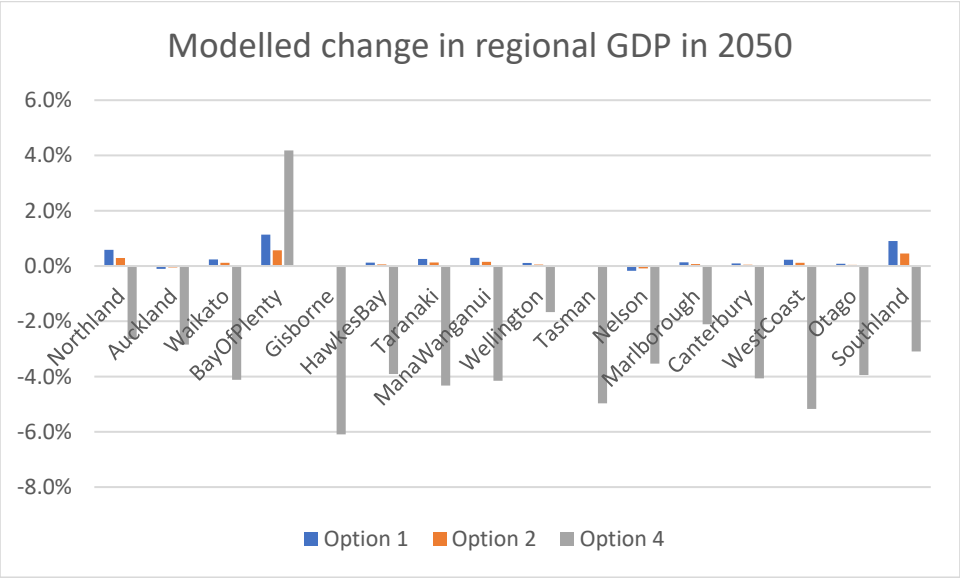
Sector impact in 2050 - compared to the status quo				
	Option 1 (14% + net zero)	**Option 2 (14%-24% + net zero)**	**Option 3 (24% + net zero)**	**Option 4 (35-47% + net - 20MTCO2e)**
Agriculture	1.1%	Between 0 and 1.1%	0.0%	-17.0%
Construction	0.0%	0.0%	0.0%	-4.4%
Electricity Generation	7.6%	Between 0 and -7.6%	0.0%	51.9%
Forestry	-0.3%	Between 0 and -0.3%	0.0%	3.5%
Manufacturing	0.1%	Between 0 and -0.1%	0.0%	-4.1%
Mining	-3.3%	Between 0 and -3.3%	0.0%	-11.2%
Services	-0.2%	Between 0 and -0.2%	0.0%	-3.2%
Utilities	5.5%	Between 0 and 5.5%	0.0%	35.0%

Impact by Region

The graph below shows the modelled changes in regional GDP in 2050 (compared to the status quo). For Option 1, some regions experience higher GDP compared to Option 1 – most significantly Northland and Southland. Other regions (such as Auckland and Nelson) experience small decline. Nevertheless, the overall impact of Option 1 on different regions is small - owing to the small overall impact this option was modelled to have. Modelled emissions under Option 3 are the same as the status quo, and so there is no difference in impact by region – for this reason, Option 3 is not shown on the graph.

The impact of Option 2 will be somewhere between the impacts of Option 1 and no change from the status quo – for the purposes of the graph, the average of these impacts is shown.

Option 4 shows lower modelled regional GDP for all regions except for the Bay of Plenty (which benefits due to its geothermal electricity resources, and to a lesser extent because of increased forestry activity).


Modelled change in regional GDP in 2050
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
-6.0%
-8.0%
Northland
Auckland
Waikato
BayOfPlenty
Gisborne
HawkesBay
Taranaki
ManaWanganui
Wellington
Tasman
Nelson
Marlborough
Canterbury
WestCoast
Otago
Southland
Option 1
Option 2
Option 4

Appendix 6: International comparison of climate targets

	Domestic targets (for comparison)		International targets (for information)		Agricultural emissions as a percentage of total gross emissions	Methane proportion of emissions (incld non-biogenic methane) as a percentage of total gross emissions
Countries	**Net Zero target**	**Methane target**	**NDC1 target (by 2030)**	**NDC2 target (by 2035)**		
New Zealand	Legislated - Split gas: Net Zero of long-lived gases (other than biogenic methane) by 2050	Legislated - by 2030: reduce biogenic methane by 10% (2017 levels) Legislated - by 2050 and beyond: reduce biogenic methane 24–47% (2017 levels)	50% below gross 2005 levels	51–55% below gross 2005 levels	53% from agriculture in 2023	48% from methane in 2023
Developed countries often compared to New Zealand						
Canada	Legislated - All gases: Net Zero by 2050	Methane strategy - by 2030: reduce methane by more than 35% (2020 levels)	40-45% below 2005 levels	45-50% below 2005 levels	10% from agriculture in 2023	17% from methane in 2022
United States	All gases: Net Zero by 2050		50-52% below 2005 levels	61-66% below 2005 levels[49] Reducing methane emissions by at least 35% (2005 levels) by 2035 (set as part of the updated NDC)	11% from agriculture in 2022	12% from methane in 2022
Australia	Legislated - All gases: Net Zero by 2050		43% below 2005 levels	Suggested[50] 65-75% below 2005 levels; or 49%-53% below 2005 levels	19% from agriculture in 2024	30% from methane in 2024
United Kingdom	Legislated - All gases: Net Zero by 2050		68% below 1990 levels	81% below 1990 levels	12% from agriculture in 2022	14% from methane in 2022
European Union	Legislated - All gases: Net Zero by 2050[51]		55% below 1990 levels	6(b)(i)	11% from agriculture in 2022	12% from methane in 2022
Japan	Legislated - All gases: Net zero by 2050		46% below 2013 levels	60% below 2013 levels by 2035 73% below 2013 levels by 2040	3% from agriculture in 2022	2.6% from methane (including LULUCF) in 2022

Small advanced economies (similar population size and economic framework to New Zealand)						
Ireland	Legislated - All gases: Net Zero by 2050	Sectoral emissions ceiling (as part of legally binding all gases carbon budgets) - by 2030: reduce agriculture emissions 25% (2018 levels)	EU NDC- 55% below 1990 levels	6(b)(i)	38% from agriculture in 2023	29% methane in 2023
Denmark	Legislated - All gases: Net Zero by 2050 Proposed Net Zero by 2045, net negative by 2050		EU NDC- 55% below 1990 levels	6(b)(i)	24% from agriculture in 2021	24% methane in 2023
Switzerland	Legislated - All gases: Net Zero by 2050		50% below 1990 levels	65% below 1990 levels	16% from agriculture in 2022	15% methane in 2023
Countries increasing net zero contributions						
Germany	Legislated – All gases: Net Zero by 2045		EU NDC- 55% below 1990 levels	6(b)(i)	9% from agriculture in 2022	6% methane in 2022
Finland	Legislated - All gases: Net Zero by 2035 Net negative soon after		EU NDC- 55% below 1990 levels	6(b)(i)	13% from agriculture in 2022	10% methane in 2023
Countries that do not require net zero emissions						
Norway	All gases: 90-95% reduction by 2050 (1990 levels)		55% below 1990 levels	Consulting on a 55-80% range	9% from agriculture in 2021	10% methane in 2023

Briefing: Further 2050 target advice: policy impacts

Date submitted: 06/06/2025
Tracking number: MfE BRF-6320; MPI B25-0329
Sub Security level: CLASSIFICATION
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Todd MCCLAY **Minister of Agriculture** Hon Simon WATTS **Minister of Climate Change**	**Note** the contents of this briefing, including potential implications of removing an agricultural emissions pricing system from greenhouse gas modelling. **Provide** feedback on this briefing.	11/06/2025

Actions for Minister's office staff
Return the signed briefing to the Ministry for the Environment (advice@mfe.govt.nz).

Appendices and attachments
Appendix One: Pipeline of mitigation technology Appendix 1 withheld in full under section 9(2)(b)(ii) of the Act

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Responsible Manager	Charlotte Harris-Miller	9(2)(a)	✓
General Manager	Hemi Smiler	022 087 1268	
Deputy Chief Executive	Sam Buckle	022 034 0311	
Key contacts at Ministry for Primary Industries			
Position	***Name***	***Cell phone***	***First contact***
Responsible Manager	Beth Hampton	9(2)(a)	✓
Director	Jane Chirnside	9(2)(a)	
Deputy Director-General	Julie Collins	9(2)(a)	

Minister's comments

Further 2050 target advice: Policy impacts

Key messages

1. This briefing responds to your request for analysis of the impacts of removing agricultural emissions pricing from projections across the biogenic methane target options being considered for the 2050 target; and how this abatement could be met.

Summary of key results

2. Removing agricultural emissions pricing, in the absence of any other action, across all scenarios you would have an additional 10.6Mt shortfall in emissions budget 3 (EB3). Without this measure, Emissions Reduction Plan 2 projected that New Zealand would achieve only a 10% reduction in biogenic methane emissions below 2017 levels by 2050 – although this did not take into account potential additional market led abatement.

3. If you were to adjust the level of effort made by the agriculture sector such that the agriculture sector does only what is required to be on a linear path[1] to 2050 targets of 14%, 14-24%, or 24%, then:
   a. You would need 1.4, 2,8 or 4.2 Megatonnes (Mts) of abatement respectively in EB3 (assuming EB3 stays the same)
   b. 9(2)(b)(ii) [redacted] and
   c. You would increase the EB3 shortfall by 9.2, 7.8, and 6.5Mt compared to the status quo (which has an existing 9.2 Mt gap).

Options to meet the gap

4. If you were to assume that current market-led activity continued beyond 2030, we estimate that 3.8 to 12.5 Mt[2] of abatement could be met by the market over EB3. We consider the lower end of this range is more likely as current market-led activity is not specifically geared towards uptake of mitigation technologies. It also currently rewards activities that reduce net emissions outside the biogenic methane target.

5. To drive further biogenic methane abatement, you could consider government support for uptake of new technologies (incentives), or regulatory requirements to meet environmental performance standards or adopt new technologies. Alternatives to agricultural emissions pricing could be designed to deliver sufficient mitigation, and to reduce risks to production and emissions leakage (i.e., they could be designed to support growth). In the absence of Government intervention, the level of methane abatement seen will be driven by the ambition of the market.

---

[1] Note ERP2 reduction of 10.6 Mt from agricultural emissions pricing achieved more reductions than implied by a linear path to at 24% 2050 methane target.
[2] This range is simply the $50m of funding per annum that Fonterra receives from Nestle and Mars multiplied by 5 years to reflect the EB3 period, and using mitigation costs of $20 per tonne and $65 per tonne representing the high technology and low technology scenarios.

6. You could also consider shifting any mitigation gap in whole or in part to sectors covered by the New Zealand Emissions Trading Scheme (NZ ETS) – which would shift the burden onto these sectors (in particular, energy and transport). While this would assist in meeting EB3 which is set on an "all gases" basis, it would not assist in meeting biogenic methane targets. This would raise NZ ETS prices (impacting businesses and households) and bring forward the point in time when auction volumes fall to zero, after which the government has little influence over the NZ ETS via unit and price control settings. This may also affect the overall cost to the economy of achieving EB3 – agricultural mitigation could end up lower in cost than NZ ETS mitigation, meaning shifting the burden from agriculture to the NZ ETS may increase the overall costs of meeting EB3.

Changing EB3

7. Emissions budgets are intended to be stepping stones towards reaching the 2050 climate targets, and so if the target was reduced, you could choose to reconsider the level of the emissions budget(s). However, if you were to allow for more emissions in EB3, this would create a gap for New Zealand in its 2035 Paris Agreement target (New Zealand's second Nationally Determined Contribution, NDC2). As any downward revision to NDC2 is likely to find New Zealand in breach of the Paris Agreement, this could mean the Crown needs to purchase offshore units to close this shortfall.

Background

8. We previously provided advice on options for changes to the 2050 emissions target (BRF – 6017/B25-0174 and BRF-5923/B25-0144 refer). This advice assessed options for target change based on their impact on the economy and the climate, as well as their feasibility, and included the results of economic and temperature impact modelling.

9. Based on this assessment, officials preferred option for changes to the 2050 target is to clarify the biogenic methane component of the target at a 24% reduction below 2017 levels.

10. Also relevant is that since 2014 agricultural emissions have decreased by 6%; with the sector reducing emissions by over 5% in just the last three years between 2020 and 2023. Total biogenic methane emissions from waste and agriculture are now sitting at 4.1% below 2017 levels. We have confidence in the pipeline of new mitigation technologies, with some tools already commercially available (see **Appendix 1**).

11. A key assumption in the baseline analysis of the target options was that an agricultural emissions pricing system to drive the uptake of mitigation technologies was in place, which contributed 10.6Mt of abatement in EB3 and 25% abatement of biogenic methane out to 2050.

12. You have since requested advice on the impacts of removing agricultural emissions pricing from projections. Specifically, you have indicated you wish to understand, in respect of different biogenic methane target options:

    a. How targets might be met in the absence of agricultural emissions pricing; and
    b. The potential implications of removing agricultural emissions pricing for the 2050 target, EB3, and potential burden-shift to ETS sectors.

Analysis and advice

Scenarios without agricultural pricing

13. The options we have modelled in response to direction from your offices are:

    a. A 24% reduction in biogenic methane emissions below 2017 levels by 2050. For this scenario, we have assumed emissions follow the trajectory set out in ERP2 – which has agricultural emissions reduce by 10.6 Mt in the EB3 period. Biogenic methane reaches 19% below 2017 levels by 2035.[3]

    b. A 14-24% reduction by 2050. For this scenario, we have modelled this as agricultural emissions reducing in a straight line to achieve a 19% reduction by 2050 (noting there would be no legal requirement to reduce emissions beyond the lower bound of the range). This scenario has 2.8Mt of agricultural abatement over EB3. Methane reaches 12% below 2017 levels by 2035.

    c. A 14% target, which we have modelled as agricultural emissions reducing in a straight line to achieve the target by 2050. This scenario has 1.4Mt of agricultural abatement over EB3. Methane reaches 12% below 2017 levels by 2035.

14. These have been modelled against ERP2 baseline production levels, which feature a 4% increase in milk solids production by the end of EB3 in 2035 compared to 2025, but a 1% decrease in red meat over the same time period.

15. Two different levels of mitigation cost have been assumed in the analysis:

    a. 9(2)(b)(ii) [redacted]

    b. 9(2)(b)(ii) [redacted]

16. **Table 1** outlines the results of this analysis.

Table 1: Direct mitigation costs of achieving agricultural EB3 emissions levels consistent with 2050 methane target options

2050 methane target	24% (ERP trajectory)	24% (linear path)	14%	14-24%*
% below 2017 levels in 2035	19%	14%	11%	12%

[3] Agricultural emissions in the ERP2 projections fall steeply over the EB3 period, owing to assumed significant increases in technology uptake. In the projections by 2035, methane levels are around 19% below 2017 levels. If agricultural emissions instead reduced in a straight line, achieving a 24% target would mean agricultural emissions need to reduce by around 4.2 Mt over EB3 and methane levels in 2035 would be around 14% below 2017 levels.

Additional abatement required from agriculture, consistent with a linear path to 2050 targets	10.6	4.2	1.4	2.8
Increase in EB3 shortfall after agricultural mitigation *(in addition to the existing 9.2Mt shortfall to EB3)*	0.0	6.5	9.2	7.8

9(2)(b)(ii)

** The 14-24% target range was modelled as emissions reducing in a straight line to reach a 19% reduction by 2050.*

Overview of removing agricultural emissions pricing on trajectory to 2050

17. Table 2 provides an overview of the abatement required to meet certain target levels, and the impact of removing agricultural emissions pricing from the ERP2 projections (in 2050).

Table 2: Biogenic methane emissions abatement required to meet target levels

	Methane reduction in 2050 from 2017	Mt in biogenic methane (agriculture and waste) reduction required to meet target (in 2050, relative to 2017 levels)[4]
ERP2 baseline without agricultural pricing	-10%	3.8
ERP2 – including agricultural pricing	-25%	9.5
14% methane target	-14%	5.3
24% methane target	-24%	9.0

Summary of results

18. Analysis shows that:

    a. removing pricing without any replacement incentive or intervention means that we would be on track to only 10% below by 2050 – although this did not take into account potential additional market led abatement.

[4] Note these figures are not comparable with the other absolute emissions values used in this briefing. These figures include methane from waste but exclude agricultural nitrous oxide and carbon dioxide emissions. Also these are annual figures whereas the other figures used sum across the 5 years of EB3.

b. the agricultural mitigation required in EB3 for consistency with a linear path to a 14% and 14-24% target is modest (1.4 Mt and 2.8 Mt, respectively).

c. reducing the methane target below 24% and reflecting this in the level of emissions reduction expected from agriculture in EB3 will increase the current shortfall to EB3.

d. There is an existing shortfall to EB3 of around 9.2 Mt – a 14% or 14-24% target option would increase this shortfall by about 9.2 and 7.8 Mt, respectively[5].

e. 9(2)(b)(ii) [redacted]

How could the EB3 gap be met?

Market led measures are not currently strong enough to close the gap

19. In the absence of Government intervention, the level of methane abatement seen will be driven by the ambition of the market.

20. We expect that market-led measures (such as an extension of Fonterra's scope 3 targets[6]), may contribute up to 3.8 to 12.5Mt abatement over the EB3 period. 9(2)(b)(ii) [redacted]. However, we note that not all of this funding is going towards additional gross methane mitigation. Until there is evidence of shifts towards further future commitments, this means that we expect the lower level of abatement associated with such incentives to be most likely.

Other options

21. To increase the chances of reaching necessary levels of abatement – or to overachieve the required abatement, to enable headroom for sector growth – you could consider incentives, regulation, or pricing agricultural emissions. Below outlines some options for the former categories. The regulatory options we have outlined below are not exhaustive; those listed are intended to give an indication of the range available. The incentive options we have highlighted below are comparatively simple. These options could also be deployed in combination to strengthen certainty of likely impact and further demonstrate Government intent to reduce agricultural emissions. See **Appendix 1** for an overview of potential abatement from some mitigation technologies.

---

[5] Maintaining a 24% target but achieving methane reductions more slowly than projected in ERP2 would also increase the shortfall – if methane reduced in a straight line to a 24% reduction by 2050 the EB3 shortfall would increase by 6.5 Mt.

[6] Note Fonterra's targets currently extend to only 2030.

[7] 9(2)(b)(ii) [redacted]

22. Note that across options, dairy farmers would likely be more able to absorb the additional cost of mitigation technology and/or in a better position to respond to market demand for lower emission products than sheep and beef farms[8].

Incentive options

Partnership with processors to respond to market demand

23. Government could leverage industry activity and funding and instead partner with the sector and provide funding, e.g., up to 50%, to incentivise additional action to increase uptake of mitigation technology and practice change on-farm. Government commitment could be linked to achieving a certain level of abatement, or other requirements (for example, evidence of additionality).

24. We do not know what industry's appetite to partner to deliver this option might be. Fonterra's current incentive schemes have around $50m funding per annum from Nestle and Mars[9]. It is unclear if this level of funding is just the beginning and could increase, or if it is an initial incentive to start action in advance of emissions reductions becoming another condition of supply funded by the supply chain (i.e. farmers).

25. To reach sheep and beef farmers, partnering with meat processors will be instrumental to removing barriers and enabling emissions reductions from these farmers. Meat processors could consider implementing instruments like emissions reduction certificates or voluntary carbon market projects as these farmers usually have looser supply agreements with meat processors (compared to more structured agreements held by dairy farmers). Government would purchase emissions reductions from sheep and beef farmers via these instruments in addition to whatever private market demand there is for these mitigation outcomes.

Developing a Government-funded incentives programme

26. To drive mitigation uptake, the Government could provide direct incentives or subsidy payments for mitigation technology or practices. 9(2)(b)(ii) [redacted]. A set of eligible mitigation technologies, with robust scientific evidence of their efficacy, would be decided, as well as any other relevant conditions that would need to be met. Further work would be required to determine the most appropriate

---

[8] Upcoming NZ ETS registration restrictions based on land use class reduce afforestation at higher NZ ETS prices (of the current unrestricted situation). This also means that farms cannot (as easily) respond to emissions technology costs by converting to ETS forest, if that is their preference. Relatedly, note that sheep and beef sector rationalisation has been driven by commercial drivers. Sheep and beef farm operating costs have risen faster than market prices, especially for strong wool, which has led to both farm consolidation (larger, more profitable farm systems) and land users deciding to shift land to other more profitable uses. For example, average 2022/23 dairy farm system earnings before interest and tax were $3,017 per hectare, compared to $607 per hectare for North Island sheep and beef finishing land.

[9] Fonterra's top payment will reach around 350 farms, and its wider payment (1 – 5 cents per KgMS) will reach 5,000 farms.

administration mechanism and ensuring recognised actions are additional[10].

27. To minimise direct fiscal risk to the Crown, a fixed budget rather than open ended commitment would be appropriate. 9(2)(b)(ii) [redacted]

Non-pricing regulatory options

28. Compared to provision of incentives, which rely on voluntary action to be successful, regulatory options offer a greater degree of certainty about the likely abatement that will be achieved over a certain time period (provided there is appropriate compliance, monitoring, and enforcement activity). To further increase confidence, you could consider multiple options in tandem and/or consider regulatory options as a backstop to incentivise voluntary action. Options you could consider include:

    a. **Setting legislated processor-level emission targets**. This would require red meat and dairy processors to meet emissions reduction targets that are set in terms of emissions intensity (emissions per unit of milk, lamb, beef and venison). These targets could fall over time at a rate designed to meet the 2050 target for methane and agriculture's allocation of emissions budgets. The level of target would be determined later, but this option would reduce emissions and drive uptake of mitigation technology without an explicit price, therefore overcoming some of the differences between sheep and beef, and dairy.

    b. **Mandating use of mitigation technologies**. This would require farmers to adopt—at some level-- agricultural mitigation technologies, once these are available for their farm systems (e.g. mandate the use of EcoPond on conventional dairy farms, mandate the use of the bolus once available, etc).

    c. **Making reducing emissions a Farm Plan requirement**. This would build on the existing freshwater farm planning regime to specifically reduce emissions. This option would require farm operators to develop an emissions reduction module which could be managed and maintained alongside their freshwater farm plan. As part of the emissions module, farmers could be required to identify and implement actions that aim to meet agreed levels of ambition for methane reductions.

    d. **Implementing a mitigation incentive levy.** This option would fund mitigation technology uptake on farm through a processor level levy that requires agricultural processors (meat and milk processors) to pay for a levy based on deemed emissions. Emissions would be calculated at the meat, milk and fertiliser processor level based on the quantity of product received from farms. Funds raised could be used to incentivise the uptake of mitigation technology through incentive and direct subsidy payments (as discussed in paragraph 20).

[10] Interventions are not truly additional if avoided emissions would have happened without financial incentive, for example, due to market forces or regulatory requirements.

Emissions leakage

29. Regulatory options likely have higher risk of production impacts, particularly on the sheep and beef sector due to the differences in profitability compared to dairy, mitigation, and high emissions relative to net revenue for sheep and beef. If production impacts were to arise, then this could also give rise to concerns about emissions leakage. However, emissions leakage is uncertain and depends on international trade, demand and supply developments. Emissions leakage can be mitigated by adopting domestic policies that prioritise reducing the emissions intensity of production rather than production itself.

30. If competing countries reduce their emissions intensity (e.g. competing feed-based dairy/beef production systems adopting Bovaer), the risk of emissions leakage from a New Zealand domestic policy is reduced. If competing countries reduce their emissions intensity significantly below New Zealand levels, a New Zealand policy that reduces production could cause negative emissions leakage where a competing lower emissions product displaces a higher emissions intensity New Zealand product. Production/leakage risks would be considered in policy design.

ETS considerations

31. Ministers could also consider shifting any mitigation gap in whole or in part to the New Zealand Emissions Trading Scheme (NZ ETS) sectors. This would shift the cost of meeting EB3 onto other sectors of the economy (e.g. transport and energy). The impact on the overall cost of meeting EB3 would depend on whether agricultural mitigation costs are more or less than the cost of mitigation in NZ ETS sectors – both are possible. Tightening ETS supply would also result in higher ETS prices, increasing costs for businesses and households - every $10 increase in emission prices adds about $90 per annum to the average household's expenditure.
32. With a 14% methane target, the total shortfall EB3 would be about 18.4 Mt (the current 9.2 Mt shortfall plus the 9.2Mt increase in shortfall due to the lower target). Our high-level modelling suggests closing an 18.4 MtCO_2-e gap in EB3 might require carbon prices at least $30 higher over the 2030s (peaking at about $105 in 2035), 9(2)(g)(i) [redacted]

Considering revisions to EB3

33. As emissions budgets are intended to be stepping-stones to meeting targets, if the target is changed Ministers could also choose to revise EB3 (reducing the impact of changing the biogenic methane target on the budget shortfall). This would likely require further changes to the CCRA. Under current legislation, when the 2050 target is changed, the Commission *may* provide advice on whether existing budgets should be revised. EB3 may only be revised if the Commission recommends it.

---

[11] The carbon price estimates noted here are based on the Computable General Equilibrium (CGE) modelling used elsewhere in this document to estimate wider economic impacts. They are derived from a different modelling framework than that used to support ETS unit and price control setting consultation. These estimates do not consider the risk the stockpile could pose to achieving the time-bound budgets.

34. An important consequence of revising EB3 is that it would create an (additional) gap for New Zealand for its 2035 Paris Agreement target (New Zealand's second Nationally Determined Contribution), as this was originally set to align with EB3. As any downward revision to NDC2 is likely to find New Zealand in breach of the Paris Agreement, this could mean the Crown needs to purchase offshore units to close this shortfall, with an associated cost to the Crown (a 9Mt gap has an estimated cost range of $400 - $1,300m).

35. EB3 will begin to be considered as part of next year's ETS settings process. This process begins later this year with initial advice that is developed by the Commission. If you do wish to change EB3, then it would be desirable to make this change so that it can inform the Commission's advice.

Next steps

36. We seek your direction on whether you are interested in progressing any of the mitigation options suggested in this briefing, and/or if you wish to retain the commitment to an agricultural emissions pricing system by 2030. We also seek your feedback on potential appetite to amend EB3 in some way.

37. If you are interested in progressing any of the mitigation options suggested, we could develop these further for your consideration, including, if relevant, via engagement with key stakeholders to understand their potential willingness to partner.

38. Depending on the scope and nature of any non-pricing options to incentivise farmers, options may interact with New Zealand's international trade obligations and settings. Further advice around relevant international policy settings can be provided in consultation with the Ministry of Foreign Affairs and Trade.

39. We will continue to work with your offices on timing related to progressing 2050 target decisions, and preferences for the legislative vehicle.

Recommendations

We recommend that you:

1. **Note** the contents of this briefing, including potential implications of removing an agricultural emissions pricing system from greenhouse gas modelling.
2. **Provide** feedback on this briefing.

Signatures

9(2)(a)

Hemi Smiler
Climate Mitigation General Manager
Ministry for the Environment
06/06/2025

Jane Chirnside
Director Resources & Rual Communities
Ministry for Primary Industries
06/06/2025

Hon Simon WATTS
Minister of Climate Change
Date

Hon Todd MCCLAY
Minister of Agriculture
Date

Draft Cabinet paper: Resetting the 2050 domestic emissions reduction target

Date submitted: 10/07/2025
Tracking number: MfE BRF-5983; MPI B25-0404
Sub Security level: CLASSIFICATION
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Todd MCCLAY **Minister of Agriculture** Hon Simon WATTS **Minister of Climate Change**	Provide direction on the draft Cabinet paper (attached as **Appendix One**)	17/07/2025

Actions for Minister's office staff
Return the signed briefing to the Ministry for the Environment (advice@mfe.govt.nz).

Appendices and attachments
Appendix One: Draft Cabinet paper: Resetting New Zealand's 2050 domestic climate change emissions target

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Responsible Manager	Stephen Goodman	9(2)(a)	
General Manager	Hemi Smiler	022 087 1268	✓
Deputy Chief Executive	Sam Buckle	022 034 0311	
Key contacts at Ministry for Primary Industries			
Position	***Name***	***Cell phone***	***First contact***
Responsible Manager	Beth Hampton	9(2)(a)	
Director	Jane Chirnside	9(2)(a)	✓
Deputy Chief Executive	Julie Collins	9(2)(a)	

Minister's comments

Draft Cabinet paper: Resetting the 2050 domestic emissions reduction target

Key messages

1. You requested a draft Cabinet paper that proposes to:
   a. amend the biogenic methane component of the 2050 emissions target from the current 24-47% to 14-24% reduction in emissions below 2017 levels;
   b. remove the commitment to introduce agricultural emissions pricing in 2030; and
   c. legislate a requirement to review the methane science and target in 2040, with agricultural emissions pricing to be considered at this time.

2. The draft Cabinet paper is attached as **Appendix 1** for your feedback.

3. You have previously received advice on the 2050 target, taking into account economic, climate and feasibility considerations.

4. To support refinement of the draft Cabinet paper, we seek your clarification of the proposed 2040 review. In particular, we seek direction on its scope and who it is to be undertaken by.

5. In relation to the direction to remove agricultural emissions pricing, we note that while current market-led activity will support agricultural emissions reduction, unless it scales up and/or very low-cost mitigations become available, we do not currently consider it likely to be sufficient to fully close the abatement gap caused by the removal of pricing. What level of methane reduction the market will achieve is currently very uncertain.

6. The range of market-led incentives and actions has been growing. However, the removal of a government pricing policy and reset of the 2050 target range may impact this, and potentially reduce willingness to invest in the New Zealand market, if these changes are perceived to be a risk to demand.

7. The economic outlook for the sector is strong, as reported in the latest Situation and Outlook for Primary Industries (SOPI) report which forecasts export earnings of $59.9 billion for the year ending 30 June 2025, $3 billion higher than projected in December, and this has been underpinned by production growth. This means that 2025 agricultural emissions projections will be materially higher than those presented in 2024, making reaching targets and budgets more challenging. This data has only recently become available and so was not able to be incorporated in earlier advice.

8. Bringing your proposed review of the methane science and target forward from 2040 and committing to regular sector monitoring could potentially strengthen the signal that the Government expects progress and will introduce a pricing mechanism if required.

9. To further support managing the agricultural sector's progress and risks of emissions gaps, you could also consider non-pricing policy to reduce agricultural emissions, shifting the burden to New Zealand Emissions Trading Scheme (NZ ETS) sectors, or changes to ambition in future emissions budgets. While decisions on this are not required now, we suggest you meet to discuss next steps on this matter to support communication of a clear strategy to the sector.

Background

10. We recently briefed you on options for changing the 2050 target (MfE BRF-6017; MPI B25-0174 refers), and on the impacts of removing agricultural emissions pricing from emissions projections (MfE BRF-6320; MPI B25-0329 refers).

11. In line with direction subsequently received from your offices, we have attached a draft Cabinet paper (**Appendix One)** for your consideration[1], which seeks an agreement to:
    a. Amend the biogenic methane component of the 2050 target to reduce biogenic methane emissions by 14 – 24% below 2017 levels
    b. Remove the commitment to an agricultural pricing system no later than 2030
    c. Review the 2050 methane target in 2040, with consideration of pricing to occur at this time also.

Analysis and advice

Proposal to review the target in 2040, including whether agricultural emissions pricing is needed

12. We seek further direction on the proposal to legislate a review of the biogenic methane target in 2040, with an opportunity to consider agricultural emissions pricing at this point.

Scope of the review

13. We understand you wish to conduct a review in 2040. We are interested in further understanding the scope of this review and if you intend it to include:
    a. an updated review of methane science; and/or
    b. advice on progress towards the target; and
    c. advice on the level of the target; and/or
    d. advice on interventions, including agricultural emissions pricing, to support methane reductions if deemed necessary; and/or
    e. any other matters.

14. We also seek your direction on how the review is to be delivered, and if, for example, you are interested in progressing a process similar to the Methane Science and Target Review in 2024, which was undertaken by a Minister-appointed panel.

15. We note that the Climate Change Commission must review the 2050 target every five years, taking into account the latest scientific evidence about climate change and development of new technologies, among other things. We are interested in understanding how you anticipate your proposed review may interact with this.

16. We can provide you with further advice on the scope of the review in line with your preferences, and any legislative changes required. In the interim, to support flexibility, we have included a recommendation in the draft Cabinet paper for you to be authorised to make policy decisions related to the design of the review.

[1] Content which has been added since the provision of the draft to your offices has been highlighted in yellow.

Timing of the review

17. In absence of alternative action, both the proposed 14-24% 2050 methane target and emissions budgets will be harder to meet without an agricultural emissions pricing system in place. While we expect to see some gross methane reductions from market-led measures, unless a highly effective mitigation is successfully developed and deployed at very low cost 9(2)(b)(ii)), and/or the market significantly increases its level of ambition, we do not currently expect the market alone to be sufficient to fully make up the 'gap' from the removal of pricing[2].

18. The level of ambition that may emerge in the market in the future is also highly uncertain[3] noting that this may also be influenced by the reset 2050 target and removal of pricing[4]. Engaging with the market on your proposals, particularly those with ambitious targets and incentive schemes currently in place, could be an opportunity to improve understanding of impacts and market intentions.

19. Forthcoming updates to projections will reflect higher agricultural sector output than that included in ERP2, with the new SOPI forecasts released at Fieldays suggesting that the sector's export revenue is on track to surpass $60 billion for the first time – which has been underpinned by increased production[5]. This means that we expect the 2025 projections to be materially higher due to the improved economic outlook for agriculture. This information was not available to inform earlier advice.

20. If you wish to provide a stronger signal to the primary sector of the importance of their commitment to mitigation uptake and gross reductions in the near term, you could consider bringing forward the proposed 2040 review, for example to 2030, and commit to progress monitoring. To further increase your confidence in budget and target achievement, you could also consider putting in place non-pricing mechanisms to support methane reductions, or making other changes discussed below. While decisions on this are not required immediately, we suggest you meet to discuss next steps on this matter to support communication of strategy to the sector, and any signalling in the Cabinet paper.

Other matters arising from a revised methane target

21. Emissions budgets are set on an all-gases basis. 9(2)(f)(iv)

[2] For example, agricultural emissions pricing was projected to drive 10.6Mt of abatement in EB3.
[3] Fonterra, for example, is targeting a 30% intensity reduction in on-farm emissions by **2030** (from a 2018 baseline). Companies' future Scope 3 target intentions are currently unknown.
[4] For example, removing agriculture emissions pricing may affect the interest of technology developers and the sector in investing in mitigation tools, due to reduced market and regulatory certainty. It is also possible that having an agricultural pricing system in place would have made it 'easier' for voluntary targets to be met; it is not clear the extent to which this has influenced the level of current market-led targets.
[5] The latest Situation and Outlook for Primary Industries report forecasts export earnings of $59.9 billion for the year ending 30 June 2025, $3 billion higher than projected in December.

9(2)(f)(iv) [redacted]

22. If the target is changed, Ministers could also choose to revise EB3 (reducing the potential impact of changing the biogenic methane target on the budget shortfall[6]), given that emissions budgets are intended to be stepping-stones to meeting targets. This would likely require further changes to the CCRA. While supporting domestic achievability, it would however create a gap between domestic emissions reductions required in EB3 and New Zealand's second Nationally Determined Contribution.

Next steps

23. We seek your joint direction on the draft Cabinet paper, and matters raised in this briefing; we welcome the opportunity to discuss these with you. We will then work with your offices to continue to refine the paper and confirm timing for Cabinet consideration. Your offices will also be provided with a draft of the Regulatory Impact Statement for amending the 2050 target.

24. We will provide the Minister of Climate Change further advice on consequential and transitional changes arising from the proposal to amend the 2050 target.

25. Additionally, we will work with your offices to progress advice on legislative vehicle options for how 2050 target related changes can be given effect to following Cabinet decisions.

[6] Note based on 2024 projections, there is a 9.2Mt gap in EB3. Removing agricultural emissions pricing would widen this total gap to 19.8Mt (above the 240Mt budget).

Recommendations

We recommend that you:

1. **Note** the contents of this briefing
2. **Agree** to meet with officials to discuss, and/or otherwise provide feedback on the draft Cabinet paper to reset the 2050 domestic emissions reduction target.

Signatures

9(2)(a)

Hemi Smiler
Climate Mitigation General Manager
Ministry for the Environment
10/06/2025

Jane Chirnside
Director Resources & Rural Communities
Ministry for Primary Industries
10/06/2025

Hon Simon WATTS
Minister of Climate Change
Date

Hon Todd MCCLAY
Minister of Agriculture
Date

Appendix 1 – Cabinet paper: Resetting the 2050 domestic climate change target

CLASSIFICATION

Office of the Minister of Agriculture

Office of the Minister of Climate Change

[TBC - Cabinet]

Resetting the 2050 domestic climate change emissions target

Proposal

1 This paper seeks agreement to reset New Zealand's 2050 domestic emissions target in the Climate Change Response Act 2002 (CCRA).

Relation to government priorities

2 Our proposal relates to:

- the Government's Target 9 to reduce net greenhouse gas emissions
- the National – ACT Party coalition agreement to review the biogenic methane science and target for consistency with the principle of no additional warming.

Executive Summary

3 The 2050 emissions target (the 2050 target) sets the level of domestic efforts to reduce emissions from greenhouse gases. It signals the long-term direction of climate change policy, providing certainty for the economy and investment. Currently the target is to:

- Reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050; and
- Reduce emissions of biogenic methane to 24-47% below 2017 levels by 2050, including to 10% below 2017 levels by 2030.

4 This Government established an independent panel to undertake a review of the methane science and target, published in December 2024 (Methane Review). The Climate Change Commission (the Commission) also reviewed the 2050 target and provided Government its report in November 2024. We have considered these reports and officials' advice.

5 We propose to reset the biogenic methane component of the 2050 target to 14-24% below 2017 levels by 2050. Other aspects of our target would remain as they are now.

6 Our view is that the current methane target is not fit for purpose. Achieving the upper end of the current range risks exacerbating land use change and reducing production, even with adoption of the current pipeline of emissions

reducing technologies. It is likely to require policies that would have a significant economic cost on the agriculture sector.

7 In proposing a reset of the target we are still maintaining our commitment to both a split gas approach and reducing gross methane emissions, and are contributing to our climate change commitments. In addition, the upper end of the range meets the criteria of no additional warming under all background global temperature scenarios – including a 1.5°C scenario – modelled in the Methane Review.

8 We also propose to remove our commitment to implementing a fair and sustainable pricing system for on-farm emissions by 2030. Pricing is not the only way to reduce emissions, and we have seen over the recent period a range of market led schemes that support our farmers to adopt new methods and technologies. We want to leverage, rather than displace private sector action.

9 To keep on track to 2050 and to ensure the target remains fit for purpose, we will legislate a review to occur in [2040]. This milestone date will also allow us to reconsider whether agricultural emissions pricing is needed as an additional intervention alongside market-led activity to reach 2050.

10 We will announce this policy change shortly and the legislative amendments necessary will be progressed through [TBC].

Background

11 In 2019, the Government set an emissions reduction target (2050 target) for New Zealand to:

- reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050
- reduce emissions of biogenic methane to 24–47% below 2017 levels by 2050, including to 10% below 2017 levels by 2030.

12 The 2050 target takes a split-gas approach, recognising that biogenic methane is a “short-lived” gas and has a different warming impact to other long-lived greenhouse gases, such as carbon dioxide.[1,2]

13 The 2050 target is an important aspect of New Zealand’s climate change policy framework. It drives decisions about emissions budgets and plans, emissions trading scheme (ETS) settings, and influences investment decisions in the wider economy. It is separate from but supports

[1] The current biogenic methane target range was drawn from the Intergovernmental Panel of Climate Change special report on limiting warming to 1.5 °C from 2018 and reflects the central range of likely global biogenic methane reductions in modelled pathways that are consistent with 1.5 °C.
[2] Under the CCRA, the biogenic methane emissions that fall within scope of our target are limited to those from the agriculture and waste sectors (representing 91.4 and 8.6% of biogenic methane emissions, respectively).

implementation of international targets under the Paris Agreement, which has a goal of limiting temperature increase to 1.5°c above pre-industrial levels.

14 We are making headway in reducing emissions. New Zealand's Greenhouse Gas Inventory shows that emissions from both long-lived gases[3] and biogenic methane are reducing[4], with 2023 levels of biogenic methane emissions 4.1% below 2017 levels, marking clear progress towards these targets.

The Methane Panel and the Climate Change Commission have provided advice on the 2050 target

15 This Government established an independent panel to undertake a review of the methane science and target, published in December 2024. The Commission also reviewed the 2050 target and provided Government its report in November 2024.

16 The Methane Review focused on what was required to stabilize the warming impact of biogenic methane emissions at 2017 levels, i.e. "no additional warming" from this base year. It found:

- a 24% reduction in biogenic methane emissions below 2017 levels would achieve "no additional warming" under all background global temperature scenarios that were modelled, including a scenario in which global temperature increase is limited to 1.5°C
- a 14-15% reduction in biogenic methane emissions below 2017 levels would achieve "no additional warming" under global mid-range (2.0°-2.7°C) and high temperature increase scenarios (temperature increase well over 2.0°C, and as high as approximately 4.5°C)

17 The Methane Review was not asked to recommend a new biogenic methane emissions target, but these results have informed the options considered by Ministers through subsequent work[5].

18 The Commission was required to review New Zealand's 2050 target and it provided its report in November 2024. The review covered the target as a whole, and recommended increasing the level of emissions reductions required by both components of the 2050 target (see **Appendix 3**). This was in response to its finding that changes in the scientific understanding of climate change point to the need for all countries to take additional action to reduce emissions, among other things.

[3] We use the term "long-lived" gases to refer to all greenhouse gas emissions excluding biogenic methane (i.e., the net-zero component of the 2050 target), noting this does include some short-lived GHGs such as fossil methane.
[4] Between 2022 and 2023, gross emissions fell by 2% and net emissions fell by 4%.
[5] Ministry for the Environment, Methane Science and Target Review – Terms of Reference, June 2024

19 The Government must respond to the Commission's advice on the 2050 target by 21 November 2025. The Minister of Climate Change will develop this response in a way that aligns with the proposals in this paper.

20 The Commission also recommended including emissions from international aviation and shipping in our 2050 target. International processes addressing these emissions are currently progressing and officials are undertaking further analysis of these matters. I, the Minister of Climate Change, therefore propose to defer consideration of these matters until later in the year.

Analysis

21 The 2050 target sets the level of domestic efforts to reduce greenhouse gas emissions. We have considered a range of 2050 target options informed by the Methane Review, the Commission's advice, and advice from officials (see **Appendices 2** and **4**). Options were assessed using the following criteria:

- Alignment with the Government's "Going for Growth" economic agenda (including economic impacts and international competitiveness)
- Contribution to limiting warming (as per the purpose of the CCRA)
- Implementation feasibility (including availability of technology and implications for government policy).

We propose to reset the biogenic methane component of the 2050 target to a range of 14-24%

22 Our view is that the current methane target is not fit for purpose. Achieving the upper end of the current range risks exacerbating land use change and reducing production, even with adoption of the current pipeline of emissions reducing technologies. It is likely to require policies that would have a significant economic cost on the agriculture sector.

23 Our proposed biogenic methane 2050 target of 14-24% is informed by the results of the Methane Review, and maintains a domestic response to climate change that contributes to our climate change commitments. It provides for flexibility, is feasible (it requires reductions ranging from 0.2 to 0.7% per annum from 2030), and will also support growth in the agriculture sector.

24 We propose to legislate a further review of the biogenic methane target and science to occur in [2040] to ensure it remains fit for purpose. [We seek authorisation for the Minister of Agriculture and the Minister of Climate Change to be given delegated authority to finalise further details of this review].

We do not agree with the Commission that the 2050 target should be increased

25 Our proposal to reset the biogenic methane target and maintain the net zero target differs from the Commission's advice. We considered the potential impact of the Commission's proposal on the economy and the climate, as well

as the feasibility of the policy mix and the technology required. On balance, we concluded that the Commission's proposal is not desirable at this time, as we do not consider it reflects an appropriate balance between objectives, and we also have concerns about its lack of sector support.

Removing our commitment to pricing agricultural emissions by 2030

26 As part of our reset, we also propose to remove the Government's commitment to implement an agricultural emissions pricing system no later than 2030. While agricultural emissions pricing has been a useful signal for catalysing mitigation investment, it is not, at this time, clear that it is necessary or the most appropriate approach. As part of our [2040] review we will reconsider whether agricultural emissions pricing is necessary, or not.

27 We are supportive of a market and technology-led approach to agricultural emissions reduction. The market is making progress on incentivising the uptake of agricultural emissions reducing technology and practices through schemes such as Fonterra's emissions incentive scheme and Silver Fern Farms' initiatives. We are partnering with the sector, leveraging our over $400m investment in accelerating the development and commercialisation of mitigation technologies, and we have high confidence in the technology pipeline [See **Appendix 1**].

28 [Placeholder - Removing agricultural emissions pricing will impact our agricultural emissions projections, which are in the process of being updated to take into account updated activity and market information, as well as policy detail. We want to provide time for market-led activity to mature and for further technologies to become available; we expect these factors, among others, such as levels of mitigation uptake and investment, will be considered as part of our [2040] review. We could also choose to consider non-pricing actions in future, if desirable].

Other changes to the CCRA

29 Changing the 2050 target gives rise to several transitional and consequential issues that I, the Minister of Climate Change, propose to address as follows.

NZ ETS unit settings process [Note this section is only needed if the law change is made before September]

30 The annual NZ ETS unit and price control settings process is underway, based on the current 2050 target. NZ ETS settings decisions are expected by Cabinet on 11 August, and must be gazetted before the end of September 2025. Changing the 2050 target midway through the NZ ETS settings process risks the accordance of NZ ETS settings with emissions reduction targets, and the need for additional advice from the Commission and re-consultation.

31 I therefore propose including a transitional provision alongside the amendment of the 2050 target to ensure that the 2025 NZ ETS settings process:

- uses the previous 2050 target to inform settings decisions, accordance requirements and any other legal requirements
- will not require additional advice from the Commission in response to the new 2050 target
- will not require re-consultation based on the new 2050 target.

32 The updated 2050 target will apply from the 2026 NZ ETS settings process.

Emissions budgets

33 Under the CCRA, the fourth emissions budget (EB4) for the period 2036 to 2040 must be set by 31 December 2025. Emissions budgets are set in response to advice from the Commission, who provided the Government advice on EB4 (as well as minor revisions to other budgets) in November last year. Given this advice was based on the current 2050 target, it may need to be updated to reflect the target change. I therefore propose the date by which EB4 must be set is extended by 24 months, to [31 December 2027], to allow sufficient time for this process. [To be confirmed by Minister of Climate Change.]

34 [Placeholder for implications if any for the third emissions budget.]

International considerations

35 9(2)(h) [redacted]

36 9(2)(h) [redacted]

37 9(2)(h) [redacted]

38 [Placeholder – legal comment/review to come]

Cost-of-living and financial implications

39 Economic modelling shows our proposed target change has a negligible overall economic impact. There are no direct cost-of living impacts from the proposal as the 2050 target relies on subsequent policy decisions in relation to emissions budgets, the emissions trading scheme, and emissions reduction plan policies to achieve change on the ground. The impact on average households of this change is likely to be nil. There are no direct financial implications from this proposal.

40 [Placeholder of any implications for the second Nationally Determined Contribution if required]

Legislative Implications

41 TBC - The proposals in this paper will be require amendment of the CCRA. We propose to progress these amendments through [TBC]

Impact Analysis

Regulatory Impact Statement

42 The Ministry for the Environment and the Ministry for Primary Industries prepared a Regulatory Impact Assessment (RIA) for this proposal (attached in **Appendix 4**). [TBC - A panel with members from the Ministry of Regulations, Ministry for the Environment and Ministry for Primary Industries assessed the RIA and considered that it [meets] the Quality Assurance criteria.]

Climate Implications of Policy Assessment

[to be updated to account for ag pricing change]

DRAFT

Population Implications

43 *Māori and Iwi* - The Māori contribution to the New Zealand economy is around $32 billion, of this the primary industries (agriculture, forestry and fishing) contributes a total $19 billion.[6] The concentration of collectively held Māori assets in the agriculture and forestry sectors means climate change policies are likely to disproportionately impact Māori. These impacts are both positive and negative, depending on the sector.

44 *Rural Communities* - New Zealand's food and fibre sector is a large component of our economy accounting for 82.5% of goods exported and contributing 12.4% of overall employment[7]. The proposals in this paper are likely to provide clarity for the sector, which in turn may further support farmer and rural community confidence.

Human Rights

45 The proposals in this paper are consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Use of external resources

46 The Ministry for the Environment contracted Principal Economics from March 2025 to June 2025 to undertake economic modelling to support analysis of different target options. The cost was $65,000.

Consultation

47 Public consultation was not undertaken for this proposal. There has been previous engagement with the public and iwi/Māori on the Zero Carbon Bill, first and second emissions reduction plans and NZ ETS legislation and the Commission's consultation on its review of the 2050 target.

48 [MFAT was consulted. Other agencies were not consulted on this proposal but have been informed and consulted on policy development, including reviewing the draft RIS].

Communications

49 TBC – We propose to publicly announce the Government's decision on the 2050 target by XX. We are aware of the need to manage the timing and content of any announcement to minimise disruption to this year's ETS setting process.

[6] Te Ōhanga Māori - The Māori Economy 2023 Report prepared by Business and Economic Research Limited (BERL) for the Ministry of Business, Innovation and Employment (MBIE)

[7] M These figures account for New Zealand's entire food and fibre sectors including dairy, meat and wool, forestry, horticulture, seafood, arable, processed food and other products. These figures account for New Zealand's entire food and fibre sectors including dairy, meat and wool, forestry, horticulture, seafood, arable, processed food and other products.

Proactive Release

50 We propose that this paper is proactively released following final decisions on the 2050 target and subject to the Official Information Act 1982 redactions.

Recommendations

The Minister of Agriculture and the Minister of Climate Change recommend that the Committee:

Resetting the biogenic methane component of the 2050 target and policy approach

51 **Note** that the Minister of Climate Change and the Minister of Agriculture have considered a range of options for changes to the 2050 target that are informed by the Climate Change Commission (Commission) advice on the 2050 target and the independent Methane Panel (Methane Panel) on the biogenic methane target

52 **Agree** to reset the biogenic methane component of the 2050 target to reduce emissions of biogenic methane to a range of 14 - 24% below 2017 levels by 2050 and retain other aspects of the current target as they relate to achieving 10% below 2017 levels by 2030

53 [TBC if recc needed from MFAT]

54 **Agree** to remove the Government's commitment to implement a fair and sustainable pricing system for on-farm emissions by 2030

55 **Agree** to review the 2050 target in [2040], [with this to be reflected in legislation], and for agricultural emissions pricing to also be reconsidered at this time

56 [**Authorise** the Minister of Agriculture and Minister of Climate Change to make policy decisions related to the design of the review of the 2050 target in [2040]]

57 **[Note** that the Minsters of Agriculture and Climate Change will regularly monitor agricultural emissions reduction progress, including mitigation technology developments and uptake]

Responding to the Commission's recommendation on the 2050 target

58 **Note** that we do not agree with the Commission that the emissions reductions required by New Zealand's 2050 target should be increased

59 **Note** that the Minister of Climate Change will receive further advice on addressing emissions from international aviation and shipping later this year, and will seek Cabinet's agreement if he recommends including international aviation and shipping emissions in our domestic target, or otherwise will respond to the Commission by November 2025 accordingly

60 **Note** that the Minister of Climate Change will develop a response to the Commission on their 2050 review consistent with the proposals in this paper

Consequential and technical changes to the Climate Change Response Act 2002

61 **Agree** to extend the date in the CCRA by which the fourth emissions budget (for the period 2036 to 2040) must be set by 24 months to 31 December 2027 to provide for consideration of the newly reset target [tbc]

62 **Agree** to amend the CCRA to provide a transitional provision to clarify that the Commission does not need to reconsult on its advice on setting of the fourth emissions budget in light of an amendment to the 2050 target [tbc]

63 [Placeholder for any implications for the third emissions budget - tbc]

64 **Agree** to amend the CCRA to provide a transitional provision to ensure the 2025 NZ ETS settings process is not affected by the change to the 2050 target

Process for amending the Climate Change Response Act 2002

65 **Invite** the Minister of Agriculture and Minister of Climate Change to issue drafting instructions to the Parliamentary Counsel Office to amend the Climate Change Response Act

66 **Agree** that the Bill will be introduced by XXX and enacted by XX...

67 **[TBC** other recommendations depending on legislative process/timing]

68 **Note** the Minister of Climate Change and the Minister of Agriculture intend to publicly announce the Government's decision on the 2050 target XXX

69 **Note** the Regulatory Impact Statement *Clarifying the 2050 domestic climate change emissions target* meets the Quality Assurance criteria.

[Authorised for lodgement - TBC]

Hon Todd McClay	Hon Simon Watts
Minister of Agriculture	Minister of Climate Change

DRAFT

Appendix 1: Mitigation Technology Pipeline

9(2)(b)(ii)

[redacted]

Appendix 2: Options for changes to the 2050 emissions target

The options for changes to the 2050 emission target that were considered were informed by the Climate Change Commission's review of the 2050 target and the Methane Review. The main options were:

- **Option 1:** Status quo would keep the 2050 target the same, which is to reduce emissions of greenhouse gases (other than biogenic methane) to net zero or lower by 2050 and beyond, and to reduce emissions of biogenic methane by 24% to 47% less than 2017 emissions beginning on 2050 and each subsequent year.
- **Option 2:** Reduce the methane target to a 14% reduction from 2017 levels and maintain the current net zero target for long-lived gases. This option was informed by the Methane Review, reflecting a 'no additional warming' approach that was modelled using a background mid-range global emissions scenario (2.0°C - 2.7°C).
- **Option 3:** Reduce the methane target to a range of 14-24% reduction from 2017 levels and maintain the current net zero target for long-lived gases. This option was informed by the Methane Review, reflecting a range of 'no additional warming' approaches modelled using background mid-range (2.0°C - 2.7°C) and 1.5°C global emission scenarios. The upper end of this range (24%) is in line with the lower end of the current biogenic methane target.
- **Option 4:** Clarify the current biogenic methane target by removing the upper range (i.e. a 24% reduction from 2017 levels only); maintain the current net zero target for long-lived gases. This option was informed by the Methane Review, reflecting a 'no additional warming' approach that was modelled using a background global emissions scenario that limited temperature increase to 1.5°C. A 24% reduction in biogenic methane emissions is also the lower end of the existing methane target range**. This is officials' preferred option in the regulatory impact analysis.**
- **Option 5:** Clarify the biogenic methane target (24% reduction from 2017 levels), strengthen the target for long-lived gases (to net negative 10Mt CO_2-e by 2050). This option was informed by the Methane Review (as above) and also includes increasing the level of New Zealand's domestic climate contribution for long-lived gases.
- **Option 6:** Increase both the biogenic methane and long-lived gases component of the target as recommended by the Commission (a 35-47% reduction in biogenic methane, net negative 20MtCO_2-e for long-lived gases by 2050). This options was recommended by the Commission in its 2050 target review.

Fundamental changes to the target, such as a move away from the split-gas approach, or removing the target altogether were ruled out of scope. Decisions on international shipping and aviation and further emissions reductions and removals post-2050 have been deferred by the Minister of Climate Change until later this year, when officials have undertaken further analysis and there is more clarity regarding the outcome of international processes.

Appendix 3: Climate Change Commission's findings

The Commission found there had been significant changes that justified increasing the level of New Zealand's domestic response to climate change, including:

- *Scientific understanding*: The impacts of global warming are greater, in both severity and scale, than was understood by the global science community when the target was set.

- G*lobal action:* Globally we are off track to meet the Paris temperature goals of limiting warming to 1.5°C. This implies that even greater reductions in global emissions are needed in the near and longer terms to limit as much as possible the amount by which the world exceeds 1.5°C, and then to bring the temperature down again.

- *New Zealand's fair share:* Many comparable countries have now set domestic emissions targets that require more emissions reductions than New Zealand's current target

- *Intergenerational equity:* Delaying increased action transfers costs and risks to future generations.

The Commission recommended:

- reaching at least net negative 20 Mt CO_2e by 2050, including emissions from international shipping and aviation (IAS).

- reducing biogenic methane emissions from 2017 levels by at least 35 – 47 % by 2050.

- there are further reductions and removals of greenhouse gases beyond these levels after 1 January 2050.

DRAFT

Appendix 4: Regulatory Impact Statement

DRAFT

CLASSIFICATION

Office of the Minister of Agriculture

Office of the Minister of Climate Change

[TBC - Cabinet]

Resetting the 2050 domestic climate change emissions target

Proposal

1 This paper seeks agreement to reset New Zealand's 2050 domestic emissions target in the Climate Change Response Act 2002 (CCRA).

Relation to government priorities

2 Our proposal relates to:

- the Government's Target 9 to reduce net greenhouse gas emissions
- the National – ACT Party coalition agreement to review the biogenic methane science and target for consistency with the principle of no additional warming.

Executive Summary

3 The 2050 emissions target (the 2050 target) sets the level of domestic efforts to reduce emissions from greenhouse gases. It signals the long-term direction of climate change policy, providing certainty for the economy and investment. Currently the target is to:

- Reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050; and
- Reduce emissions of biogenic methane to 24-47% below 2017 levels by 2050, including to 10% below 2017 levels by 2030.

4 This Government established an independent panel to undertake a review of the methane science and target, published in December 2024 (Methane Review). The Climate Change Commission (the Commission) also reviewed the 2050 target and provided Government its report in November 2024. We have considered these reports and officials' advice.

5 We propose to reset the biogenic methane component of the 2050 target to 14-24% below 2017 levels by 2050. Other aspects of our target would remain as they are now.

6 Our view is that the current methane target is not fit for purpose. Achieving the upper end of the current range risks exacerbating land use change and reducing production, even with adoption of the current pipeline of emissions

DRAFT

reducing technologies. It is likely to require policies that would have a significant economic cost on the agriculture sector.

7 In proposing a reset of the target we are still maintaining our commitment to both a split gas approach and reducing gross methane emissions, and are contributing to our climate change commitments. In addition, the upper end of the range meets the criteria of no additional warming under all background global temperature scenarios – including a 1.5°C scenario – modelled in the Methane Review.

8 We also propose to replace our commitment to a pricing system for on-farm emissions with a market-led approach. Pricing is not the only way to reduce emissions, and we have seen over the recent period a range of market-led schemes that support ~~our farmers~~ the sector to adopt new methods and technologies. We want to leverage, rather than displace ~~private sector~~industry action.

Commented [SG1]: Stylistic request from MCC

9 To keep on track to 2050 and to ensure the target remains fit for purpose, we will legislate a review to occur in [2040]. This milestone date will also allow us to reconsider whether agricultural emissions pricing is needed as an additional intervention alongside market-led activity to reach 2050.

10 We will announce this policy change shortly and the legislative amendments necessary will be progressed through [TBC].

Background

11 In 2019, the Government set an emissions reduction target (2050 target) for New Zealand to:

- reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050
- reduce emissions of biogenic methane to 24–47% below 2017 levels by 2050, including to 10% below 2017 levels by 2030.

12 The 2050 target takes a split-gas approach, recognising that biogenic methane is a "short-lived" gas and has a different warming impact to other long-lived greenhouse gases, such as carbon dioxide.[1,2]

13 The 2050 target is an important aspect of New Zealand's climate change policy framework. It drives decisions about emissions budgets and plans, emissions trading scheme (ETS) settings, and influences investment decisions in the wider economy. It is separate from but supports

[1] The current biogenic methane target range was drawn from the Intergovernmental Panel of Climate Change special report on limiting warming to 1.5 °C from 2018 and reflects the central range of likely global biogenic methane reductions in modelled pathways that are consistent with 1.5 °C.
[2] Under the CCRA, the biogenic methane emissions that fall within scope of our target are limited to those from the agriculture and waste sectors (representing 91.4 and 8.6% of biogenic methane emissions, respectively).

DRAFT

implementation of international targets under the Paris Agreement, which has a goal of limiting temperature increase to 1.5°c above pre-industrial levels.

14 We are making headway in reducing emissions. New Zealand's Greenhouse Gas Inventory shows that emissions from both long-lived gases[3] and biogenic methane are reducing[4], with 2023 levels of biogenic methane emissions 4.1% below 2017 levels, marking clear progress towards these targets.

The Methane Panel and the Climate Change Commission have provided advice on the 2050 target

15 This Government established an independent panel to undertake a review of the methane science and target, published in December 2024. The Commission also reviewed the 2050 target and provided Government its report in November 2024.

16 The Methane Review focused on what was required to stabilize the warming impact of biogenic methane emissions at 2017 levels, i.e. "no additional warming" from this base year. It found:

- a 24% reduction in biogenic methane emissions below 2017 levels would achieve "no additional warming" under all background global temperature scenarios that were modelled, including a scenario in which global temperature increase is limited to 1.5°C
- a 14-15% reduction in biogenic methane emissions below 2017 levels would achieve "no additional warming" under global mid-range (2.0°-2.7°C) and high temperature increase scenarios (temperature increase well over 2.0°C, and as high as approximately 4.5°C)

17 The Methane Review was not asked to recommend a new biogenic methane emissions target, but these results have informed the options considered by Ministers through subsequent work[5].

18 The Commission was required to review New Zealand's 2050 target and it provided its report in November 2024. The review covered the target as a whole, and recommended increasing the level of emissions reductions required by both components of the 2050 target (see **Appendix 3**). This was in response to its finding that changes in the scientific understanding of climate change point to the need for all countries to take additional action to reduce emissions, among other things.

19 The Government must respond to the Commission's advice on the 2050 target by 21 November 2025. The Minister of Climate Change will develop this response in a way that aligns with the proposals in this paper.

[3] We use the term "long-lived" gases to refer to all greenhouse gas emissions excluding biogenic methane (i.e., the net-zero component of the 2050 target), noting this does include some short-lived GHGs such as fossil methane.
[4] Between 2022 and 2023, gross emissions fell by 2% and net emissions fell by 4%.
[5] Ministry for the Environment, Methane Science and Target Review – Terms of Reference, June 2024

Formatted: Font: (Default) Arial

DRAFT

20 The Commission also recommended including emissions from international aviation and shipping in our 2050 target. International processes addressing these emissions are currently progressing and officials are undertaking further analysis of these matters. I, the Minister of Climate Change, therefore propose to defer consideration of these matters until later in the year.

Analysis

21 The 2050 target sets the level of domestic efforts to reduce greenhouse gas emissions. We have considered a range of 2050 target options informed by the Methane Review, the Commission's advice, and advice from officials (see **Appendices 2** and **4**). Options were assessed using the following criteria:

- Alignment with the Government's "Going for Growth" economic agenda (including economic impacts and international competitiveness)
- Contribution to limiting warming (as per the purpose of the CCRA)
- Implementation feasibility (including availability of technology and implications for government policy).

We propose to reset the biogenic methane component of the 2050 target to a range of 14-24%

22 Our view is that the current methane target is not fit for purpose. Achieving the upper end of the current range risks exacerbating land use change and reducing production, even with adoption of the current pipeline of emissions reducing technologies. It is likely to require policies that would have a significant economic cost on the agriculture sector.

23 Our proposed biogenic methane 2050 target of 14-24% is informed by the results of the Methane Review, and maintains a domestic response to climate change that contributes to our climate change commitments. It provides for flexibility, is feasible (it requires reductions ranging from 0.2 to 0.7% per annum from 2030), and will also support growth in the agriculture sector.

24 We propose to legislate a further review of the biogenic methane target and science to occur in [2040] to ensure it remains fit for purpose. [We seek authorisation for the Minister of Agriculture and the Minister of Climate Change to be given delegated authority to finalise further details of this review].

We do not agree with the Commission that the 2050 target should be increased

25 Our proposal to reset the biogenic methane target and maintain the net zero target differs from the Commission's advice. We considered the potential impact of the Commission's proposal on the economy and the climate, as well as the feasibility of the policy mix and the technology required. On balance, we concluded that the Commission's proposal is not desirable at this time, as we do not consider it reflects an appropriate balance between objectives, and we also have concerns about its lack of sector support.

DRAFT

Adopting a market-led and technology-based approach to reducing agricultural emissions

26 As part of our reset, we also propose to replace the Government's commitment to implement an agricultural emissions pricing system with a market-led approach to reducing agricultural emissions. The market is making progress on incentivising the uptake of agricultural emissions reducing technology and practices through schemes such as Fonterra's emissions incentive scheme and Silver Fern Farms' initiatives. We are partnering with the sector, leveraging our over $400m investment in accelerating the development and commercialisation of mitigation technologies, and we have high confidence in the technology pipeline [See **Appendix 1**].

27 Without agricultural emissions pricing, the industry will need to step up its own emissions reduction action. Officials have estimated the industry will need to deliver 10.6 Mt CO2-e of abatement during the period of the third emissions budget (from 2031-2035) to maintain the emissions reduction pathway set by this Government's second emissions reduction plan. This will require a significant scaling-up of current industry-led schemes, as well as a particular focus on driving adoption of the latest mitigation technologies.[6] We, the Ministers of Agriculture and Climate Change intend to engage with industry leaders to secure a plan to achieve this additional effort and report back in March next year.

Other changes to the CCRA

28 Changing the 2050 target gives rise to several transitional and consequential issues that I, the Minister of Climate Change, propose to address as follows.

NZ ETS unit settings process [Note this section is only needed if the law change is made before September]

29 The annual NZ ETS unit and price control settings process is underway, based on the current 2050 target. NZ ETS settings decisions are expected by Cabinet on 11 August, and must be gazetted before the end of September 2025. Changing the 2050 target midway through the NZ ETS settings process risks the accordance of NZ ETS settings with emissions reduction targets, and the need for additional advice from the Commission and re-consultation.

30 I therefore propose including a transitional provision alongside the amendment of the 2050 target to ensure that the 2025 NZ ETS settings process:

- uses the previous 2050 target to inform settings decisions, accordance requirements and any other legal requirements

[6] Officials estimate this level of abatement could be achieved if 85-100% of dairy farmers adopt new mitigation technologies, with potential costs ranging from $212m- $689m over the five-year EB3 period (depending on technology availability). Fonterra has already made a $50m annual funding commitment to 2030.

- will not require additional advice from the Commission in response to the new 2050 target
- will not require re-consultation based on the new 2050 target.

31 The updated 2050 target will apply from the 2026 NZ ETS settings process.

Emissions budgets

32 Under the CCRA, the fourth emissions budget (EB4) for the period 2036 to 2040 must be set by 31 December 2025. Emissions budgets are set in response to advice from the Commission, who provided the Government advice on EB4 (as well as minor revisions to other budgets) in November last year. Given this advice was based on the current 2050 target, it may need to be updated to reflect the target change. I therefore propose the date by which EB4 must be set is extended by 24 months, to [31 December 2027], to allow sufficient time for this process. [To be confirmed by Minister of Climate Change.]

33 [Placeholder for implications if any for the third emissions budget.]

International considerations

34 9(2)(h) [redacted]

35 9(2)(h) [redacted]

36 9(2)(h) [redacted]

9(2)(h) [redacted]

37 [Placeholder – legal comment/review to come]

Cost-of-living and financial implications

38 Economic modelling shows our proposed target change has a negligible overall economic impact. There are no direct cost-of living impacts from the proposal as the 2050 target relies on subsequent policy decisions in relation to emissions budgets, the emissions trading scheme, and emissions reduction plan policies to achieve change on the ground. The impact on average households of this change is likely to be nil. There are no direct financial implications from this proposal.

39 [Placeholder of any implications for the second Nationally Determined Contribution if required]

Legislative Implications

40 TBC - The proposals in this paper will be require amendment of the CCRA. We propose to progress these amendments through [TBC]

Impact Analysis

Regulatory Impact Statement

41 The Ministry for the Environment and the Ministry for Primary Industries prepared a Regulatory Impact Assessment (RIA) for this proposal (attached in **Appendix 4**). [TBC - A panel with members from the Ministry of Regulations, Ministry for the Environment and Ministry for Primary Industries assessed the RIA and considered that it [meets] the Quality Assurance criteria.]

Climate Implications of Policy Assessment

[to be updated to account for ag pricing change]

Population Implications

42 *Māori and Iwi* - The Māori contribution to the New Zealand economy is around $32 billion, of this the primary industries (agriculture, forestry and fishing)

contributes a total $19 billion.[7] The concentration of collectively held Māori assets in the agriculture and forestry sectors means climate change policies are likely to disproportionately impact Māori. These impacts are both positive and negative, depending on the sector.

43 *Rural Communities* - New Zealand's food and fibre sector is a large component of our economy accounting for 82.5% of goods exported and contributing 12.4% of overall employment[8]. The proposals in this paper are likely to provide clarity for the sector, which in turn may further support farmer and rural community confidence.

Human Rights

44 The proposals in this paper are consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Use of external resources

45 The Ministry for the Environment contracted Principal Economics from March 2025 to June 2025 to undertake economic modelling to support analysis of different target options. The cost was $65,000.

Consultation

46 Public consultation was not undertaken for this proposal. There has been previous engagement with the public and iwi/Māori on the Zero Carbon Bill, first and second emissions reduction plans and NZ ETS legislation and the Commission's consultation on its review of the 2050 target.

47 [MFAT was consulted. Other agencies were not consulted on this proposal but have been informed and consulted on policy development, including reviewing the draft RIS].

Communications

48 TBC – We propose to publicly announce the Government's decision on the 2050 target by XX. We are aware of the need to manage the timing and content of any announcement to minimise disruption to this year's ETS setting process.

Proactive Release

49 We propose that this paper is proactively released following final decisions on the 2050 target and subject to the Official Information Act 1982 redactions.

[7] Te Ōhanga Māori - The Māori Economy 2023 Report prepared by Business and Economic Research Limited (BERL) for the Ministry of Business, Innovation and Employment (MBIE)
[8] M These figures account for New Zealand's entire food and fibre sectors including dairy, meat and wool, forestry, horticulture, seafood, arable, processed food and other products. These figures account for New Zealand's entire food and fibre sectors including dairy, meat and wool, forestry, horticulture, seafood, arable, processed food and other products.

Recommendations

The Minister of Agriculture and the Minister of Climate Change recommend that the Committee:

Resetting the biogenic methane component of the 2050 target and policy approach

1 **Note** that the Minister of Climate Change and the Minister of Agriculture have considered a range of options for changes to the 2050 target that are informed by the Climate Change Commission (Commission) advice on the 2050 target and the independent Methane Panel (Methane Panel) on the biogenic methane target

2 **Agree** to reset the biogenic methane component of the 2050 target to reduce emissions of biogenic methane to a range of 14 - 24% below 2017 levels by 2050 and retain other aspects of the current target as they relate to achieving 10% below 2017 levels by 2030

3 [TBC if recc needed from MFAT]

4 **Agree** to replace the Government's commitment to implement a pricing system for on-farm emissions with a market-led approach to agricultural emissions reduction

5 **Agree** that the Minister of Agriculture and the Minister of Climate Change will report back to Cabinet in March 2026 with the details of this industry-led approach to addressing agricultural emissions, following engagement with the sector

6 **Agree** to review the 2050 target in [2040], [with this to be reflected in legislation], and for agricultural emissions pricing to also be reconsidered at this time

7 [**Authorise** the Minister of Agriculture and Minister of Climate Change to make policy decisions related to the design of the review of the 2050 target in [2040]]

8 **[Note** that the Minsters of Agriculture and Climate Change will regularly monitor agricultural emissions reduction progress, including mitigation technology developments and uptake]

Responding to the Commission's recommendation on the 2050 target

9 **Note** that we do not agree with the Commission that the emissions reductions required by New Zealand's 2050 target should be increased

10 **Note** that the Minister of Climate Change will receive further advice on addressing emissions from international aviation and shipping later this year, and will seek Cabinet's agreement if he recommends including international aviation and shipping emissions in our domestic target, or otherwise will respond to the Commission by November 2025 accordingly

DRAFT

11 **Note** that the Minister of Climate Change will develop a response to the Commission on their 2050 review consistent with the proposals in this paper

Consequential and technical changes to the Climate Change Response Act 2002

12 **Agree** to extend the date in the CCRA by which the fourth emissions budget (for the period 2036 to 2040) must be set by 24 months to 31 December 2027 to provide for consideration of the newly reset target [tbc]

13 **Agree** to amend the CCRA to provide a transitional provision to clarify that the Commission does not need to reconsult on its advice on setting of the fourth emissions budget in light of an amendment to the 2050 target [tbc]

14 [Placeholder for any implications for the third emissions budget - tbc]

15 **Agree** to amend the CCRA to provide a transitional provision to ensure the 2025 NZ ETS settings process is not affected by the change to the 2050 target

Process for amending the Climate Change Response Act 2002

16 **Invite** the Minister of Agriculture and Minister of Climate Change to issue drafting instructions to the Parliamentary Counsel Office to amend the Climate Change Response Act

17 **Agree** that the Bill will be introduced by XXX and enacted by XX...

18 **[TBC** other recommendations depending on legislative process/timing]

19 **Note** the Minister of Climate Change and the Minister of Agriculture intend to publicly announce the Government's decision on the 2050 target XXX

20 **Note** the Regulatory Impact Statement *Clarifying the 2050 domestic climate change emissions target* meets the Quality Assurance criteria.

[Authorised for lodgement - TBC]

Hon Todd McClay	Hon Simon Watts
Minister of Agriculture	Minister of Climate Change

DRAFT

Appendix 1: Mitigation Technology Pipeline

9(2)(b)(ii)

[redacted]

Appendix 2: Options for changes to the 2050 emissions target

The options for changes to the 2050 emission target that were considered were informed by the Climate Change Commission's review of the 2050 target and the Methane Review. The main options were:

- **Option 1:** Status quo would keep the 2050 target the same, which is to reduce emissions of greenhouse gases (other than biogenic methane) to net zero or lower by 2050 and beyond, and to reduce emissions of biogenic methane by 24% to 47% less than 2017 emissions beginning on 2050 and each subsequent year.
- **Option 2:** Reduce the methane target to a 14% reduction from 2017 levels and maintain the current net zero target for long-lived gases. This option was informed by the Methane Review, reflecting a 'no additional warming' approach that was modelled using a background mid-range global emissions scenario (2.0°C - 2.7°C).
- **Option 3:** Reduce the methane target to a range of 14-24% reduction from 2017 levels and maintain the current net zero target for long-lived gases. This option was informed by the Methane Review, reflecting a range of 'no additional warming' approaches modelled using background mid-range (2.0°C - 2.7°C) and 1.5°C global emission scenarios. The upper end of this range (24%) is in line with the lower end of the current biogenic methane target.
- **Option 4:** Clarify the current biogenic methane target by removing the upper range (i.e. a 24% reduction from 2017 levels only); maintain the current net zero target for long-lived gases. This option was informed by the Methane Review, reflecting a 'no additional warming' approach that was modelled using a background global emissions scenario that limited temperature increase to 1.5°C. A 24% reduction in biogenic methane emissions is also the lower end of the existing methane target range**. This is officials' preferred option in the regulatory impact analysis.**
- **Option 5:** Clarify the biogenic methane target (24% reduction from 2017 levels), strengthen the target for long-lived gases (to net negative 10Mt CO_2-e by 2050). This option was informed by the Methane Review (as above) and also includes increasing the level of New Zealand's domestic climate contribution for long-lived gases.
- **Option 6:** Increase both the biogenic methane and long-lived gases component of the target as recommended by the Commission (a 35-47% reduction in biogenic methane, net negative 20MtCO_2-e for long-lived gases by 2050). This options was recommended by the Commission in its 2050 target review.

Fundamental changes to the target, such as a move away from the split-gas approach, or removing the target altogether were ruled out of scope. Decisions on international shipping and aviation and further emissions reductions and removals post-2050 have been deferred by the Minister of Climate Change until later this year, when officials have undertaken further analysis and there is more clarity regarding the outcome of international processes.

Appendix 3: Climate Change Commission's findings

The Commission found there had been significant changes that justified increasing the level of New Zealand's domestic response to climate change, including:

- *Scientific understanding***:** The impacts of global warming are greater, in both severity and scale, than was understood by the global science community when the target was set.
- G*lobal action:* Globally we are off track to meet the Paris temperature goals of limiting warming to 1.5°C. This implies that even greater reductions in global emissions are needed in the near and longer terms to limit as much as possible the amount by which the world exceeds 1.5°C, and then to bring the temperature down again.
- *New Zealand's fair share:* Many comparable countries have now set domestic emissions targets that require more emissions reductions than New Zealand's current target
- *Intergenerational equity:* Delaying increased action transfers costs and risks to future generations.

The Commission recommended:

- reaching at least net negative 20 Mt CO_2e by 2050, including emissions from international shipping and aviation (IAS).
- reducing biogenic methane emissions from 2017 levels by at least 35 – 47 % by 2050.
- there are further reductions and removals of greenhouse gases beyond these levels after 1 January 2050.

DRAFT

Appendix 4: Regulatory Impact Statement

DRAFT

Ministry for the Environment
Manatū Mō Te Taiao

Briefing: 2050 target – additional legislative changes and implications of decisions

Date submitted: 22 August 2025
Tracking number: BRF-6279
Sub Security level: CLASSIFICATION
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Simon WATTS **Minister of Climate Change**	**Agree** to the additional legislative changes to be progressed alongside changes to the 2050 emissions target **Note** 9(2)(h) [redacted]	25/08/2025

Actions for Minister's office staff
Return the signed briefing to the Ministry for the Environment (advice@mfe.govt.nz).

Appendices and attachments
Appendix 1: Appendix withheld in full under section 9(2)(h) of the Act [redacted]
Appendix 2: Appendix withheld in full under section 9(2)(h) of the Act [redacted]

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Principal Author	Arek Wojasz Joe Beaglehole		
Responsible Manager	Simon Mandal-Johnson Steve Goodman		
General Manager	Mark Vink Hemi Smiler		✓

Minister's comments

2050 target Cabinet paper – additional legislative changes and implications of decisions

Key messages

1. You recently agreed to amend the 2050 emissions target in the Climate Change Response Act 2002 (CCRA) to require a 14-24% reduction in biogenic methane emissions by 2050 (BRF-6017 refers).

2. We are working with your office to finalise the Cabinet paper for lodgement on Thursday 4 September 2025 and consideration at Cabinet Economic Policy Committee (ECO) on Wednesday 10 September 2025.

3. This briefing seeks your decisions on several other amendments to the CCRA that are needed to ensure a smooth transition to the new target. These are set out in the table below. If you agree to these proposals, we will reflect them in the final Cabinet paper.

Table 1: Summary of proposed additional changes to the CCRA to be progressed alongside a change to the 2050 target

Aspect of the CCRA	*Issue*	*Proposal*
Defer setting the fourth emissions budget (EB4)	The Commission has provided its advice on EB4 (including revisions to existing emissions budgets) based on the current 2050 target. As you are required to make decisions that have considered this advice, it would be appropriate for it to be updated to reflect the intended change to the 2050 target.	Extending the timeframe by which EB4 must be set by 24 months. This will allow time for the Commission to update its advice, as well as avoid future overlap with ETS settings processes. The alternative is to set EB4 this year based on the current target.
Transitional arrangements for this year's ETS unit limits and price control settings (ETS settings) process	Decisions on ETS settings have recently been made by Cabinet. 9(2)(h) [redacted]	Introducing transitional provisions to clarify that any amended 2050 target does not apply to the ETS settings decisions for this year, and that further public consultation and advice from the Commission is not required. Transitional provisions are needed only if the 2050 target is amended before 1 January 2026.

4. In addition to the change to the 2050 target, the draft Cabinet paper includes a proposal to remove agricultural emissions pricing as a policy commitment in the second emissions reduction plan (ERP2). As requested, we have provided your office with draft text for the Cabinet paper and recommendations that would establish a process for agreeing a market-led replacement for this policy with an equivalent level of emissions abatement.

5. 9(2)(h) [redacted]

6. 9(2)(f)(iv) [redacted]

[redacted]

8. 9(2)(h) [redacted]

Recommendations

We recommend that you:

a. **agree** to amend the CCRA to extend the date by which EB4 must be set by 24 months to 31 December 2027

Yes | No

b. **agree** to include transitional provisions in the CCRA that:

   a. the Commission must update its advice on setting EB4 (including revisions to existing budgets)

   b. the Commission is not required to reconsult before updating its advice on setting EB4 (including revisions to existing budgets).

Yes | No

c. **agree** to include transitional provisions clarifying that any change to the 2050 target does not apply to the 2025 ETS settings decisions (if the 2050 target is amended before 1 January 2026)

Yes | No

d. **note** the policy decisions in this paper will be reflected in the Cabinet paper seeking agreement to the 2050 target change

e. 9(2)(f)(iv) [redacted]

f. 9(2)(h) [redacted]

Signatures

Hemi Smiler
General Manager
Climate Change Mitigation and Resource Efficiency

22 August 2025

Hon Simon WATTS
Minister of Climate Change

Date

Impact of 2050 emissions target decisions on emissions budgets and ETS settings

Purpose

1. This briefing seeks agreement to additional legislative changes to be progressed alongside your decision to change the 2050 emissions target. These are needed to ensure a smooth transition to the new target.

2. 9(2)(h) [redacted]

Background

3. You recently agreed to amend the biogenic methane target in the CCRA to 14-24% below 2017 levels by 2050 [BRF-6017 refers].

4. We are working with your office to finalise the Cabinet paper advancing this proposal for lodgement on Thursday 4 September 2025 and consideration at Cabinet Economic Policy Committee (ECO) on Wednesday 10 September 2025.

Analysis and advice

Updating the Commission's advice on EB4

5. Under s 5X(3)(d), the fourth emissions budget (EB4) for the period 2036 to 2040 must be set by 31 December 2025. The Commission provided you its advice on EB4 in November last year, based on the current 2050 target. This advice also recommended revisions to EBs 1-3 to reflect methodological changes and higher rates of afforestation.

6. As you are required to consider the Commission's advice in making decisions, the advice should be updated to reflect the proposed change to the 2050 target.

7. Under the CCRA, the Commission has a significant role in relation to emissions budgets. The Commission is required to advise the Minister of Climate Change on emissions budgets (ss 5ZA and 5ZC), while the Minister must make final decisions on the budgets and respond to the Commission in relation to their advice (ss 5ZB and 5ZC).

8. In keeping with the role of the Commission under the CCRA, for EB4, we therefore suggest:

    i The Commission is required to consider updating its advice on EB4 (and whether any notified emissions budgets should be revised), once the target is amended.

ii The CCRA is amended to extend the date by which EB4 must be set by 24 months to 31 December 2027.

9. This will allow adequate time for both the Commission to revise its work and the Government to consider its advice and make final decisions.

10. Changing the date by which EB4 must be set would require an amendment to the CCRA that would be progressed at the same time as amending the 2050 target. Given the Commission has already consulted on EB4, we also suggest the legislative change make clear it is not required to consult further in updating its advice (but has the discretion to do so, it if wishes to).

11. The alternative is to set EB4 this year, in line with the existing 2050 target. You would likely need to set EB4 on or near the level recommended by the Commission. Then, you would need to review the budget for alignment with your new target at a later point. While this would allow you to set EB4 this year, it would be set in a way that is inconsistent with your proposed target.

12. If you are interested in setting EB4 this year, we can advise you on the process required. This option may also be required if legislation to amend the target is not enacted this year as intended.

Impacts on ETS settings process

13. Cabinet has recently made decisions on the 2025 ETS unit limits and price control settings (ETS settings) [CAB-25-MIN-0276 refers]. Those decisions will be enacted and published by the end of September but come into force on 1 January 2026. If a CCRA amendment changing the 2050 target is passed during the settings process it could result in two possible issues:

    i **ETS settings accordance:** You must be satisfied that unit limits and price control settings for the ETS (ETS settings) are in accordance with the 2050 target, as well as emissions budgets and Nationally Determined Contributions (NDCs) under the Paris Agreement. Your preferred methane 2050 target of 14-24% below 2017 levels would not directly impact ETS settings because it does not change the target for ETS-covered emissions. 9(2)(h)

    ii **ETS settings process:** The CCRA requires that ETS settings decisions are informed by advice from the Commission and feedback through consultation. The Commission's advice is based on the current 2050 target, and consultation was completed using settings options aligned with the current 2050 target.

14. Any changes to the 2050 target are expected to come after ETS settings are enacted and published, but may come before the new ETS settings come into force. Because the decisions on ETS settings have been substantially made before any change in target, there is a limited risk that the two issues identified would eventuate. 9(2)(h)

i 9(2)(h)

15. If the 2050 target is amended on or after 1 January 2026, then there is no risk to the 2025 ETS settings from the 2050 target change, and no transitional provisions will be required.

16. Additional reductions during the EB3 period could also be required for ETS-covered emissions if Cabinet decides to remove the commitment to pricing agricultural emissions. 9(2)(h) Advice on this was provided as part of the briefing on final 2025 ETS settings decisions [BRF-6351 refers].

9(2)(h)

Legislative process for 2050 target changes

20. 9(2)(f)(iv) .

21. 9(2)(f)(iv) [redacted]

22. 9(2)(h) [redacted]

Step	*Timeframe*
Cabinet policy approval	15 September 2025
Bill Introduced	October 2025
First Reading	October 2025
Select Committee stage (to be confirmed)	None
Second Reading	November 2025
Committee of the Whole House	November 2025
Third Reading	December 2025
Royal Assent and estimated enactment	By 31 December 2025

Next steps

23. We will reflect your decisions in the draft Cabinet paper: *Resetting New Zealand's 2050 domestic climate change emissions target in the Climate Change Response Act 2002.*

Ministry for the Environment
Manatū Mō Te Taiao

Options to maintain the currency of ERP2

Date submitted: 28/08/2025
Sub Security level: CLASSIFICATION
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Simon WATTS **Minister of Climate Change**	**Agree** to your preferred approach to maintain the currency of ERP2.	1 September 2025

Actions for Minister's office staff
Forward this briefing to the Minister of Agriculture **Return** the signed briefing to the Ministry for the Environment (advice@mfe.govt.nz).

Appendices and attachments

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Principal Author	Katie Lund		
Responsible Manager	Stephen Goodman	9(2)(a)	
General Manager	Hemi Smiler	64 22 0871268	✓

Minister's comments

Options to maintain the currency of ERP2

Key messages

1. As part of your decisions on the 2050 target, you and the Minister of Agriculture are proposing to replace agriculture emissions pricing with an industry-led approach. This is consistent with your Climate Strategy and the Government's focus on economic growth.

2. At the same time, under the Climate Change Response Act 2002 (CCRA), the Minister of Climate Change is required to maintain a current emissions reduction plan (ERP). 9(2)(h) [redacted]

3. The CCRA provides for amendments but requires that, if an amendment is more than minor or technical, the same process must be followed as for preparing a new plan, including consultation. We have discussed with you that some provisions in the CCRA can make the process to update ERPs impractical. You intend to streamline the process for updates to ERPs 9(2)(f)(iv) [redacted]

4. A key consideration in maintaining a current ERP2 is how New Zealand is tracking towards meeting Emissions Budget 2 (EB2). Provisional projections from this year suggest that EB2 is on track to be met. However, the provisional projections also show that agriculture emissions are higher than they were in the ERP2 projections, although private sector commitments and emerging mitigation technologies are helping the agriculture sector reduce its emissions.

5. There are options around how you may wish to maintain the currency of ERP2 which present different trade-offs:

   i. **Option 1- focused update in 2025:** Provides quickest option to satisfy your requirement to have a current ERP before EB2 commences but with a three-to-six-week public consultation. This option becomes less feasible the further into 2025 decisions are delayed. A key consideration is if it aligns with your intention to engage with the agricultural sector on the industry-led approach.

   ii. **Option 2- start work now, update after May 2026:** Similar approach to Option 1 but would allow more time to engage the sector before public consultation. This will mean having a slightly less current ERP2 when EB2 commences but we can signal there is work underway to develop the industry-led approach, after which point public consultation on the amended ERP2 will occur.

   iii. **Option 3- midpoint review in 2026/27:** Consider an update to ERP2 in 2026/27, potentially as part of the 2026 adaptive management process, ERP2 would remain less up to date for a longer period.

6. If none of these options are preferable to Ministers, 9(2)(f)(iv) [redacted]

9(2)(f)(iv) [redacted] .

7. We recommend you engage with the Minister of Agriculture as the lead portfolio Minister for the agriculture chapter of ERP2 and agricultural climate policies to jointly agree to a preferred approach to maintaining a current ERP2.

Recommendations

We recommend that you:

a. **meet** with the Minister of Agriculture to agree to a preferred approach.

b. **agree** to an option to maintain the currency of ERP2:

   i. **either** Option 1- focused update in 2025

   Yes | No

   ii. **either** Option 2- start work now, update in May 2026

   Yes | No

   iii. **either** Option 3- midpoint review in 2026/27

   Yes | No

c. **or** direct officials to investigate 9(2)(f)(iv) [redacted]

Yes | No

Signatures

Hemi Smiler
General Manager-
Climate Change Mitigation
28 August 2025

Hon Simon WATTS
Minister of Climate Change
Date

Options to maintain the currency of ERP2

Purpose

1. The purpose of this brief is to provide options and seek your preferred approach to maintaining the currency of the second emissions reduction plan (ERP2), reflecting a proposal to replace agriculture emissions pricing.

Background

2. On 19 August 2025, you received advice on updated provisional greenhouse gas emissions projections for 2025 which provided progress toward emissions budgets and incorporated updated agricultural emissions scenarios [BRF-6512 refers].

3. You also recently received a brief on updating the 2050 target 9(2)(h) [redacted] BRF-6279 refers].

Analysis and advice

Obligation to maintain a current emissions reduction plan

4. Section 5ZG and 5ZI of the Climate Change Response Act 2002 (CCRA) requires the Minister of Climate Change to set an emissions reduction plan; and it outlines the process for amending the plan, and ensuring it remains current. The CCRA also requires you to ensure public consultation has been adequate and undertake further consultation as necessary when preparing an emissions reduction plan.

5. The CCRA provides for amendments to an emissions reduction plan and its supporting policies and strategies at any time to maintain its currency. If an amendment is more than ‘minor or technical’, the same process must be followed as for preparing a new plan. This includes reconsidering the Commission’s advice on meeting the relevant emissions budget and ensuring there has been adequate consultation on the amended plan.

6. In 2024, you amended ERP1 to maintain the currency of the plan and align ERP1 with the Climate Strategy, including by formally removing 41 actions. Following Cabinet approval of your intent to amend ERP1, public consultation occurred on the impact of the proposed change in approach to meeting EB1, via the ERP2 discussion document. Following your consideration of submissions received from public consultation and reconsideration of relevant advice from the Commission, Cabinet approved the amended ERP1. A short (13 page) ERP1 amendment document was published, to be read in conjunction with the original ERP1.

Proposal to replace agriculture emissions pricing

7. As part of the 2050 target review, the Minister of Climate Change and the Minister of Agriculture are proposing to replace the agriculture emissions pricing system (to be put

in place by 2030). Instead, Ministers propose to leverage growing industry incentives and action to enable farms to accelerate the uptake of new technology to reduce emissions. This would support a market and technology-led approach which is consistent with the Climate Strategy and aligns with the Government's focus on economic growth.

8. Agriculture emissions pricing was signalled as a key policy in the ERP2. Replacing it with an industry-led approach represents more than a minor or technical change. While this shift may be seen as a significant change, it also reflects evolving policy direction. To maintain the currency of the plan, it may be important to formally amend the plan to recognise this change before or soon after the commencement of EB2. You may also wish to signal the Government's intention to replace this policy.

9. 9(2)(g)(i) [redacted] Provisional projections from this year suggest that EB2 is on track to be met with a growing buffer of overachievement. However, the provisional projections also show that agriculture emissions are higher than they were in the ERP2 projections, although private sector commitments and emerging mitigation technologies are helping the agriculture sector reduce its emissions.

10. For the provisional projections, the scenarios modelled used varying levels of adoption and efficacy improvements for key mitigation technologies which could be achieved by different factors such as market drivers, industry ambition, government policies/incentives and/or a collaboration between government and industry. However, the results are unable to distinguish between the different drivers of technology development and adoption.

11. 9(2)(g)(i) [redacted].

12. While this advice is regarding ERP2, the plan does have an impact on future budgets, particularly EB3. Total emissions for EB3 are projected to be 247.9 Mt which is about 7.9 Mt above the limit of 240 Mt, but the gap is narrower than the 9.2 Mt projected for ERP2. The agriculture sector is projected to contribute 4.8 Mt more emissions in EB2 and 9.9 Mt in EB3, compared to the projections for ERP2.

Options to maintain currency of ERP2

13. We understand you are interested in managing risk to ERP2 in a prompt and efficient way. We recommend you discuss your preferred approach with the Minister of Agriculture. We have developed three options for your consideration, each involving trade-offs between the timeliness of updating and maintaining currency of ERP2, engagement with the agriculture sector, and public consultation.

14. **Option 1- focused update in 2025:** This would be the quickest option and satisfies your requirement to have a current ERP. It follows the approach taken for ERP1 with a ~10-page addendum update to ERP2, supported by the modelling used for the 2025 projections. Cabinet delegation would be sought for a three-to-six-week consultation on the proposed approach. While public consultation is possible in this timeframe, the further into 2025 decisions are delayed, the less feasible this option becomes. Another consideration is whether this option aligns with your intention to engage with the sector on the industry-led approach, which we understand has been reflected in the draft 2050

target Cabinet paper. Note the wording in the Cabinet paper does not necessarily imply formal public consultation being undertaken. This option would maintain currency of the ERP2 best at the time of EB2 commencing.

15. **Option 2- start work now, update in May 2026:** This is the second quickest option to update ERP2 and follows a similar approach to Option 1 but would allow more time to engage the agricultural sector on the industry-led approach. This option would seek approval from Cabinet to start work on the industry-led approach followed by public consultation and a concise addendum update to ERP2. This option means having a slightly less current ERP2 when EB2 commences compared with Option 1.

16. **Option 3- midpoint review in 2026/27:** This option would consider an update to ERP2 in 2026/27, potentially as part of the adaptive management approach. A midpoint review could assess progress against EB2 to determine whether changes to ERP2 are still required. However, ERP2 would remain less up to date for a longer period. This option provides more time to confirm an industry-led approach to replace agriculture emissions pricing and to consult on changes to ERP2.

17. If none of these options are preferred, there is work underway to address some of the impracticalities of the CCRA. 9(2)(f)(iv) [redacted]

9(2)(h) [redacted]

[redacted]

[redacted]

[redacted]

9(2)(h) [redacted]

[redacted]

[redacted]

Next steps

23. If you agree, this advice will be forwarded to the Minister of Agriculture. Officials suggest you meet to discuss the options in this paper and agree a preferred approach.

24. We seek your direction on your preferred approach and will start to develop a plan, jointly with the Ministry for Primary Industries, to give effect to this. Cabinet approval of public consultation could occur as part of the Cabinet paper on 2050 target decisions, with final decisions delegated to the Minister of Climate Change in accordance with his statutory duties and in consultation with Minister of Agriculture.

MINISTRY OF TRANSPORT
TE MANATŪ WAKA

Ministry for the Environment
Manatū Mō Te Taiao

Briefing: Policy decisions on including international shipping and aviation emissions in the 2050 target

Date submitted: 18 September 2025
Tracking number: BRF-6389 | OC250718
Sub Security level: CLASSIFICATION
MfE priority: Non-urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Simon WATTS **Minister of Climate Change** To Hon James MEAGER **Associate Minister of Transport**	**Decide** between options 1, 2 or 3 on how to address international shipping and aviation emissions under the 2050 target. **Provide direction** on next steps.	25 September 2025

Actions for Minister's office staff
Return the signed briefing to the Ministry for the Environment (advice@mfe.govt.nz). **Return** the signed briefing to the Ministry of Transport (OCU@transport.govt.nz)

Appendices and attachments
Appendix 1 – Overview of the reasons and implications presented by the Climate Change Commission, for their recommendation to include international shipping and aviation emissions in the 2050 target Appendix 2 – Further information on implications of option 2 and 3 Appendix 3 – Domestic and international actions underway

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Principal Author	Letisha Nicholas	N/A	
Responsible Manager	Stephen Goodman	9(2)(a)	✓
General Manager	Hemi Smiler	64 22 0871268	
Key contacts at Ministry of Transport			
Position	***Name***	***Cell phone***	***First contact***
Principal Author	Paul Hawkes	9(2)(a)	
Responsible Manager	Nick Paterson	9(2)(a)	✓
Acting Deputy Chief Executive	Siobhan Routledge	9(2)(a)	

Minister's comments

Policy decisions on including international shipping and aviation emissions in the 2050 target

Key messages

1. This briefing seeks your decision on how to respond to the Climate Change Commission's recommendation to include international shipping and aviation emissions in New Zealand's 2050 target under the Climate Change Response Act 2002 (CCRA).

2. The Commission sets out that New Zealand's international shipping and aviation emissions are contributing to warming and need to be reduced. They advise that emission reduction opportunities exist but need scaling up and require coordinated domestic action alongside international efforts.

3. It is current practice that these emissions are accounted for through global cooperation mechanisms. New Zealand is part of international efforts to address emissions from international shipping and aviation with the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO). The treatment of international shipping emissions is currently under negotiation by the IMO. Officials will provide Ministers with Powers to Act (Minister Peters, Minister McClay, Minister Watts and Minister Meager), with advice on this ahead of the upcoming IMO meeting in October.

4. Officials have considered three options to address these emissions and assessed them against three objectives: alignment with New Zealand's economic growth interests, including the Government's Going for Growth agenda, certainty of approach to limiting global warming to 1.5°C, and implementation feasibility. All options are consistent with the Government's current work to harmonise approaches with regional partners. The options are:

   i. **Option 1 – do not include in the 2050 target (status quo):** continue globally accepted approach of reducing these emissions through international mechanisms.
   ii. **Option 2 – include emissions in the 2050 target (Commission's recommendation):** include these emissions in the long-lived gas component of the 2050 target under domestic legislated climate framework - the CCRA.
   iii. **Option 3 – defer and reconsider after further review in 2031:** defer decision, following further review of international shipping and aviation emissions aligned with the next 2050 target review in 2031.

5. The Ministry of Transport (MoT) recommends Option 1 (status quo) as it supports international multi-lateral efforts to mitigate international aviation and shipping emissions, avoids increased compliance costs from fragmented national policies and aligns New Zealand with most other countries. This option also aligns with New Zealand's economic interests, including the Government's Going for Growth agenda, and provides certainty to the aviation and shipping sectors of New Zealand's policy preference that mitigation of international shipping and aviation emissions are managed by the IMO and ICAO.

6. The Minister of Climate Change will seek Cabinet approval to respond to the Commission on behalf of Government. Options requiring legislative amendment will need Cabinet approval. Officials will use Ministers' preferred option to draft a response to the Commission and provide this to the Minister of Climate Change before the response is due on 21 November 2025.

Recommendations

We recommend that you:

a. **agree** to:

i. **either** Option 1 (Ministry of Transport recommended) – not include international shipping and aviation emissions in the 2050 target (status quo)

Yes / No

ii. **either** Option 2 – include international shipping and aviation emissions in the long-lived gas component of the 2050 target

Yes / No

iii. **either** Option 3 – defer decision and review in 2031, whether to include international shipping and aviation emissions in the 2050 target, by either of the following approaches:

a) **either** amend the CCRA to require a review in 2031

Yes / No

b) **or** make a non-legislative commitment to review in 2031

Yes / No

b. **note** the Climate Change Commission's recommendations on the 2050 target and technical recommendations on international shipping and aviation emissions contained in this briefing.

Signatures

Hemi Smiler
General Manager – Climate Change Mitigation
Ministry for the Environment
Date 18 September 2025

Siobhan Routledge
Acting Deputy Chief Executive, Policy
Ministry of Transport

Hon Simon WATTS
Minister of Climate Change

Hon James MEAGER
Associate Minister of Transport

Purpose

1. This briefing seeks your decision on how to respond to the Climate Change Commission's (the Commission) recommendation to include international shipping and aviation emissions in the long-lived gas component of New Zealand's 2050 domestic climate target (the target) under the Climate Change Response Act 2002 (CCRA).

Background

2. New Zealand's target was legislated under the CCRA in 2019. It has two parts:

3. Net accounting emissions of greenhouse gases in a calendar year, other than biogenic methane, are zero by calendar year beginning on 1 January 2050 and for each subsequent calendar year; and

4. Emissions of biogenic methane in a calendar year are 10% less than 2017 emissions by calendar year beginning on 1 January 2030; and are 24% to 47% less than 2017 emissions by the calendar year beginning on 1 January 2050 and for each subsequent calendar year.

5. The CCRA requires the Commission to carry out a one-off review of whether international shipping and aviation emissions should be included in the target.[1] The Commission provided this advice to the Minister of Climate Change in November 2024, alongside a five-yearly legislated review of the target.

6. The Commission made an overall recommendation that each component of the target should be strengthened alongside including international shipping and aviation.[2] The Minister of Climate Change received advice on the Commission's 2050 target review in May 2025 [BRF-6017 refers]. Cabinet will consider the other components of the 2050 target recommendation separately, as proposals for these will require legislative amendment. The CCRA does not specify what the Minister of Climate Change needs to consider when deciding on the Commission's international shipping and aviation recommendation.

Analysis and advice

The Commission's advice for including international shipping and aviation in the 2050 target

7. The Commission recommended including international shipping and aviation emissions in the long-lived gas component of the target. The Commission also recommended that the target be strengthened from achieving net zero emissions by 2050, to achieving net negative 20Mt CO_2-e (carbon dioxide equivalent) by 2050 instead.

---

[1] Section 5R of the Climate Change Response Act 2002.
[2] See pg. 16 for recommendation overview. Climate-Change-Commission-Target-and-ISA-Final-Advice-04Dec2024-with-errata-message.pdf

8. The Commission reported that international shipping and aviation emissions are equivalent to about 9% of New Zealand's net domestic greenhouse gas emissions.[3] In 2023 this would represent an increase of approximately 6.7Mt CO_2-e to New Zealand's total domestic emissions, using the Commission's proposed accounting method.

9. The Commission outlined the following rationale for their recommendations (Appendix 1 refers):

   i. The Intergovernmental Panel on Climate Change (IPCC) have found that CO2 emissions, including those from international shipping and aviation, must reach net zero by or around 2050 followed by net negative emissions to limit warming to 1.5°C.[4] To do this, the Commission said international shipping and aviation emissions must be reduced or offset through removals or reductions in other sectors.

   ii. There are opportunities to address these emissions, in particular efficiency improvements, a shift to sustainable aviation fuels for international aviation and a mix of fuels (e.g. biofuels, green hydrogen, green ammonia and green methanol) for shipping.

   iii. While global action to address these emissions is underway through the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO), domestic action is needed to support these efforts. This is because New Zealand is creating these emissions and both international and domestic action is needed to achieve the greatest reduction in these emissions.

   iv. Including these emissions in our 2050 target would encourage domestic policy action, as these sectors would become part of emissions reduction planning and monitoring.

10. The Commission made further technical recommendations relating to the approach to counting these emissions, non-CO_2 climate effects and bringing a focus on gross emissions. Officials can advise on these technical recommendations, should you decide to agree with the Commission's recommendation to include these emissions in the target.

Context relevant to assessing the Commission's recommendations

11. New Zealand currently focuses effort to reduce emissions from international shipping and aviation emissions through international bodies. ICAO is responsible for the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) which aims to offset growth in aviation emissions. In 2023 the IMO agreed to the Strategy on the Reduction of Greenhouse Gas Emissions from Ships and as a result is currently negotiating the 'Net-Zero Framework' which aims to reduce emissions from shipping to zero by or around 2050.

---

[3] By 2050 emissions could grow to be equivalent to more than one-third of the countries' domestic net emissions.
[4] IPCC Sixth assessment report. Summary for policy makers 2023. https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf

12. The IMO's Net-Zero Framework proposes to apply a 'sinking lid' on emissions from international ships weighing 5000 gross tons and above. Fuel inefficient ships will pay fines, while fuel efficient ships will receive credits. Measures under negotiation are contentious and it is likely that countries will be called upon to cast a vote on these measures at negotiations in mid-October (Ministers with Power to Act will be asked to support, oppose or abstain from supporting these measures, CBC-24-MIN-0088 refers).

13. ICAO has an aspirational goal of net zero by 2050. CORSIA's first, compulsory phase to reduce emissions begins in 2027. CORSIA has no planned phases after 2035, but future reviews of the scheme will determine if and how it can continue beyond 2035. It is unclear what proportion of New Zealand's share of international aviation emissions are or will be covered by CORSIA, or how well the scheme will align in the long-term with global emissions pathways consistent with limiting warming to 1.5°C. New Zealand along with other countries will contribute to the ICAO process to consider next steps for CORSIA.

14. Most states rely on the IMO and ICAO to tackle emissions from international shipping and aviation, both of which are in the early stages of developing and implementing their emission reduction mechanisms. A key reason for this is because accounting for international emissions is complex. Using a single, overarching system to account for these emissions avoids the potential of 'double counting' and the complexity caused by international trade in goods – for example, it is common for sea-shipped goods to travel through multiple ports before reaching their final destination. Accounting for which country was responsible for these emissions would require complex negotiation.

15. The Commission's recommendation to include these emissions in the 2050 target represents a departure from this position. Exceptions to this approach include the European Union (EU) and the United Kingdom (UK), which have included, or partially included, these emissions in domestic targets and/or emission budgets.[5] The Pacific Islands have a strong stance on reducing emissions from these sectors but have not included these emissions in their domestic targets.

Options analysis

16. Officials have considered three options in response to the Commission's recommendation to include international shipping and aviation emissions in the 2050 target. The options were assessed against three objectives (outlined in table 1 below):

    i. Objective 1: Alignment with New Zealand's economic growth interests, including the Government's Going for Growth agenda (including economic impacts and national interests). Economic growth is a priority for the Government. This objective assesses how climate policy aligns with supporting sustained economic growth.

    ii. Objective 2: Certainty of New Zealand's approach to limiting global warming to 1.5°C. This objective analyses the certainty of New Zealand's approach to limiting warming under each option. The target sets the ambition of domestic effort to

[5] The EU has a legislative framework in place that covers all greenhouse gas emissions except from maritime transport.

mitigate climate change and indicates the long-term direction of climate change policy and how New Zealand will contribute to limiting warming to 1.5°C.[6]

iii. Objective 3: Implementation feasibility (including availability of technology and implications for government policy).
This objective assesses the implementation feasibility of each option. The target is implemented through policies that need to be feasible to achieve climate goals and objectives.

Table 1: Summary of options analysis against objectives

	Objective 1 *Economic growth*	**Objective 2** *Certainty of approach to limiting warming*	**Objective 3** *Implementation feasibility*
Option 1 *(status quo)*	**0** No additional costs	**0** No change	**0** No additional implementation considerations
Option 2 *(include)*	**-** Additional costs	**+** Improved certainty	**-** Substantial further implementation considerations
Option 3 *(defer & review)*	**0** No additional costs until reviewed	**-** Less certainty until reviewed	**0** No additional implementation considerations until reviewed

Option 1 (status quo) – continue to exclude international shipping and aviation emissions from the 2050 target

17. New Zealand relies on foreign-owned shipping for most seaborne trade and international aviation for global connectivity and tourism. As a geographically remote country with no land-based borders, we are highly exposed to shifts in the price of sea and air-based freight and are at an economic disadvantage to increases in freight costs.

18. This option maintains the status quo of excluding international shipping and aviation emissions from the 2050 target, relying instead on multilateral efforts. Efforts are led by organisations like the IMO and ICAO to regulate these sectors and incentivise measures such as sustainable fuel adoption to align sector emission pathways to 1.5°C.

19. Supporting multilateral agreements helps to ensure that countries operate on a level playing field, avoiding a future in which fragmentation of decarbonisation efforts by states increases compliance costs for business. As a small, remote nation New Zealand relies on functioning and effective multilateral systems to maximise our competitiveness. This option also aligns New Zealand with most countries, who do not include these emissions in their domestic climate targets.[7]

[6] The UN Global stocktake acknowledged the progress to date, and the need for urgent and deep cuts in emissions to align with 1.5°C, as globally we are off track. Options assessed can contribute to this effort, with varying effectiveness.
[7] International shipping and aviation emissions are also not included in New Zealand's Nationally Determined Contribution (NDC) target, under the Paris Agreement.

20. There is a risk that the multilateral mechanisms administered through the IMO and ICAO do not reach their own 2050 emission reduction goals. These mechanisms rely on consensus among diverse member states, which differ in their ambition, capacity, and political will to implement robust climate measures. To mitigate this risk, both the IMO and ICAO have periodic reviews in place to assess the progress of their emissions reduction mechanisms. The next CORSIA review will take place in 2028, and should the IMO Net-Zero Framework come into effect in 2027 as proposed, it will be reviewed in 2032.

21. The Ministry of Transport recommends this option as it supports international multi-lateral efforts to mitigate international aviation and shipping emissions, avoids increased compliance costs from fragmented national policies and aligns New Zealand with most other countries. This option also aligns with New Zealand's economic interest, including the Government's Going for Growth agenda, and provides certainty to the aviation and shipping sectors of New Zealand's policy preference that mitigation of international shipping and aviation emissions are managed by the IMO and ICAO.

Option 2- Including international shipping and aviation emissions in the 2050 target *(the Commission's recommended option)*

22. This option would accept the Commission's recommendation to include international shipping and aviation emissions in the long-lived emissions part of the target. The Commission did not recommend making specific adjustments to the target to accommodate these emissions; therefore, including these emissions would increase the total net emission reductions required to meet the target. This option therefore signals that further domestic action in addition to international mechanisms is required. A legislative amendment to the CCRA would be required to implement Option 2.

23. This option will likely involve higher economic costs compared to the status quo, as domestic measures may be required in addition to international ones. However, including these emissions in the target may provide long-term signals to the market, encouraging investment in low emissions technologies leading to economic opportunities. It would also align New Zealand with more ambitious countries that are also trade partners.

24. Modelling from the 2050 target review suggests that reducing an extra 10Mt CO_2-e in 2050, could lower GDP growth by around 0.3% (10Mt CO_2-e aligns with the higher end of the Commission's emission scenarios). The actual costs and benefits will depend on the timing and design of any policy response, which would need to avoid duplicating international pricing and compliance mechanisms.

25. Including these emissions in the 2050 target could provide greater certainty about New Zealand's approach to limiting warming. This would offer strategic direction and signal over the long-term how New Zealand will address these emissions.[8]

26. The Commission concluded that expanding the scope of the long-lived emissions component of the 2050 target was feasible. They suggested this would not put meeting

[8] The Commission's greenhouse gas warming analysis in their 2050 target review are based on New Zealand's net target accounting emissions which does not include emissions from international shipping and aviation. The Commission considered that limiting warming to 1.5°C requires emissions from international shipping and aviation need to be reduced to net zero by or around 2050.

the 2050 target at risk, as scalable options would be available for reducing emissions from these sectors (refer to Appendix 1). However, there are alternative ways to accommodate these emissions such as adjusting target level or structure. For example, the Commission consulted on other approaches such as separate net or gross goals for shipping and aviation within the 2050 target.

27. If Ministers are interested in progressing Option 2, further advice can be provided on how to include these emissions in the 2050 target and amend the CCRA. The decision to include would have significant implications for domestic policy settings. Including these emissions would likely require further consideration against (but not limited to) existing and future emissions budgets, and if some or all these emissions are included the New Zealand Emissions Trading Scheme (NZ ETS). The Commission has a role to annually monitor progress in reducing these emissions. See Appendix 2 for information on NZ ETS implications.

Option 3- defer decision and review in 2031, whether international shipping and aviation emissions should be included in the 2050 target

28. This option would defer a decision on including these emissions in the 2050 target until 2031, after the next five-yearly 2050 target review. The review could be expanded to include international shipping and aviation, allowing time for international mechanisms to develop before deciding how to treat these emissions. There are two proposed approaches to deferring the decision, they are (see Appendix 2, table 1 for assessment of pros and cons for each approach):

    i. a legislative amendment to the CCRA requiring a review in 2031, or

    ii. a non-legislative commitment to review again in 2031.

29. Option 3 does not add additional economic costs, unless Ministers change their approach following the proposed review in 2031.

30. Deferring a decision for at least 5 years may create uncertainty. This uncertainty could delay potential investment by the sector and other interested groups (e.g. regional partners) in scaling up alternative fuels, technology and infrastructure. It could also make uncertain New Zealand's approach to limiting warming from these sectors. The 2031 review could consider shifts in other countries' approaches to limiting warming that have occurred between 2025 –2030 and the effectiveness of international arrangements.

31. This option is feasible to implement, as there is already a legislated 2050 target review every 5 years, the next being scheduled for 2031. By then, the scope of a review could be expanded to consider international shipping and aviation emissions again.[9]

[9] Any adjustments to the 2050 review schedule as part of CCRA efficiency work will be finalised by Cabinet in 2025.

Other Considerations

Te Tiriti analysis

32. Further analysis to identify specific impacts to Treaty partners, iwi and Māori and other Māori organisations and businesses would need to be undertaken if Ministers chose to progress Option 2. Impacts to iwi and Māori would be considered by the Commission as part of future review under option 3.a. Appendix 1 includes a summary of the Commission's findings on implications of their recommendation on Crown-Māori relationship, te ao Māori and specific effects on iwi and Māori.

33. There are no specific requirements in Treaty settlement legislation or the CCRA to consult with post-settlement governance entities or Māori in general on changes to the 2050 emissions reduction target. However, following a public announcement, MfE will inform post-settlement governance entities (with relationship agreements and accords with MfE) of any policy change.

Consultation and engagement

34. The Commission consulted on a draft recommendation for international shipping and aviation in April-May 2024, as part of the 2050 target review consultation (see appendix 1 for more information). Officials seek direction on whether Ministers would like any further engagement with stakeholders beyond existing arrangements (as outlined in appendix 3).

9(2)(h)

9(2)(h)

Regulatory and legislative implications

41. Some decisions in this briefing require a Cabinet decision, to pursue legislative amendment to the CCRA. These include a decision to include international shipping and aviation emissions in the 2050 target (Option 2), or if Ministers wish to require a future review of these emissions in 2031 through legislation (Option 3.a). There may be options to progress these decisions, 9(2)(f)(iv)

42. The process of responding to Commission recommendations is prescribed in the CCRA[12] and the Minister of Climate Change is seeking authority from Cabinet to respond to the Commission on behalf of Government. Your decisions from this paper will be incorporated into the response to the Commission, which is due on 21 November 2025. The response must include any reasons for departure from the Commission's recommendations. Within 10 working days of providing the Government response to the Commission, you must ensure a copy of the response is tabled in the House of Representatives. Officials will work with your office to meet this requirement once the Government's preferred option is clear.

---

[10] 9(2)(h)

[11] 9(2)(h)

[12] Section 5U of the Climate Change Response Act 2002.

Next steps

43. Confirm if a bilateral meeting between the Ministers of Climate Change and Associate Transport is needed to provide an opportunity to discuss advice and options. Ministers may wish to discuss the contents of this briefing with other potentially interested Ministers, including the Minister of Foreign Affairs and the Minister of Trade and Investment. Officials can work with your respective offices to arrange any meetings.

44. Once Ministers have provided direction, officials can:

    i. provide further advice on implementation of decisions, or any other matters, including any further engagement with key stakeholders
    ii. develop a proposed response to the Commission for the Minister of Climate Change based on the response to this briefing, and
    iii. prepare any communications materials if necessary.

MINISTRY OF TRANSPORT
TE MANATŪ WAKA

Ministry for the Environment
Manatū Mō Te Taiao

Appendix 1- Overview of the reasons and implications presented by the Climate Change Commission, for their recommendation to include international shipping and aviation emissions in the 2050 target.

The table below provides an overview of the key reasons and implications laid out by the Commission in their advice in respect of their recommendation to include international shipping and aviation in the 2050 target. A high-level summary of key stakeholder feedback is also provided.

Table 1. Summary of key implications and assumptions outlined in the Commission's 2050 advice on international shipping and aviation

Case for change	Economic implications	Policy implications	Social, cultural, environmental and ecological implications
CCC's rationale for recommendation • Emissions from international shipping and aviation are contributing to climate change • These emissions amount to around 9% of New Zealand's net domestic emissions, and this proportion is likely to grow to more than a third if no action is taken • There are opportunities to address these emissions, in particular efficiency improvements and a shift to sustainable aviation fuels for international aviation and a mix of biofuels, green hydrogen, green ammonia and green methanol for shipping • While global action to address these emissions is underway through the IMO and ICAO, domestic action is needed to support these efforts • Including these emissions in our 2050 target would encourage	• Given the New Zealand economy relies heavily on international shipping and aviation, choices about how to address these emissions are significant and could impact international market access and demand for New Zealand products • New Zealand's distance from other major economies means it will face higher costs to decarbonise these sectors • In a well-supported transition to alternative fuels, where the price difference is brought down and efficiency of fuel use increases, the flow-on impacts of a fuel cost increase are likely to be relatively small (e.g. in aviation, an Australian study found that a 28% SAF mandate by 2040 would have a 0.3% impact on flying costs between 2025 and 2040; in shipping IMO analysis of a levy on emissions of USD$30-$300 found it would increase prices by 0.2%-0.38%)	*Impact on feasibility of current target* • Adding international shipping and aviation emissions to the target increases the total volume of net emissions that must be reduced and risks the target not being met; however, the Commission's analysis found achieving the target remained feasible – it would be met in three of the five scenarios modelled (including high-technology, high systems change; high-technology, low systems change, and low-technology, high systems change) • IMO and ICAO have both set net zero targets in 2050. International analysis shows achieving these targets is possible through technology change. *Supporting policies are needed* • Enabling policy action to support alternative fuel use e.g. investment in research and development, and emissions pricing or fuel mandates, is likely the most effective way to achieve a significant reduction in these emissions • Certainty is needed to support demand and investment in alternative fuels so that they can achieve scale and be widely deployed.	*Social and cultural* • There are health benefits to increasing alternative fuel use – 200,000 New Zealanders may be living near harmful shipping emissions • Increased travel costs could negatively impact connections with friends and relatives overseas *Environmental and ecological* • Switching to shipping fuels that do not contain sulphur can reduce water contamination and ocean acidification • Care is needed to ensure alternative fuels are sustainably produced – e.g. feedstocks for biofuels • Producing alternative fuels with renewable energy provides more significant emissions reductions *Distributional impacts*

domestic policy action, as these sectors would become part of emissions reduction planning *CCC's proposed approach to including these emissions* • These emissions should be counted as part of the all-other [long lived] gases component of the 2050 target (as opposed to setting a specific component) • The following methods for counting emissions should be used – for shipping, 50% of the emissions to/from the next overseas port; for aviation, refuelling in New Zealand • Additional measures should be developed to drive gross emissions reductions, e.g. a specific budget (or proportion of a budget) for these emissions • The level of current target should not be adjusted when including these emissions	• Over 80% of New Zealand exports by value go to countries with mandatory climate-related disclosures proposed or in-force. A recent study by Zespri concluded New Zealand trails other countries in climate and transport policy and investment for low emissions shipping – and this could impact access to international markets • Shipping and aviation companies are likely to focus their emissions reduction efforts on routes where there is government support or alternative fuels are more readily available • Policies to address these emissions could also improve NZ's economic resilience by supporting energy security • There are economic opportunities arising from the potential to develop alternative fuels, including woody biomass based sustainable aviation fuels and biofuels, green hydrogen, green ammonia and green methanol.	*Emissions pricing* • Adding these emissions to the target does not mean they would automatically be added to the NZ ETS • Emissions pricing for these emissions is most efficient at the international level and domestic pricing could undermine effective global efforts • CORSIA prices emissions but will need strengthening to drive significant reductions. IMO is considering pricing mechanisms • There are barriers to some forms of aviation pricing (a direct tax on fuel may breach international agreements, but including these emissions in the NZ ETS may not) *International relationships* • Including these emissions in our target may strengthen perceptions of our climate response • There are opportunities for trans-Tasman cooperation on addressing these emissions – Australia is accelerating investment in renewable hydrogen, low carbon liquid fuels, and manufacturing if clean energy technologies	• While action to reduce these emissions may have impacts on current generations, it prevents higher impacts on future generations. Implementing change faster may reduce the cost of change on future generations *Crown-Māori relationship, te ao Māori and specific effects on iwi and Māori* • These emissions are impacting the natural environment, which is an important source of wellbeing and prosperity for iwi/Māori • Addressing these emissions could create short-term cost increases related to exports and tourism, but secure long-term demand in sectors with a strong Māori presence, e.g. forestry
Commission received feedback from several key stakeholders The aviation sector had split views. Several stakeholders supported the inclusion, conditional on these emissions not being included in the NZ ETS, improved Sustainable Aviation Fuel (SAF) access, and further Government involvement including for example, introduction of targeted policy and regulatory changes. • Shipping sector views were mixed; some supported inclusion to drive policy action, while others preferred waiting for international measures. Some stakeholders advocated aligning with ICAO and IMO processes or a more proactive international stance.			

MINISTRY OF TRANSPORT
TE MANATŪ WAKA

Ministry for the Environment
Manatū Mō Te Taiao

Appendix 2 – Further information on implications of Options 2 and 3

Further implications of Option 2; NZ ETS related implications of including international shipping and aviation emissions in our 2050 target

- International shipping and aviation emissions are currently difficult to abate. Acknowledging that the NZ ETS is the Government's main tool to reduce net emissions, a choice to include these emissions in the NZ ETS would require a range of considerations. These include (but are not limited to) effects on annual unit limits and price control settings (ETS Settings).

- Whether a domestic pricing incentive enhances the signals of the international schemes (e.g. to develop alternative fuel and infrastructure supply), or simply duplicates them, depends on decisions by Ministers, such as the scope of emissions to be included in any domestic pricing scheme.[13]

- The Commission's advice noted several NZ ETS related issues to address if emissions were to be included in the 2050 target, including scope of pricing to avoid overlap, scope of reporting requirements to avoid gaps and duplication and alignment with international agreements. They suggested that with careful consideration these could be overcome.

- Including these emissions in the NZ ETS would likely lead to increased demand for New Zealand Units (NZUs). This increased demand could place upward pressure on NZU prices and impose additional costs on businesses and consumers. A higher NZU price would likely reduce total net emissions, with flow on impacts for the economy. These impacts will depend on a range of factors e.g. auction volume limits and removals response to demand.

- If Ministers chose not to include these emissions in the NZ ETS but included them in the 2050 target, this could still influence ETS settings. This is because ETS parameters must accord with the 2050 target and emissions budgets, potentially requiring adjustments to accommodate the additional emissions.

- Should Ministers choose Option 2 (include these emissions in the 2050 target), officials can carry out further analysis to estimate the impact for the NZ ETS. Quantifying the impact of including these emissions in the NZ ETS will depend on several factors, such as if, and how, emissions budgets are amended and if, and how, we adjust NZ ETS settings in response.

Further details on implementing Option 3- defer and review in 2031, whether international shipping and aviation emissions are included in the 2050 target

- Ministers have options regarding how they implement Option 3, each option has benefits and drawbacks', as outlined indicatively in table 2 below. The Minister of Climate Change

[13] The Commission made a recommendation about the 'counting' method that could be used to measure these emissions under the 2050 target. Certain methods are better than others at managing overlap or gaps with other jurisdictions, as well as incentivising where reductions need to occur.

could request updated advice on international shipping and aviation from the Commission as a part of either option.

Table 2. Indicative pros and cons for implementing option 3

Approaches to option 3	Pros	Cons
a) *Legislative amendment to CCRA requiring future review*	Provides clarity and certainty to domestic and international market about how and when these emissions will be considered in the future.	The timing of future review may not align with or be long enough to indicate progress (or lack of) on key issues e.g. technological and international developments.
b) *Non-legislative commitment to future review*	Flexibility to consider issue again at the right time.	Less certainty and clarity to domestic and international market about domestic approach to future consideration of these emissions.

Appendix 3 - Domestic and international actions underway

The decision to include—or exclude—emissions from international shipping and aviation in New Zealand's domestic targets does not prevent domestic efforts to reduce these emissions. **The appendix outlines the current initiatives underway to mitigate emissions from these sectors.**

Domestic actions underway

The New Zealand Government

- The New Zealand Government is currently engaged in a Ministerial led 2+2 Climate and Finance dialogue with Australian counterparts. During the 2+2 Climate and Finance Dialogue with Australia in July 2024, the Government committed to convening roundtables with the maritime sector. These looked at the conditions required for green routes between countries.

- Members of the aviation industry has been vocal about supporting a policy pathway for uptake of Sustainable Aviation Fuel (SAF) through the 2+2 Climate and Finance Dialogue architecture (2+2). Industry sent relevant Ministers a letter in June outlining their expectations on SAF for this year's 2+2.

- 9(2)(j) [redacted]

- The Second Emissions Reduction Plan committed to creating the conditions for green shipping routes by 2035.

International aviation stakeholders:

- Air NZ already purchases CORSIA units but has not disclosed the volume or price paid. They have also purchased SAF to meet 1.6% of projected fuel use 2026 (bunkered in US), from Singapore company Neste.[14]

- 2024: Air NZ and LanzaJet / Lanzatech completed a feasibility study into production of woody biomass based SAF in NZ.[15]

International shipping stakeholders:

- Aotearoa Circle commissioned Deloitte to produce a report for the FutureFit shipping work, on the possible pathways including greater use of renewable fuels, strengthening international partnerships and infrastructure investment. It explores key considerations for establishing Trans-Tasman green shipping corridor and provides alternative fuel roadmaps, along with an economic risk assessment if action is delayed.[16]

---

[14] https://www.airnewzealand.co.nz/sustainability-reporting-and-communication
[15] https://www.airnewzealandnewsroom.com/press-release-2024-new-study-shows-local-production-of-sustainable-aviation-fuel-could-support-fuel-resilience-and-security-in-aotearoa-new-zealand
[16] https://www.theaotearoacircle.nz/focus-areas/climate/climate-mitigation/future-fit-shipping

- Zespri partnered with CMA CGM Group commissioned EY on a feasibility study for a green route from New Zealand to Europe (Belgium).[17]

- Pre-feasibility study was completed by the Maersk Mc-Kinney Moller Centre for Zero Carbon Shipping in 2023. It brought together diverse industry stakeholders to discuss an Australia–New Zealand green shipping corridor. This could allow commercially operating ships to use alternative fuels.

International actions underway

International Civil Aviation Organization (ICAO)

- ICAO runs the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) scheme, a global initiative aimed at mitigating the mid-term growth of CO_2 emissions from international aviation (domestic aviation is excluded). While long-term solutions like sustainable aviation fuels (SAF) and new technologies are still developing, CORSIA requires operators to monitor, verify, and report emissions from international flights.

- The first phase (2024–2026) is voluntary, while phase two (2027–2035) mandates participation from member states. A review in 2032 will determine the scheme's future beyond 2035 as currently there is no phase planned after 2035.

- The Commission's recommendation would require New Zealand's international aviation emissions be included in the net zero part of the 2050 target.[18] ICAO and member states (including New Zealand) have adopted a long-term aspirational goal of net-zero carbon emissions by 2050 for international aviation. ICAO's primary tool is the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which addresses emissions growth beyond 85% of 2019 levels. New Zealand is currently a voluntary participant, with CORSIA becoming mandatory for all ICAO member states from 2027.

- Resolution A38-18, adopted by the 38th ICAO Assembly in 2013, set an overarching policy for the member states to ICAO to address the impacts of climate from international aviation. A "basket of mitigation measures" was developed because of this resolution to reduce CO_2 emissions from international aviation. These included advancements in aircraft technology, operational improvements, sustainable alternative fuels, and market-based measures (e.g. CORSIA). These complementary measures are designed to give flexibility to states and allow for a comprehensive approach to addressing emissions reduction.

ICAO/ CORSIA price incentives

- Offsetting allows an operator to compensate for emissions by financing a reduction in emissions elsewhere. These types of offsets include financing alternative energy for communities, protecting or extending forestry and other natural carbon sinks. Offsetting and carbon markets have been a fundamental component of ICAO emissions reduction policies and continue to be a mechanism for action against climate change.

- ICAO's position is that offsetting is more effective than a tax, as a carbon tax merely requires companies or operators to pay for their emissions, without guarantee that the payment will lead to any emissions reductions. While there are choices around where

[17] https://canopy.zespri.com/public/home/news/low-emissions-shipping-corridor-report
[18] The Commission recommended calculating aviation emissions based on refuelling taking place in New Zealand based on bunker fuel use by all international operators.

tax or Offsetting places a cost on the industry, but the revenue goes directly to projects that reduce CO_2 emissions.

- To offset emissions growth beyond 2019 levels, operators must purchase emissions units. This includes factors such as:

  i Offsetting obligations begin when emissions exceed 85% of the sector's 2019 baseline.

  ii Offset prices range from USD $8.57 (NZS $14.10/ t CO2 e) to $20.80 per tonne of CO_2 e (NZD$ 34.23/ t CO_2 e), with demand expected to surge from 150 Mt CO_2 e in phase one to up to 1500 Mt CO_2 e in phase two.[19]

  iii CORSIA has expanded the list of eligible offset schemes and introduced CORSIA Eligible Fuels (CEF), which can reduce emissions by 6–10%, though they are more costly than offsets.[20]

  iv A formal update from CORSIA in 2025 will confirm supply and demand forecasts and amongst other things.[21]

- Analysis, including summaries by the IPCC, warn that reliance on offsets may undermine actual emissions reductions, raising concerns about the additionality of credits.[22]

International Maritime Organization (IMO)

- IMO has committed to reducing greenhouse gas emissions from international shipping, with a target of net-zero emissions by or around 2050. It is currently negotiating emissions reduction measures. Ministry of Transport officials will provide advice to Ministers with Powers to Act ahead of the October negotiations.

- Over 80% of global trade is transported via international shipping, making IMO's role critical in global commerce. In 2023, IMO member states, including New Zealand, agreed on a strategy to reduce greenhouse gas (GHG) emissions from ships.23 The strategy targets net-zero GHG emissions by 2050 and sets interim goals for 2030: a minimum 20% reduction in total emissions, at least 40% reduction in carbon intensity, and a minimum 5% uptake of zero-emission fuels.

IMO price incentives

- Negotiations under way will, if agreed, implement a system from 2027 that will require ships to report emissions, with the first compliance period spanning 2028 to 2030. Ships exceeding their greenhouse gas fuel intensity (GFI) must pay penalties based on excess emissions.

- Penalties apply to ships over 5000 gross tonnes and vary by compliance tier. Tier 1 (GFI between Tier 1 and Tier 2 targets) incurs a penalty of USD $100/ t CO_2 e (NZD $164/t

---

[19] South Pole 2025 CORSIA Review. Available at: https://www.southpole.com/blog/icaos-recent-decision-new-carbon-standards-for-corsia-eligible-emissions-units

[20] ICAO CORSIA cost modeling (2023)

[21] https://www.iata.org/en/programs/sustainability/corsia/

[22] https://www.ipcc.ch/report/ar6/wg3/

[23] https://www.imo.org/en/ourwork/environment/pages/2023-imo-strategy-on-reduction-of-ghg-emissions-from-ships.aspx

CO_2 e), while Tier 2 (above Tier 2 limit) incurs USD $380/ t CO_2 e (NZD $625/t CO_2 e). These rates are valid through 2030, with future values to be defined by January 2028.[24]

- These 'tiers' are based on the GFI of each ship. The allowable emissions intensity of both levels will decrease over time. As a result, ships that do not switch to low or zero carbon fuels will face higher penalties (the 'Tier 2' figure above) more often.

- Ships operating with zero or near-zero emissions may earn financial rewards in the form of 'Surplus Units' (SU), which can be banked or transferred. Non-compliant ships must purchase 'Remedial Units' (RU) to offset emissions.

- Review mechanisms are planned for RU penalties and GFI reduction factors. The framework commits to defining RU values by 2028 (effective 2031) and post-2035 GFI reduction factors by 2032.

- The strategy aligns IMO with global decarbonisation efforts such as the Paris Agreement and emphasises the importance of shipping in global trade. Final negotiations in October 2025 will focus on a fuel intensity measure to cap emissions.

- New Zealand relies on foreign-owned shipping for most seaborne trade. If flagged states adopt the Net-Zero Framework, associated costs may be passed on to operators. Our participation in these negotiations is important to secure an effective global regime for the transition of international shipping.

- A global approach will help mitigate the disproportionate impacts New Zealand. The South Pacific more broadly would be exposed to impacts, if uncoordinated unilateral or regional systems were established. A multitude of these could increase compliance costs for business. For example, shipping companies operating to and from New Zealand could be required to undertake compliance checks with multiple levels of emissions reduction measures. These could be based on various sources of emissions. A product exported from New Zealand could be considered as reducing emissions in one market, but not another – which would lead to consumer confusion and further costs on businesses.

[24] https://www.zerocarbonshipping.com/news/countdown-historic-imo-agreement-lays-groundwork-for-maritime-decarbonization

Appendix 1 withheld in full under section 9(2)(b)(ii) of the Act.
Appendix 4 withheld in full under section 9(2)(h) of the Act. Appendix 5 refused in full under section 18(d) of the Act as it will soon be publicly available.

CLASSIFICATION

Office of the Minister of Agriculture

Office of the Minister of Climate Change

Cabinet

Updating the 2050 domestic climate change emissions target

Proposal

1 This paper seeks agreement to update New Zealand's 2050 domestic biogenic methane target in the Climate Change Response Act 2002 (CCRA).

Relation to government priorities

2 Our proposal relates to:

2.1 the Government's Target 9 to reduce net greenhouse gas emissions

2.2 the National – ACT Party coalition agreement to review the biogenic methane science and target for consistency with the principle of no additional warming.

Executive Summary

3 New Zealand's primary sector is the engine room of the economy, accounting for 10% of our GDP, earning almost $60 billion in export revenue in the past year, contributing 12.4% of overall employment, and totalling 82.5% of New Zealand's goods exports. New Zealand farmers are among the most productive and emissions efficient in the world.[1]

4 New Zealand has taken a split-gas approach to emissions reduction to recognise the distinct warming impacts of different gases. The split-gas approach recognises that biogenic methane (from agriculture and waste) is a "short-lived" gas with less atmospheric lifetime and a different warming impact, to other long-lived greenhouse gases, such as carbon dioxide.

5 This Government remains committed to our climate change commitments of net zero long-lived gases by 2050, reducing gross methane emissions and to the split-gas approach.

6 Cabinet agreed to an independent panel of highly regarded New Zealand and international scientists to review and provide evidence-based advice on

[1] Historical trends confirm that New Zealand is among the most productive dairy system in the world, with the International Farm Comparison Network reporting that of 54 countries representing approximately 90% of the total milk production, dairy farm productivity in New Zealand was the highest in the world in 2021 (on a seasonal basis). For example, see: AgResearch, Updating the carbon footprint for selected New Zealand agricultural products: an update for milk, August 2021; and Mazzetto, Falconer and Ledgard, Carbon footprint of New Zealand beef and sheep meat exported to different markets, January 2023.

4pq7iss0p5 2025-09-23 14:59:20

New Zealand's biogenic methane target for consistency with no additional warming. The findings of the review were published in December 2024 (Methane Review).[2] The Climate Change Commission (the Commission) also reviewed the 2050 target and provided Government its report in November 2024. We have considered both these reports and officials' advice.

7 We propose to change the biogenic methane component of the 2050 climate change target to 14-24% below 2017 levels by 2050. This is informed by the Commission's advice and the findings of the independent Methane Review, where 14% to 24% represents achievement of no additional warming against the two most plausible global methane reduction scenarios presented in the report.

8 We intend to legislate another review of the methane target in 2040, based on the most up to date science for consistency with no additional warming, and to take account of progress by New Zealand and our main trading partners. This milestone date will allow us to assess whether additional government interventions are required alongside market-led activity to achieve the 2050 target. The terms of reference for this review in 2040 will include finding a final single point target for biogenic methane by 2050.

9 We propose to not progress an on-farm emissions pricing system by 2030 because it will add cost to agricultural sector production and may drive jobs and production overseas to less emissions efficient countries. In its place we propose to support and leverage growing industry incentives to enable farms to accelerate the uptake of new technology to reduce methane, without adding significant cost to production.

10 We intend to progress a further targeted amendment to the CCRA to provide greater recognition of food production, which we note is reflected in Article 2.1(b) of the Paris Agreement.

11 We also propose to investigate the application of a split-gas target to our future international climate change commitments. This investigation will assess the opportunity to align New Zealand's international targets with our domestic approach.

Background

12 New Zealand farmers are widely recognised as among the most emissions-efficient food producers globally. We don't take this recognition for granted and acknowledge there is competitive pressure for the positioning, which is why this Government has invested heavily to deliver tools and technology to farmers to tackle the very complex issue of biological agricultural emissions.

[2] Ministry for the Environment, *Methane Science and Target Review – Terms of Reference*, June 2024 (https://environment.govt.nz/assets/news/Methane-Science-and-Target-Review-Terms-of-Reference.pdf)

4pq7iss0p5 2025-09-23 14:59:20

13 Under the CCRA, New Zealand's current emissions reduction targets (2050 target) are:

13.1 reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050; and

13.2 reduce emissions of biogenic methane to 24% to 47% below 2017 levels by 2050, including to 10% below 2017 levels by 2030.[3]

14 We are making good progress towards reducing biogenic methane emissions. Improved genetics and better on-farm practices have delivered emissions efficiencies, and these gains look set to continue (see **Appendix 1**). The increase in on-farm productivity and efficiency has seen dairy emissions intensity fall by 30% since 1990 and 42% for the sheep and beef sector. However, while productivity and efficiencies have been realised, there has also been high levels of afforestation on productive farmland and a reduction in overall stock numbers.

The Climate Change Commission's advice and the Independent Methane Panel's findings have informed the 2050 target

15 The Climate Change Commission is required under the CCRA to review New Zealand's 2050 target every five years and it provided its report in November 2024. The review covered the targets for both short and long-lived gases and recommended increasing the level of emissions reductions required for both components of the 2050 target (see **Appendix 2**). This was in response to its finding that changes in the scientific understanding of climate change point to the need for all countries to take additional actions to reduce emissions.

16 The Commission made other recommendations relating to the 2050 target. These included whether to bring emissions from international shipping and aviation into the target. I, the Minister of Climate Change, will respond to the Commission's advice in November, following consultation with relevant Ministers.

17 In line with the National-ACT coalition agreement, the Government established an independent scientific panel to undertake a review of the methane science and target. Biogenic methane is a "short-lived" gas with less atmospheric lifetime and a different warming impact, to other long-lived greenhouse gases, such as carbon dioxide. The Methane Review focused on what was required to stabilise the warming impact of biogenic methane emissions at 2017 levels, that is "no additional warming" from the base year. It found (detailed findings in **Appendix 3**):

17.1 a 24% reduction in biogenic methane emissions below 2017 levels would achieve "no additional warming" under all background global

[3] Section 5Q, Climate Change Response Act 2002.

4pq7iss0p5 2025-09-23 14:59:20

temperature scenarios that were modelled, including a scenario in which global temperature increase is limited to 1.5°C;

17.2 a 14-15% reduction in biogenic methane emissions below 2017 levels would achieve “no additional warming” under global mid-range (2.0°-2.7°C) and high temperature increase scenarios (temperature increase well over 2.0°C, and as high as approximately 4.5°C).

18 The Methane Review was not asked to recommend a new biogenic methane emissions target, but these results have informed the options considered by Ministers. The Methane Review found that no additional warming could be achieved at different global emissions scenarios presented, and strongly depends on actions undertaken by the rest of the world.

Analysis

We propose to update the biogenic methane component of the 2050 target to a range of 14-24%

19 We have considered a range of 2050 target options informed by the Methane Review, the Commission’s advice, and advice from officials. Options considered were assessed using the following criteria:

19.1 Alignment with the Government’s “Going for Growth” agenda, including economic impacts and international competitiveness

19.2 Contribution to the purpose of the CCRA

19.3 Implementation feasibility such as the availability of mitigation technology.

20 Our proposed biogenic methane 2050 target of 14-24% is informed by the Methane Review and maintains a domestic response to climate change that contributes towards our climate change commitments. A range of 14-24% represents the two most plausible global emissions scenarios presented in the Methane Review.

21 We propose to legislate a further review of the biogenic methane target and science to occur in 2040 to ensure it remains relevant, is based on the most up to date science for consistency with no additional warming, and takes account of New Zealand’s progress, that of our trading partners and actions undertaken by the rest of the world. The terms of reference for this review will include finding a final single point target for biogenic methane by 2050. We seek authorisation for the Minister of Agriculture and the Minister of Climate Change to be given delegated authority to finalise further details of this review.

4pq7iss0p5 2025-09-23 14:59:20

Other options considered

22 We considered other options for the biogenic methane target against a range of factors including the potential impact on the economy, rural communities, the climate, and broader Government objectives. Options included:

Option 1: Status quo would keep the 2050 target the same, which is to reduce emissions of biogenic methane by 24% to 47% less than 2017 emissions beginning in 2050 and each subsequent year.

We considered that the status quo did not align with the findings of the Methane Review. The status quo target also does not reflect agriculture's significance in the New Zealand economy, and risks shutting down New Zealand farms and sending production overseas resulting in emissions 'leakage'.

Option 2: Reduce the methane target to a 14% reduction from 2017 levels. This option was informed by the Methane Review, reflecting a 'no additional warming' approach that was modelled using a background mid-range global emissions scenario (2.0°C - 2.7°C).

We note that a target of 14% could be seen as out of step with international trade partners and would require a shift in the emissions reduction burden to the New Zealand Emissions Trading Scheme sectors (energy and transport).

Option 3: Set the biogenic methane target to a 24% reduction from 2017 levels only. This option was informed by the Methane Review, reflecting a 'no additional warming' approach that was modelled using a background global emissions scenario that limited temperature increase to 1.5°C. This was officials' preferred option in the regulatory impact analysis, but we do not consider this provides sufficient flexibility.

Based on findings from the Methane Review we note that it found that no additional warming could be achieved at different global emissions scenarios presented, and will strongly depend on actions undertaken by the rest of the world.

Option 4: Increase the biogenic methane component of the target to a 35-47% reduction. This option was recommended by the Commission in its 2050 target review.

We do not agree with the Commission that the 2050 target should be significantly increased. We considered the potential impact of the Commission's proposal on the economy, rural communities and the climate, as well as the feasibility of the policy mix and the technology required. On balance, we concluded that the Commission's proposal does not reflect an appropriate balance of Government objectives.

4pq7iss0p5 2025-09-23 14:59:20

Adopting a market-led and technology-based approach to reducing agricultural emissions

23 We propose to support a market and technology-led approach to agricultural emissions reduction rather than pricing agricultural emissions. The market is making progress on incentivising the uptake of agricultural emissions mitigation technology and practices through schemes such as Fonterra's emissions incentive scheme and Silver Fern Farms' initiatives.

24 We are partnering with the sector, leveraging our over $400 million investment to accelerate the development and commercialisation of mitigation technologies to drive emissions reduction. We have high confidence in the technology pipeline (see **Appendix 1**).

25 Cabinet has agreed to track progress towards the second emissions budget in line with the adaptive management approach outlined in the second emissions reduction plan (ERP2).

26 Agricultural emissions pricing is a policy in ERP2. Achieving biogenic methane reductions without agricultural emissions pricing is feasible but will require a continuation and scaling-up of current industry-led schemes, as well as a particular focus on driving adoption of the latest mitigation technologies. We intend to engage with industry leaders to maintain momentum and update ERP2 accordingly. We will report back to Cabinet in May next year to provide an update on progress towards agricultural emissions reduction.

Industry Momentum and Incentives

27 Processors and co-operatives are already driving significant reductions, for example:

Fonterra

28 Fonterra has publicly stated its ambition to reach net-zero emissions by 2050 and has committed to a 30% reduction in on-farm (methane and nitrous oxide) emissions intensity by 2030 (baseline year 2018).

29 In June this year, Fonterra introduced a financial incentive scheme for farmers based on certain emissions-related criteria as part of updates to its Co-operative Difference framework. Fonterra is also offering on-farm emission efficiency incentives that benefit farmers through separate agreements with Mars and Nestlé.

30 These important decisions by New Zealand's largest processor, which represents over 8000 dairy farms, means that some of their customers will be financially encouraging the uptake of methane reduction technology and emissions efficiency.

4pq7iss0p5 2025-09-23 14:59:20

Silver Fern Farms (SFF)

31 SFF has committed to a 16% reduction in beef intensity (methane) and a 10% reduction for sheep absolute (methane) by 2032 (baseline year 2021).

32 To achieve its targets, SFF has committed to incentivise on farm sustainability measures and emissions reduction through holding emissions calculation workshops, incentivising farmers to be certified under the NZ Farm Assurance Programme, and are linking farmers directly to in-market premiums from global customers. SFF is currently negotiating these commercial agreements with international customers.

Trade and market access

33 9(2)(d) [redacted]

34 The Methane Review was completed by a panel of highly regarded, New Zealand and international scientists who provided evidence-based advice on what New Zealand's biogenic methane target should be to ensure no additional warming.

35 As well as being consistent with the findings of the panel, our proposal for a methane target of 14-24% below 2017 levels by 2050 supports New Zealand's contribution towards the current global ambition of limiting warming to 1.5°C, reducing gross methane emissions, and maintains our commitment to the split-gas approach.

We propose a further CCRA amendment to ensure food production is not threatened by New Zealand's climate change response

36 Article 2.1 of the Paris Agreement states that, its purpose, in addition to limiting global temperature increases, is to increase "the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production".

37 We propose amending the CCRA to provide greater recognition of food production. We seek authorisation for the Minister of Agriculture and Minister of Climate Change to be given delegated authority to make further policy decisions in relation to the amendment.

4pq7iss0p5 2025-09-23 14:59:20

We propose to investigate the application of a split-gas target to our future international climate change commitments and monitor others

38 New Zealand's Nationally Determined Contribution (NDC) outlines the contribution the country will make towards delivering on the goals of the Paris Agreement. The New Zealand NDC is currently set on an all-gases basis.

39 We propose that relevant agencies, including the Treasury, Ministry of Foreign Affairs and Trade, Ministry of Primary Industries and Ministry for the Environment, are tasked with investigating the application of a split-gas target to our future international climate change commitments. This investigation will assess the opportunity to align New Zealand's international targets with our domestic approach.

40 The investigation will consider the choices and trade-offs for emissions reductions, the economic and social implications of pursuing split-gas international targets in place of an all-gases approach, and our international commitments. This review will also look at potential impacts on trade access; the actions of our trading partners; and the potential mitigation and abatement costs or savings for our economy, in taking such an approach.

41 We will also direct officials to annually monitor the progress that other nations, particularly those who are the highest emitting, are making towards their climate change commitments.

Other changes to the CCRA

42 Changing the 2050 target gives rise to several transitional and consequential issues that I, the Minister of Climate Change, propose to address as follows.

NZ ETS unit settings process

43 Cabinet has recently made decisions on the 2025 ETS unit limits and price control settings based on the current 2050 methane target [CAB-25-MIN-0276 refers]. Those decisions will be enacted and published by the end of September but come into force on 1 January 2026. Changing the 2050 target during the NZ ETS settings process risks the accordance of NZ ETS settings with emissions reduction targets, and the need for additional advice from the Commission and re-consultation.

44 Changes to the 2050 target are expected to come after ETS settings are enacted and published, but may come before the new ETS settings come into force. Because the decisions on ETS settings have been substantially made before any change in target, to ensure clarity and certainty, I propose including a transitional provision alongside the amendment of the 2050 target to ensure that the 2025 NZ ETS settings process:

44.1 uses the previous 2050 target to inform settings decisions, accordance requirements and any other legal requirements

4pq7iss0p5 2025-09-23 14:59:20

44.2 will not require additional advice from the Commission in response to the new 2050 target

44.3 will not require re-consultation based on the new 2050 target.

45 The updated 2050 target will apply from the 2026 NZ ETS settings process.

Emissions budgets

46 Under the CCRA, the fourth emissions budget (EB4) for the period 2036 to 2040 must be set by 31 December 2025. Emissions budgets are set in response to advice from the Commission, who provided the Government advice on EB4 (as well as minor revisions to other budgets) in November last year. Given this advice was based on the current 2050 target, it may need to be updated to reflect the target change. I therefore propose the date by which EB4 must be set (and responses to the advice on revisions to other budgets) is extended by 24 months, to 31 December 2027, to allow sufficient time for this process.

9(2)(h)

[redacted]

[redacted]

4pq7iss0p5 2025-09-23 14:59:20

9(2)(h) [redacted]

[redacted]

[redacted]

[redacted] .

Cost-of-living and financial implications

51 Meeting the methane target as currently legislated in the CCRA risks New Zealand requiring agricultural climate policies that impose increased costs on food production and relative costs of living. This is heightened if the costs of agricultural emissions reductions are greater than other opportunities available for mitigation across the wider economy. The Government is committed to managing agricultural emissions in a sustainable way that supports all of New Zealand's prosperity.

Legislative Implications

52 We propose to amend the Climate Change Response Act 2002 to change the 2050 emissions target and make consequential and technical changes. We propose to progress these amendments through a standalone Bill, and seek Cabinet’s approval to include the Bill in the 2025 Legislation Programme, with a priority of category 2 (must be passed by the end of 2025).

53 To enable this, we propose to seek delegated authority for the Minister of Agriculture and Minister of Climate Change to approve the Bill for introduction by December 2025 to give effect to the proposals in this paper.

Impact Analysis

Regulatory Impact Statement

54 The Ministry for the Environment and the Ministry for Primary Industries prepared a Regulatory Impact Statement (RIS) for the proposal to amend the 2050 biogenic methane target (attached in **Appendix 5**). A panel with members from the Ministry of Regulation, Ministry for the Environment and

4pq7iss0p5 2025-09-23 14:59:20

Ministry for Primary Industries assessed the Regulatory Impact Statement (RIS) and considered that it meets the Quality Assurance criteria.

Climate Implications of Policy Assessment

55 The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirm that CIPA requirements apply to this proposal as an explicit objective of the policy proposal is to reduce greenhouse gas emissions (see **Appendix 6** for detail).

Population Implications

56 *Māori and Iwi* - The Māori contribution to the New Zealand economy is around $32 billion, of this the primary industries (agriculture, forestry and fishing) contributes a total $19 billion.[4] The concentration of collectively held Māori assets in the agriculture and forestry sectors means climate change policies are likely to disproportionately impact Māori. These impacts are both positive and negative, depending on the sector.

57 *Rural Communities* - New Zealand's food and fibre sector is a large component of our economy accounting for 82.5% of goods exported and contributing 12.4% of overall employment.[5] The proposals in this paper are likely to provide clarity for the sector, which in turn will further support farmer and rural community confidence.

Human Rights

58 The proposals in this paper are consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Use of external resources

59 The Ministry for the Environment contracted Principal Economics from March 2025 to June 2025 to undertake economic modelling to support analysis of different target options. The cost was $65,000.

Consultation

60 Public consultation was not undertaken for this proposal. There has been previous engagement with the public and iwi/Māori on the Zero Carbon Bill, first and second emissions reduction plans and NZ ETS legislation and the Commission's consultation on its review of the 2050 target.

[4] Te Ōhanga Māori - The Māori Economy 2023 Report prepared by Business and Economic Research Limited (BERL) for the Ministry of Business, Innovation and Employment (MBIE)
[5] These figures account for New Zealand's entire food and fibre sectors including dairy, meat and wool, forestry, horticulture, seafood, arable, processed food and other products.

4pq7iss0p5 2025-09-23 14:59:20

61 MFAT was consulted. Other agencies were not consulted on this proposal but have been informed and consulted on policy development, including reviewing the draft RIS.

62 The proposals in this paper have had extensive Ministerial consultation with Coalition Partners of the Government.

Proactive Release

63 We propose that this paper is proactively released following final decisions on the 2050 target and subject to the Official Information Act 1982 redactions.

Recommendations

The Minister of Agriculture and Minister of Climate Change recommend that Cabinet:

Updating the biogenic methane component of the 2050 target and policy approach

1 **Note** that the Minister of Agriculture and Minister of Climate Change have considered a range of options for changes to the 2050 target that are informed by the Climate Change Commission (Commission) advice on the 2050 target, the independent Methane Panel (Methane Panel), and officials' advice on the biogenic methane target

2 **Agree** to update the biogenic methane component of the 2050 target to reduce emissions of biogenic methane to a range of 14-24% below 2017 levels by 2050

3 **Agree** to remove the proposal for a pricing system for on-farm emissions and for the Minister of Agriculture and Minister of Climate Change to report back to Cabinet by May 2026 to provide an update on progress towards agricultural emissions reduction

4 **Note** the Minister of Climate Change will continue to track progress towards the second emissions budget in line with the adaptive management approach outlined in the second emissions reduction plan and return to Cabinet if further policy decisions are to be considered as part of this approach

5 **Agree** to amend the CCRA to require a review in 2040 of the 2050 biogenic methane target, and methane science, to ensure it remains relevant, is based on the most up to date science for consistency with no additional warming, and takes account of New Zealand's progress, that of our trading partners and actions undertaken by the rest of the world, with a view to specifying a single point 2050 methane target

6 **Authorise** the Minister of Agriculture and Minister of Climate Change to make policy decisions related to the design of the 2040 review of the 2050 biogenic methane target

7 **Agree** to amend the CCRA to provide greater recognition of food production

4pq7iss0p5 2025-09-23 14:59:20

8 **Authorise** the Minister of Agriculture and Minister of Climate Change to make policy decisions related to providing greater recognition of food production

9 **Agree** to direct Ministry for Primary Industries, Foreign Affairs and Trade, Treasury, and Environment officials to investigate opportunities to align New Zealand's future international climate targets with our domestic split-gas target approach, and report back to the Ministers of Foreign Affairs, Finance, Agriculture, Trade, and Climate Change

10 **Agree** to direct Ministry for Primary Industries and Environment officials to annually monitor the progress that other nations, particularly those who are the highest emitting, are making towards their climate change commitments

Responding to the Commission's recommendations on the 2050 target

11 **Note** that we believe that the 2050 target for emissions of greenhouse gases other than biogenic methane should not be increased

12 **Note** that the Minister of Climate Change will receive further advice on addressing emissions from international aviation and shipping later this year, and will seek Cabinet's agreement if the Minister recommends including international aviation and shipping emissions in our domestic target, or otherwise will respond to the Commission by November 2025 accordingly

13 **Agree** the Minister of Climate Change will respond to the Commission on their 2050 review consistent with the proposals in this paper

Consequential and technical changes to the Climate Change Response Act 2002

14 **Agree** to extend the date in the CCRA by which the fourth emissions budget (for the period 2036 to 2040) must be set by 24 months to 31 December 2027 to provide for consideration of the newly updated target

15 **Agree** to amend the CCRA to provide a transitional provision to clarify that the Commission does not need to reconsult on its advice on setting of the fourth emissions budget (and revisions to existing budgets) in light of an amendment to the 2050 target

16 **Agree** to defer the Minister's response to the Commission's advice on revision of existing emissions budgets to 31 December 2027 to provide for consideration of the updated target

17 **Agree** to amend the CCRA to provide a transitional provision to ensure the 2025 New Zealand Emissions Trading Scheme settings process is not affected by the change to the 2050 target

Process for amending the Climate Change Response Act 2002

18 **Invite** the Minister of Agriculture and Minister of Climate Change to issue drafting instructions to the Parliamentary Counsel Office to amend the Climate Change Response Act 2002

4pq7iss0p5 2025-09-23 14:59:20

19 **Approve** the inclusion of the Bill in the 2025 Legislation Programme, with a priority of category 2 (must be passed by the end of 2025)

20 **Authorise** the Minister of Agriculture and the Minister of Climate Change to approve the Bill for introduction

21 **Note** the Minister of Agriculture and Minister of Climate Change intend to publicly announce the Government's decision on the 2050 target

22 **Note** the Regulatory Impact Statement *Resetting the 2050 domestic climate change emissions target* meets the Quality Assurance criteria

Authorised for lodgement

Hon Todd McClay	Hon Simon Watts
Minister of Agriculture	Minister of Climate Change

4pq7iss0p5 2025-09-23 14:59:20

Appendix 2: Climate Change Commission's 2050 target review advice

The Commission found there had been significant changes that justified increasing the level of New Zealand's domestic response to climate change, including:

- *Scientific understanding*: The impacts of global warming are greater, in both severity and scale, than was understood by the global science community when the target was set.
- G*lobal action:* Globally we are off track to meet the Paris temperature goals of limiting warming to 1.5°C. This implies that even greater reductions in global emissions are needed in the near and longer terms to limit as much as possible the amount by which the world exceeds 1.5°C, and then to bring the temperature down again.
- *New Zealand's fair share:* Many comparable countries have now set domestic emissions targets that require more emissions reductions than New Zealand's current target.
- *Intergenerational equity:* Delaying increased action transfers costs and risks to future generations.

The Commission recommended:

- reaching at least net negative 20 Mt CO_2e by 2050, including emissions from international shipping and aviation (IAS).
- reducing biogenic methane emissions from 2017 levels by at least 35%-47% by 2050.
- there are further reductions and removals of greenhouse gases beyond these levels after 1 January 2050.

4pq7iss0p5 2025-09-24 10:55:35

Appendix 3: Methane Review's 2050 Target Review Findings

The Methane Science and Target Review Panel (the Panel) was asked to deliver an independent review of the methane science and the 2050 target for consistency with the principle of "no additional warming" from agricultural methane emissions from a 2017 base year.

The Panel mapped a range of potential methane emissions futures for New Zealand against possible emissions reduction pathways (the IPCC scenarios) the world might take. The Panel found that the extent to which New Zealand's methane causes warming is also affected by emissions of methane and other greenhouse gases from the rest of the world.

The Panel's results show that:

- Under a low emission global scenario, akin to limiting the temperature increase to 1.5°C above pre-industrial levels, cuts amounting to 24% reductions by 2050 are sufficient to keep or return warming to or at below 2017 levels.
- For mid-range global scenarios, holding average temperatures to 2.0-2.7°C, cuts of 14-15% by 2050 are sufficient to keep or return warming to or at below 2017 levels.
- For high emission scenarios, with a temperature increase well over 2.0°C and as high as approximately 4.5°C, maintaining 2022 domestic emissions levels is sufficient to keep or return warming to or at below 2017 levels.

4pq7iss0p5 2025-09-24 10:55:40

Appendix 6

Climate implications of policy assessment: Disclosure sheet

This disclosure sheet provides the responsible department's best estimate of the greenhouse gas emissions impacts for Aotearoa New Zealand that would arise from the implementation of the policy proposal or option described below. It has been prepared to help inform Cabinet decisions about this policy. It is broken down by periods that align with Aotearoa New Zealand's emissions budgets.

Section 1: General information

General information	
Name/title of policy proposal or policy option:	Resetting the 2050 domestic climate change emissions target
Agency responsible for the Cabinet paper:	Ministry for the Environment, Ministry for Primary Industries
Date finalised:	4/09/2025
Short description of the policy proposal:	This paper seeks agreement to reset New Zealand's 2050 domestic emissions target in the Climate Change Response Act 2002 (CCRA).

Section 2: Greenhouse gas emission impacts

This CIPA considers two key changes - changes to the biogenic methane target for 2050, and the impact of replacing the agriculture emissions pricing system for on-farm emissions (to be put in place by 2030), as was modelled in the second Emissions Reduction Plan (ERP2). The impacts of these decisions depend on whether the impact of the new biogenic methane target is measured against the lower or upper bound of the range of the existing biogenic methane target; and the outcomes of the Government's planned process to replace agricultural emissions pricing.

For this analysis on the 2050 biogenic methane target, we have compared emissions under the proposed new target range with the emissions projections from ERP2 because these are the latest available projections. We have also compared emissions against the higher bound of the old target range, as this forms part of the current legislated target. We considered three scenarios: one where biogenic methane emissions reach the lower bound of the new 2050 biogenic methane target (14%), and two where biogenic methane emissions reach the higher bound of the new 2050 biogenic methane target (24%). One of the higher bound scenarios has biogenic methane emissions unchanged from ERP2 projections; the other assumes biogenic methane emissions reduce more slowly in the 2030s – reflecting that an alternative policy to agricultural emissions pricing might result in a different emissions reduction trajectory.

These scenarios demonstrate the possible impacts from these changes, as well as generally demonstrating that the emissions reduction to 2050 is uncertain.

Table 1. Emissions impact of changing the biogenic methane component of the 2050 target

	Changes in net target accounting greenhouse gas emissions in tonnes of carbon dioxide equivalent (Mt CO_2-e)							Total net target accounting emissions in 2050 (Mt CO2-e)
	2022–25	2026–30	2031–35	2036–40[4]	2041–45[4]	2046–50[4]	Total[4]	
ERP2 with additional measures (reference scenario) – absolute emissions	284.1	303.1	249.2	192.2	149.5	146.9	1,324.9	28.6
Current 2050 target (24 - 47% biogenic methane and net-zero for LLGs by 2050)	-	-	-	-	-	-	-	20.2 – 28.9[3]
Lower bound of 2050 target (14% for biogenic methane and net-zero for LLGs by 2050) – based on linear trajectory for biogenic methane to 14% in 2050 from 2030 10% target	0	0	9.2	19.0 (24.9)	21.6 (40.7)	21.0 (56.5)	70.7 (131.4)	32.7
Higher bound of 2050 target (24% for biogenic methane and net-zero LLGs by 2050) – based on linear trajectory for biogenic methane to 24% in 2050 from 2030 10% target[1]	0	0	6.3	11.4 (17.3)	9.2 (28.3)	3.8 (39.4)	30.7 (91.4)	28.9
Higher bound of 2050 target (24% for biogenic methane and net-zero LLGs by 2050) – based on ERP2 [2]	0	0	0	0 (5.9)	0 (19.2)	0 (35.6)	0 (60.7)	28.6[2]

[1] The emissions impact quantified for this variation of the higher bound (24%) of the 2050 biogenic methane target is based on the difference between our current trajectory from ERP2 and a new trajectory based on a linear path from the 10% target in 2030 to a 24% target in 2050. This was included to reflect the potential impact of removing agricultural pricing on the current trajectory based on ERP2 (which includes the impact of agricultural pricing), i.e., removing agricultural pricing could lead to a different trajectory to reaching the 24% biogenic methane target in 2050.

[2] The emissions impact quantified for this variation of the higher bound (24%) of the 2050 biogenic methane target assumes that the emissions impact of removing agricultural pricing will be offset by alternative actions that provide a similar level of abatement within each emissions budget period as currently modelled for agricultural pricing in ERP2 (including a slight overachievement of the 24% biogenic methane in 2050 by 0.9% as modelled in ERP2).

[3] The range represents the total net target accounting emissions in 2050 achieved based on the low and high end of the given target range for biogenic methane in 2050.

[4] The numbers in brackets represent the difference between emissions under the upper and lower bound of the proposed target range and a scenario where biogenic methane achieved the top end of the current target (a 47% reduction), with net long-lived gas emissions remaining based on ERP2 with additional measures.

Table 2. Emissions impact of removing agricultural pricing

	Changes in net target accounting greenhouse gas emissions in tonnes of carbon dioxide equivalent (Mt CO_2-e)					
	2022–25	**2026–30**	**2031–35**	**2036–40**	**2041–45**	**2046–50**
ERP2 with additional measures (reference scenario) – absolute emissions	284.1	303.1	249.2	192.2	149.5	146.9
Emissions impact of removing agricultural pricing	0	0.2	10.6	21.3	26.3	27.9
Additional abatement required to meet **lower bound of 2050 target** (14% for biogenic methane by 2050)	0	0.2	1.4	2.4	4.7	6.9

Section 3: Additional information

Additional information

- In Table 1, we have compared the net target accounting emissions trajectory against a reference scenario. The reference scenario used is the projected emissions from New Zealand's second emissions reduction plan (ERP2). Current projections from ERP2 indicate New Zealand is ~9.2 Mt CO2e short of meeting the third emissions budget (EB3 – 2031-35). The emissions impact is calculated as the change in emissions from the reference scenario. The projected trajectory of emissions reductions outlined in ERP2 is just one way the 2050 target could be met and using this trajectory as a reference scenario for the broader range of possible outcomes that could be achieved from the current legislated 2050 target may not be truly reflective of the emissions impact of changing the 2050 target.
- For the higher bound (24%) of the 2050 target, two versions have been calculated in Table 1 which is explained in footnotes 1 and 2.
- For the lower bound (14%) of the 2050 target we have calculated the trajectory of biogenic methane emissions assuming a linear trajectory from projected emissions in 2030 from ERP2 (which achieves the 10% biogenic methane component of the 2050 target). The emissions impacts calculated are not based on quantified impacts from policy assumptions or specific policies and are based on a simple assumption that the targets are met through linear reductions from a specified date to the emissions target in 2050. As a result, there is a high degree of uncertainty of the emission impact as the trajectory of emission reductions are generally non-linear.
- In Table 2, we have quantified the impact of removing agricultural pricing based on the modelling undertaken for ERP2. These results indicate that removing agricultural pricing, in the absence of other action, will not achieve the lower bound of the proposed 2050 target for biogenic methane (14%). We have calculated the additional abatement required to achieve the 14% target based on the difference between the illustrative trajectory used in Table 1 that meets the 14% target and the modelled trajectory from ERP2 if agricultural pricing was removed as a policy.
- Tables 1 and 2 cannot be added to obtain a cumulative emissions impact.
- This disclosure sheet uses emissions data from the 2024 ERP2 projections and the 2024 GHGI. The biogenic methane target range for the CIPA has also been calculated using the 2024 GHGI, to ensure consistency with the 2024 ERP2 projections, which are calibrated to the 2024 GHGI.

Additional information

- The CIPA disclosure sheet details the emissions impact of the proposed change to the target presented in this Cabinet paper, whereas the RIS outlines the emissions impact of the options considered.
- The information in this disclosure sheet is expected to require revision once the updated 2025 projections are released.

Section 4: Quality assurance

Quality assurance

The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirm that CIPA requirements apply to this proposal as an explicit objective of the policy proposal is to reduce greenhouse gas emissions.

The proposal recommends amending the biogenic methane component of the 2050 target to a reduction of 14% to 24% below 2017 levels by 2050. The emissions impact of this decision is quantified in Table 1 of Section 2.

This proposal removes the agricultural emissions pricing policy, which was expected to deliver an abatement of 0.2 Mt CO_2-e in EB2 and 10.6 Mt CO_2-e in EB3. The emissions impact of this decision is quantified in Table 2 of Section 2. The CIPA team notes that this policy was a key strategy in ERP2 for reducing emissions in Emissions Budget 3 (EB3); therefore, its removal poses a risk to meeting the current 2050 target. Its removal would mean additional action is required to meet the lower bound (14%) of the new proposed 2050 target. It is assumed the 2050 target will still be achieved through alternative strategies, such as new government policies and industry action.

Because the existing target range (24% to 47%) is factored into decisions on emissions budgets and influences broader climate policy settings, introducing a new lower bound of 14% below 2017 levels may result in higher emissions than if the current range were retained.

The modelling used to estimate the impact of resetting the 2050 target follows the ERP2 policy scenario through to 2030. It therefore assumes the 2030 biogenic methane target, a 10% reduction from 2017 levels, is met. As a result, there is no impact on Emissions Budget 2 (EB2) (noting that the estimate of the emissions impact of removing agricultural pricing during EB2 is 0.2 Mt CO_2-e). However, modelling suggests the amended 2050 target could increase the projected gap to meeting EB3, currently estimated at 9.2 Mt CO_2-e. Policies to address this gap will be agreed as part of the third Emissions Reduction Plan (ERP3), to be set in 2029, which will outline the policies and actions needed to reduce emissions over that budget period.

These emissions pathways are indicative only and based on ERP2 projections, with the expectation that they will change following updated projections. They do not account for future policy decisions, technological developments, or economic conditions, all of which are likely to evolve over time. There is significant uncertainty in estimating emissions over long timeframes.

Priority – High **Security level** – CLASSIFICATION

Ministry for the Environment
Manatū Mō Te Taiao

Ministry for Primary Industries
Manatū Ahu Matua

To: Hon Todd McClay, Minister of Agriculture
Hon Simon Watts, Minister of Climate Change

From: Jane Chirnside, Director Resources and Rural Communities, Ministry for Primary Industries
Hemi Smiler, General Manager Mitigation Policy, Ministry for the Environment

2040 biogenic methane target review

Date	25 September 2025	**Reference**	MPI: B25-0561 MfE: BRF-6866

Date decision required by
30 September 2025

Purpose

- This briefing seeks your agreement to the details of the proposed 2040 review of the biogenic methane target (2040 Review). These details will be included in the Bill that is to amend the 2050 target.

Background

1. On 22 September, Cabinet:
   a) agreed to amend the Climate Change Response Act 2002 (CCRA) to require a review in 2040 of the 2050 biogenic methane target, and methane science, to ensure it remains relevant, is based on the most up to date science for consistency with no additional warming, and takes account of New Zealand's progress, that of New Zealand's trading partners and actions undertaken by the rest of the world, with a view to specifying a single point 2050 methane target; and
   b) authorised the Minister of Agriculture and Minister of Climate Change (Ministers) to make policy decisions related to the design of the 2040 review of the 2050 biogenic methane target [CAB-25-MIN-0329 refers].

Analysis and Advice

2. This briefing seeks your agreement to the details of the proposed 2040 Review that will be included in the CCRA, including its purpose and scope, who undertakes the review, and its process requirements.

3. You have a choice about how much detail you wish to include in legislation. At a minimum, the CCRA should set the requirement for a 2040 review in line with Cabinet's decisions. Legislation could also set more detailed matters the review must

consider, prescribe who undertakes the review, set consultation requirements and responsibilities for joint Ministerial decision-making. This would set more direction for how the review will be conducted, but reduce flexibility for the Minister(s) to design these details to be fit for the purpose when the review is initiated.

4. Given the review is to occur in 2040, officials favour a less prescriptive approach to allow flexibility to accommodate circumstances at the time.

Purpose of the 2040 review

Minimum requirements needed

5. At a minimum, to implement Cabinet's decisions, we recommend the CCRA is amended to specify:
   - i. there must be a review of the biogenic methane component of the 2050 target that is provided to Minister(s) and tabled in the House no later than 31 December 2040;
   - ii. the review must assess whether or not the biogenic methane component of the 2050 target is relevant, with a view to specifying a single point year target for biogenic methane emissions in 2050; and
   - a) the review must consider:
     - i. the latest science on the warming impact of biogenic methane emissions and what is required to achieve no additional warming;
     - ii. New Zealand's progress in reducing its biogenic methane emissions;
     - iii. our trading partners' progress in reducing their biogenic methane emissions; and
     - iv. the progress and actions taken internationally in reducing biogenic methane emissions in order to meet emissions reduction targets under international treaties and agreements.

Additional matters that could also be specified

6. Beyond what was included in the Cabinet recommendation, you could also choose to include a provision that allows Minister(s) to specify other matters to be considered in the scope of the review, ahead of it commencing. This could, for example, provide for the inclusion of consideration of the development and uptake of agricultural mitigation technologies and activities, and/or consideration of the efficiency and effectiveness of policy measures and actions to support biogenic methane emissions reductions.

Who undertakes the review

7. You also have a choice about who should undertake the 2040 Review, and if you wish for this to be specified in legislation. The options we have identified are:

Option 1: No further details in legislation

8. In this option, Minister(s) would be left the discretion to determine who leads the 2040 review at the time. This option would allow the review to be led by officials from the Ministry for the Environment and Ministry for Primary Industries. This could also include establishing a technical advisory group with the relevant scientific and policy capability required.

Option 2: A legislated Ministerial Advisory Panel

9. In this option, Minister(s) would be required to appoint an independent advisory panel, via the Appointments and Honours Committee process, with the scientific and technical skillset to undertake the 2040 review. The Panel would report directly to the responsible Minister(s). In this case, the legislation would specify that the review must be led by an independent panel, and require the Minister(s) to appoint Panel members with the relevant skills and experience.

Option 3: Climate Change Commission

10. The Climate Change Commission (the Commission) is already required to review the 2050 target every five years, considering the latest scientific evidence on climate change, development of new technologies, and other relevant factors.[1] A review of the 2050 target is already scheduled for 2040.

11. Under this option, the CCRA would be amended to require the Commission to lead the proposed 2040 review (consistent with the decisions about its scope above). If this option is chosen, we recommend there is also a requirement for Minister(s) to respond to the Commission's advice, as with other processes in the CCRA.

Engagement and consultation requirements

12. The CCRA could also specify engagement and consultation requirements for the 2040 review. The Commission already has a requirement to proactively engage with relevant persons in undertaking its functions and where the Commission considers it is necessary, provide for participation by the public. The 2024 Methane Panel Terms of Reference enabled engagement with relevant experts in the development of the report.

13. There are two options for engagement and consultation requirements on the 2040 Review.

Option 1: Requirement to engage and consult

14. Under this option, the legislation would specify a requirement to proactively engage with persons relevant to the Review and to provide for participation by the public.

Option 2: No requirement to engage and consult

15. Under this option, the legislation would not set consultation or engagement requirements. Whether or not to consult the public in undertaking the 2040 Review would be determined by Minister(s) at the time.

Ministerial responsibility

[1] These factors are outlined in section 5T of the Climate Change Response Act 2002

16. The Minister of Climate Change is by default the responsible Minister under the CCRA. If you wish for the Minister of Agriculture to be jointly responsible for the review, you could also specify this.

17. As with other details of this review, if no detailed legislative requirements are set, there is flexibility to include a range of relevant Ministers as part of the process at the time.

9(2)(h)

Next steps

19. Your decisions on this briefing will be reflected in drafting instructions to the Parliamentary Counsel Office.

20. 9(2)(f)(iv)

Recommendations

It is recommended that you:

1. **Note** that on 22 September, Cabinet:

   a) agreed to amend the Climate Change Response Act 2002 (CCRA) to require a review in 2040 of the 2050 biogenic methane target, and methane science, to ensure it remains relevant, is based on the most up to date science for consistency with no additional warming, and takes account of New Zealand's progress, that of New Zealand's trading partners and actions undertaken by the rest of the world, with a view to specifying a single point 2050 methane target;

   b) authorised the Minister of Agriculture and Minister of Climate Change (Ministers) to make policy decisions related to the design of the 2040 review of the 2050 biogenic methane target [CAB-25-MIN-0329 refers];

NOTED

2. **Agree** to issue drafting instructions to Parliamentary Counsel Office to reflect the proposals in this briefing;

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

Purpose and scope of the 2040 review

3. **Agree** the CCRA will be amended to require a review of the biogenic methane target that must be provided to Minister(s) no later than 31 December 2040;

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

4. 9(2)(f)(iv) [redacted]

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

5. **Agree** the CCRA will be amended to specify that the 2040 review must consider:

   a) the latest science on the warming impact of biogenic methane emissions and what is required to achieve no additional warming;
   b) New Zealand's progress in reducing its biogenic methane emissions;
   c) our trading partners' progress in reducing their biogenic methane emissions; and
   d) the progress and actions taken internationally in reducing biogenic methane emissions in order to meet emissions reduction targets under international treaties and agreements, such as the Paris Agreement;

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

Optional considerations

6. **Agree** the CCRA will be amended to specify that the 2040 review must consider any other matters specified by the responsible Minister(s), ahead of it commencing;

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

Who undertakes the review

7. **Agree** to either:

   a) no requirement for who the proposed 2040 Review will be undertaken by

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

OR

   b) the CCRA will be amended to require that the proposed 2040 Review is undertaken by one of the following:

      i. Ministerial Advisory Panel;

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

OR

ii. Climate Change Commission;

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

8. If the Climate Change Commission is to undertake the proposed 2040 review, **agree** there will be requirement for the Minister of Climate Change to respond to the Commission (as per the existing process in s5U of the CCRA);

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

Engagement and consultation requirements

9. **Agree** to either**:**

a) no requirement for engagement and public consultation to be specified

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

OR

b) amend the CCRA to require engagement with relevant persons and provide for public participation in undertaking the proposed 2040 Review;

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

Ministerial responsibilities

10. **Agree** to either**:**

a) that the Minister of Climate Change is responsible for the proposed 2040 Review;

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

OR

b) the Minister of Climate Change and the Minister of Agriculture will be jointly responsible for the proposed 2040 Review.

YES / NO	**YES / NO**
Hon Todd McClay Minister of Agriculture	Hon Simon Watts Minister of Climate Change

9(2)(a)

Jane Chirnside
Director Resources and Rural Communities
Ministry for Primary Industries

Hon Todd McClay
Minister of Agriculture

/ / 2025

Hemi Smiler
General Manager Mitigation Policy
Ministry for the Environment

Hon Simon Watts
Minister of Climate Change

/ / 2025