



Ministry for Primary Industries
Manatū Ahu Matua



Briefing: Methane Science and Targets Review

Date submitted: 1 March 2024

MfE Tracking number: BRF-4278

MPI Track number: B24-0154

Security level: Policy and Privacy

MfE priority: Urgent

Actions sought from Ministers		
Name and position	Action sought	Response by
Hon Todd MCCLAY Minister of Agriculture To Hon Simon WATTS Minister of Climate Change	Decision required	4 March 2024

Actions for Ministers' office staff
Return the signed briefing to the Ministry for the Environment (ministerials@mfe.govt.nz). Return the signed briefing to the Ministry for Primary Industries (ministerials@mpi.govt.nz)

Appendices and attachments
1. Appendix One: Slide deck to inform discussion of options for the scope of the review 2. Appendix Two: Indicative milestone delivery of the methane science and target review

Key contacts at Ministry for the Environment			
Position	Name	Cell phone	First contact
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Position	Name	Cell phone	First contact
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Responsible Manager	Sophia Murphy	9(2)(a)	✓
Director	Charlotte Denny		

Minister's comments

Methane Review

Key messages

1. The Government's Coalition Agreement commits to "Maintain a split-gas approach to methane and carbon dioxide through to 2050 and review the methane science and targets in 2024 for consistency with no additional warming from agricultural methane emissions".
2. This briefing seeks your early direction on the scope and mode of the methane science and targets review. Officials will then report back with draft terms of reference, potential panellists for you to consider, and a draft Cabinet paper.
3. We have identified three options for the scope a review of the methane science and targets. The first two options could be completed within the timeframe you have directed. The third option is wider in scope and would extend the timing of the review into quarter 3 of this year.
4. We have begun to draw up a long list of suitable candidates which we will provide to you once the scope is determined.

Recommendations

We recommend that you:

Either:

a. Agree to:

i. jointly meet with officials to discuss your preferred approach to the scope of this work;

Yes | No

OR

ii. indicate your preference amongst the options below and officials will progress on this basis;

Yes | No

Option 1 - A science review of the relative warming of methane,

Yes | No

OR

Option 2 – Expands on the scope of Option One to also include a review of updates to the global evidence base for targeting different levels for biogenic methane reduction

Yes | No

OR

Option 3 – A review of the biogenic methane target to test its consistency with no additional warming. This option would also consider the applicability of a no additional warming target for biogenic methane and its compatibility with New Zealand's broader climate strategy, temperature goals, equity principles of the Paris Agreement, legislative framework and the government's equity and economic objectives domestically. This option could be pursued in isolation or in combination with Option One or Two.

Yes | No

b. Agree your preferred approach to deliver this review:

1.1. The review will be progressed by an agency-led advisory committee,

Yes | No

OR

1.2. The review will be progressed by a Ministerial advisory committee.

Yes | No

c. Note that following your direction on the scope of this review, officials will report back to in the week of 11 March on suitable candidates for the review group, draft terms of reference and a draft Cabinet paper.

Yes | No

Signatures



Sam Buckle
Deputy Secretary

**Climate Change Mitigation and
Resource Efficiency, MfE
Date 1 March 2023**

9(2)(a)



Julie Collins
Deputy Director General
Policy and Trade, MPI
Date 1 March 2023

Please note, these dates should read as 2024

Hon Simon WATTS
Minister of Climate Change
Date

Hon Todd MCCLAY
Minister of Agriculture
Date

Methane Science and Targets Review

Purpose

5. This briefing seeks your direction on the scope and approach of an independent review of the methane science and targets.

Background

6. On 31 January 2024 you directed officials to provide joint advice on the scope and sequencing of the methane science and targets review, including potential membership of the review committee and its relationship with the Climate Change Commission's (the Commission) target review.
7. You have indicated the following timeline for conducting the methane science and targets review in 2024:

Timeframe	Milestone
Quarter 1	Announce and initiate the methane science and target review
Quarter 2	Conduct and complete the methane science and target review
Quarter 4	Publicly announce the findings of the review

The Climate Change Commission's target reviews and advice

8. This year the Climate Change Commission (the Commission) is undertaking a review of the 2050 targets (including biogenic methane targets as required by the Climate Change Response Act). The Commission will launch public consultation on its review of the 2050 target on 8 April 2024, and final advice is due to the Minister of Climate Change by 31 December 2024.
9. As part of the 2050 targets review, the Commission will take account of developments in the science since the 2050 targets were set. The Commission can only recommend a change to 2050 targets under section 5ZE(1)(b) of the Climate Change Response Act 2002 if there has been a "significant change" in the considerations upon which the target was based – including the scientific understanding of climate change.
10. The review will also likely consider and respond to submissions made to the Commission in their call for evidence, including a submission made by DairyNZ,

Beef + Lamb NZ and Federated Farmers which includes the recently commissioned paper that considers no additional warming.¹

11. The Government must respond to a Commission recommendation to amend the 2050 target within 12 months. This Government response must include reasons for any departure from the Commission's recommendations.

Review process

12. Due to the high interest in the methane science and target, officials recommend the review process adhere to the following principles:
 - a. Rigorous - Uses the most comprehensive feasible body of evidence; recognises and minimises bias; is independently reviewed as part of a quality assurance process.
 - b. Inclusive - Considers many types and sources of evidence; uses a range of skills and people.
 - c. Transparent - Clearly describes the research question, methods, sources of evidence and quality assurance process; communicates complexities and areas of contention; acknowledges assumptions, limitations and uncertainties, including any evidence gaps; declares personal, political and organisational interests and manages any conflicts.
 - d. Accessible - Is written in plain language; is available in a suitable timeframe; is freely available online.

The methane science and target review

13. This section outlines three high level approaches for undertaking a review of the methane science and targets. All options broadly align with the timeline you have set out. Options 2 and 3 have a broader scope of work. We expect option 2 could be completed within quarter two of this year. Option 3 would likely push into quarter 3 to complete.

Options for scope

14. The three options for your consideration are:
 - a. Option One: A review of the relative warming of biogenic methane

¹ <https://www.dairynz.co.nz/media/qu1lwtgu/joint-evidence-submission-for-target-review-final-14-sept-2023.pdf>

- b. Option Two: Expands on the scope of Option One to also include a review of updates to the global evidence base for targeting different levels for biogenic methane reduction,
 - c. Option Three: A review of the biogenic methane target to test its consistency with no additional warming. This option would also consider the applicability of a no additional warming target for biogenic methane and its compatibility with New Zealand's broader climate strategy, temperature goals, equity principles of the Paris Agreement, legislative framework and the government's own equity and economic objectives domestically. This option could be pursued in isolation or in combination with Option One or Two.
15. Options One and Two would provide up to date information on the relative warming potential of methane. If Ministers wish to progress option three, there is still value in undertaking options One or Option Two. This is because these would provide the most up to date assessment of evidence. Option Three additionally would uncover the applicability of a no additional warming target and its compatibility with New Zealand's broader climate strategy.
16. We recommend discussing these options with you both in more detail so we can clarify the outcomes you expect from this work. We have attached slides to inform this discussion in **Appendix One**.

Options for delivery

17. We have identified two options for delivery of the review, with varying degrees of independence:
18. *Option A: Agency Advisory Panel*
19. The review could also be delivered through an agency advisory panel that was supported by MfE/MPI. The panel would be appointed by MfE/MPI and would provide advice to both agencies.
20. *Option B: Ministerial Advisory Panel*
21. Alternatively, the advisory panel could be selected and appointed by Ministers and considered by Cabinet. This would give ministers and Cabinet greater control over selection and appointments and could increase the perceived independence of the panel from government agencies. This could take longer to progress as the process and selection process would need to be agreed by ministers and the panel would need to be considered by Cabinet. The review could still start in Q2 but may not conclude until the beginning of Q3 with the inclusion of an APH Cabinet process.
22. Both of these options would be subject to the Cabinet Fees Framework, however exceptions can be made. Option A would be a panel process that agencies administer, support and the panel would be accountable to agency Chief Executives. Option B would be a panel appointed by Ministers and Cabinet.

Appointment process and expertise

23. We understand you wish the review to group to be *independent*. We understand this to mean the group and chair consists of experts from institutions independent of the direct influence of the Government. This could include domestic and international experts from Universities, Crown Commissions, Crown research agencies, and private consultancies.
24. We will provide you with a list of potential candidates in our next briefing. The expertise of the panellists and size of the group will depend on the scope. We envisage a group three to five independent experts, including a group Chair.
25. For the first scope option, experienced scientists with a background in the relevant field of climate science would be suitable. For scope option two, technical experts with experience in the relevant science, economic and climate models would be suitable. For the third scope option, a broader scope of expertise would be suitable, for example panel members with experience with international target setting frameworks and economic analysis.

Treaty Impact Analysis

26. The Crown has obligations to Māori through legislation, case law, and settlement agreements. It is likely that Māori will have high interest in the methane science and target reviews. We will include further analysis on the potential policy implications for Māori in our upcoming advice pending your direction on the scope.

Timeframes

27. We have outlined the upcoming milestones for this work and how we plan to conduct the methane science and target review. This can be found in **Appendix Two**.

Next steps

28. It is important to note that the timeframe for finalising the appointment process, appointing panel members, and arranging remuneration before the end of Q1 2024 is very tight and therefore will require a swift process. Any delay in ministerial process will result in a shift in timelines.
29. We will provide a subsequent briefing to progress this including detail around the panellists, process, and appointments. This advice will include a draft Cabinet paper and draft Terms of Reference.

Appendix One: Slide deck to inform discussion of options for the scope of the review

Methane science and target review

Options for the scope of the review



Ministry for the
Environment
Manatū Mō Te Taiao

Ministry for Primary Industries
Manatū Ahu Matua



Option 1: review of relative warming of methane

Scope

- Assess the latest scientific research developments on the relative warming effect of biogenic methane from agriculture over different time periods.
- Assess the contribution that biogenic methane from agricultural production has made to global warming to date, relative to other emissions and sectors.

Potential value

- Valuable if your objective is to have an up-to-date assessment of scientific developments since New Zealand's legislated biogenic methane target was first set in 2019.
- A simple task. A small group (1-3) scientific experts could undertake.

Limitations

- This would not help you assess whether a "no additional warming" target is appropriate for agricultural methane in New Zealand.
- This work may duplicate analysis in the Climate Change Commission's 2050 target review this year.

Option 2: A review of updates to the global evidence base for targeting different levels for biogenic methane reduction

Scope

- Option 1 could be expanded to also review the updated global climate and economic models used in the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report (and any other relevant research). These models informed the biogenic methane target in 2019 and have since been updated.
- These models developed *least cost* pathways for reducing emissions globally from different sectors to limit temperature rise to 1.5 degrees.
- This could include a review of how the science and modelling was applied to New Zealand's current domestic biogenic methane target.

Potential value

- This could inform subsequent policy work assessing different target options, e.g. updated modelled pathways would help assess the extent to which the current methane target or a "no additional warming" target aligns with a 'least cost' approach to limiting temperature rise to 1.5 degrees.
- A relatively simple task that 1-3 scientists/technical experts could undertake. Could be achieved in a similar timeframe to option 1.

Limitations

- On its own this analysis would not assess the value judgement inherent in the existing target or tell you if a "no additional warming" target is appropriate for agricultural methane in New Zealand.
- This work may duplicate analysis in the Climate Change Commission's 2050 target review.

Option 3: Review the biogenic methane target to test its consistency with no additional warming. Consider the applicability of a no additional warming target for biogenic methane and its compatibility with New Zealand's broader climate strategy

Context

- Some proponents of a no additional warming target frame it as more "scientifically robust" than the current biogenic methane target. There may, therefore, be an expectation that a science review will assess the merit of a no additional warming target.
- In practice, assessing the merits of this target is not principally a question of science. Whether a no additional warming target "makes sense" depends on the government's temperature goals, concerns about equity, desire to align with international agreements, and so on. It also depends on the base year, end date chosen for the target, and future warming scenarios considered.

Scope

- Explore the concept of a warming-based target for biogenic methane: Consider the applicability of a no additional warming target for biogenic methane and its compatibility with New Zealand's broader climate strategy including NDC1, temperature goals, equity principles of the Paris Agreement, legislative framework and the government's own equity and economic objectives domestically.
- This option could build on either option 1 or 2.

Potential value

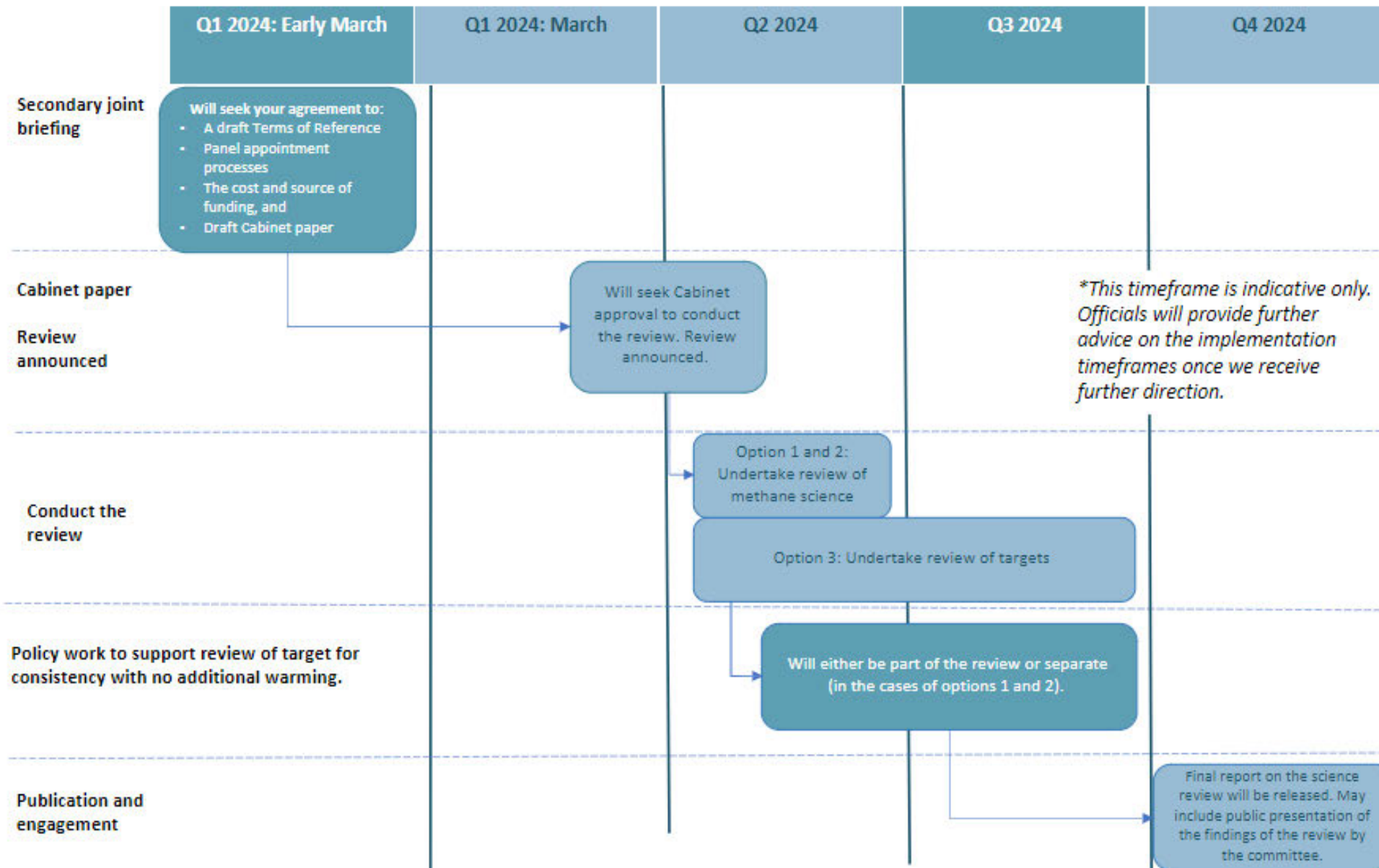
- This would consider the value judgement and tradeoffs inherent in a no additional warming target, including its compatibility with New Zealand's broader climate strategy.
- Expert review could help to untangle and evaluate the judgements and trade-offs at play in emission target setting.

Option 3 continued

Limitations

- Officials expect this approach would be complex, require a broader range of expertise on the panel and push the review into Q3. Developing a clear and specific Terms of Reference would be required to ensure this would be manageable within Q3.
- There would be value in considering the finding of this review alongside the findings of Commission's review of 2050 targets (required by 31 December 2024).

Indicative milestone delivery



Appendix Two: Indicative milestone delivery of the methane science and target review

Indicative milestone delivery

