



THE TREASURY
Kaitohutohu Kaupapa Rawa

Reference: 20150312

13 January 2017

Simon Johnson
fyi-request-2971-4d6a89b1@requests.fyi.org.nz

Dear Simon Johnson

OFFICIAL INFORMATION ACT COMPLAINT

I refer to your request made under the Official Information Act and received on 23 July 2015. Your request was for:

*"I have read with interest the cabinet paper "New Zealand's intended contribution to the new global climate change agreement" dated June 2015 that is available for download from the Ministry of Environment's website .
This paper mentions the comments of Treasury in several places (page 10; paragraph 78, page 23; Appendix 6; paragraph 7).
Will you please provide me with a copy of the report or document that sets out Treasury comments and was provided to the writers of the cabinet paper."*

As you are aware I wrote to you on 21 September 2015 stating that the document was publicly available on the Treasury website and that some relevant material was withheld under the following sections of the Official Information Act:

- personal contact details of officials, under section 9(2)(a) – to protect the privacy of natural persons, including deceased people, and
- confidential information, under section 9(2)(j) – to enable the Crown to negotiate without disadvantage or prejudice

Subsequent to my response, you requested that the Office of the Ombudsman investigate my decision to withhold information covered by your request.

At the time of this request, information was withheld under section 9(2)(j) as the release document contained material that was relevant to New Zealand's negotiation strategy in the international climate change negotiations and would be likely to prejudice or disadvantage the Ministers in their negotiations. Therefore, it was necessary to withhold that information.

1 The Terrace
PO Box 3724
Wellington
New Zealand
tel. 64-4-472 2733
fax. 64-4-473 0982
www.treasury.govt.nz

Following your request to the Office of the Ombudsman and due to the passage of time, I have reconsidered this decision and the information that was withheld under section 9(2)(j) can now be released. However, information relating to a manager's cell phone number must still be withheld under the following section of the Official Information Act:

- personal contact details of officials, under section 9(2)(a) – to protect the privacy of natural persons, including deceased people

Please find enclosed the following information that is now being released.

Item	Date	Document Description
1.	19 June 2015	Original Treasury Report: Climate Change – New Zealand's post 2020 emissions target

In making my decision, I have considered the public interest considerations in section 9(1) of the Official Information Act.

Yours sincerely



Libby Masterton
Manager, Natural Resources

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Treasury Report: Climate change - New Zealand's post-2020 emissions reduction target

Date:	19 June 2015	Report No:	T2015/1273
		File Number:	SH-10-8

Action Sought

	Action Sought	Deadline
Minister of Finance (Hon Bill English)	<p>Do not support the Minister for Climate Change Issues' proposal for New Zealand's post-2020 emission reduction target.</p> <p>Discuss with your colleagues at EGI on 24 June the need for further advice on target options.</p> <p>Seek further advice on target options for EGI on 31 June.</p>	24 June 2015
Associate Minister of Finance (Hon Steven Joyce)	<p>Do not support the Minister for Climate Change Issues' proposal for New Zealand's post-2020 emission reduction target.</p> <p>Discuss with your colleagues at EGI on 24 June the need for further advice on target options.</p> <p>Seek further advice on target options for EGI on 31 June.</p>	24 June 2015
Associate Minister of Finance (Hon Paula Bennett)	<p>Do not support the Minister for Climate Change Issues' proposal for New Zealand's post-2020 emission reduction target.</p> <p>Discuss with your colleagues at EGI on 24 June the need for further advice on target options.</p> <p>Seek further advice on target options for EGI on 31 June.</p>	24 June 2015

Contact for Telephone Discussion (if required)

Name	Position	Telephone		1st Contact
Alastair Cameron	Senior Analyst, Natural Resources	04 917 6047 (wk)	N/A (mob)	✓
Mark Vink	Acting Manager, Natural Resources	04 917 6006 (wk)	s9(2)(a) (mob)	

Actions for the Minister's Office Staff (if required)

Return the signed report to Treasury.

Refer a copy of this advice to the Minister for Climate Change Issues, the Associate Minister for Climate Change Issues, Minister for the Environment, the Minister for Primary Industries, and the Associate Minister for Primary Industries.

Enclosure: No

Treasury Report: Climate change - New Zealand's post-2020 emissions reduction target

Executive Summary

At an 8 June meeting with your colleagues to discuss New Zealand's post-2020 emissions reduction target, you asked for an additional option to that being put forward by the Minister for Climate Change Issues, and for analysis on the costs and benefits of the different options.

The Cabinet paper submitted for EGI on 24 June proposes that New Zealand takes a post-2020 emissions reduction target of 10% below 1990 levels by 2030 (covering all sectors). The paper considers and rejects an alternative option for a split target with reduced coverage for the agriculture sector. However, this conclusion is not supported by a clear analysis of the costs, benefits and risks of the two options.

The first part of this report set out the key assumptions behind the Minister's proposed target, provides Treasury's comment, and suggests some questions you may wish to raise at EGI to test the assumptions.

Part two of the report sketches out a potential alternative option that would:

- be a meaningful contribution towards addressing climate change, and demonstrate "progression" from our current target;
- lower the costs significantly at the outset;
- provide Ministers with options to manage the risks associated with this option, particularly the risk of losing access to markets and forestry rules.

On the balance of risks given the current information available, Treasury considers that such an approach may be in New Zealand's best interests.

On this basis, we recommend that you **do not support** the Minister's proposed target and instead invite the Minister to direct his officials, in consultation with MPI, MFAT, MBIE, and Treasury, to provide additional information for discussion at EGI on 31 June.

The additional information should:

- compare the Minister's proposed target with alternative target options;
- include an analysis of the cost, benefits, risks and risk mitigation strategies of each option;
- include an analysis of the relative climate change contribution of each option.

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Recommended Action

We recommend that you:

- a **note** that the Minister for Climate Change Issues is proposing that New Zealand take a post-2020 emissions reduction target of 10% below 1990 levels by 2030.
- b **note** that the Minister prefers this option to a split target, but this conclusion is not supported by clear analysis of the costs, benefits and risks of each option.
- c **note** that the target proposed by the Minister for Climate Change Issues risks high economic and fiscal costs over the 2020s, even with access to markets and forestry rules, but provides a future Government with few options to reduce those costs.
- d **note** the Treasury's advice that, on the balance of risks given the current information available, a split target prioritising carbon dioxide reductions may be in New Zealand's best interests.
- e **note** that the key arguments in favour of a split target are:
 - i. since carbon dioxide is the main driver of long term temperature increase, more stringent targets for carbon dioxide can credibly be argued to demonstrate progression from our current target;
 - ii. the costs of achieving a split target would be considerably lower;
 - iii. Ministers would have flexibility to change the target to improve New Zealand's negotiating position if a split target appeared to risk access to markets and forestry rules.
- f **do not support** the Minister for Climate Change Issues' proposed target.

<i>Agree/disagree</i>	<i>Agree/disagree</i>	<i>Agree/disagree</i>
Minister of Finance	Associated Minister of Finance	Associated Minister of Finance

- g **invite** the Minister for Climate Change Issues to direct his officials, in consultation with MPI, MFAT, MBIE, and the Treasury, to provide additional information for discussion at EGI on 31 June that:
 - i. compares the Minister's proposed target with alternative target options;
 - ii. includes an analysis of the cost, benefits, risks and risk mitigation strategies of each option;
 - iii. includes an analysis of the relative climate change contribution of each option.

<i>Agree/disagree</i>	<i>Agree/disagree</i>	<i>Agree/disagree</i>
Minister of Finance	Associated Minister of Finance	Associated Minister of Finance

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- h **note** the suggested questions you may wish to raise at EGI (also in Appendix 2).
- i **refer** this report to the Minister for Climate Change Issues, the Associate Minister for Climate Change Issues, the Minister for the Environment, the Minister for Primary Industries, and the Associate Minister for Primary Industries.

<i>Refer/Not refer</i>	<i>Refer/not refer</i>	<i>Refer/not refer</i>
Minister of Finance	Associated Minister of Finance	Associated Minister of Finance

Mark Vink
Acting Manager, Natural Resources

Hon Bill English
Minister of Finance

Hon Steven Joyce
Associate Minister of Finance

Hon Paula Bennett
Associate Minister of Finance

Treasury Report: Climate change - New Zealand's post-2020 emissions reduction target

Purpose of Report

1. This report provides advice on the Minister for Climate Change Issues' proposal for New Zealand to take a post-2020 emissions reduction target of 10% below 1990 levels by 2030 (covering all sectors). EGI will consider the Minister's proposal on 24 June.
2. The decision about the level of New Zealand's climate change target is not an easy one. It requires Ministers to balance competing objectives, which include maintaining New Zealand's good international reputation, making a meaningful contribution to global climate change, and managing costs to the economy.
3. The Minister's paper is weighted heavily towards maintaining New Zealand's international reputation, and his proposed target reflects this weighting. The paper rejects an option that may better achieve other objectives, but this conclusion is not supported by a clear analysis of the costs, benefits and risks of the two options.
4. Treasury considers there is value in testing the assumptions behind the Minister's proposed target, and seeking more analysis about the trade-offs between the options.
5. The remainder of this report is structured as follows:
 - a. Part 1 provides a summary of the key arguments in support of the Minister's proposal, Treasury's comment, and suggested questions for you to raise at EGI.
 - b. Part 2 illustrates how a potential alternative target could work.

Part 1: Treasury comment on the key arguments in support of the proposal, and suggested questions to raise at EGI

6. The Cabinet paper makes a number of assumptions to support the Minister's proposal, but does not discuss key uncertainties surrounding these assumptions. Treasury's comment in the paper focuses on the assumption that a less stringent target will lead to greater overall costs (covered in para 8.b below).
7. A discussion of the key uncertainties surrounding the assumptions in the paper would help to highlight that there are additional options that may achieve Ministers' objectives better than the proposed target.
8. Accordingly, the following paragraphs summarise the key assumptions in the paper, note some of the uncertainties surrounding them, and discuss the implications.
 - a. **New Zealand must demonstrate "progression"**: The Cabinet paper argues that New Zealand needs to take a post-2020 emissions reduction target that demonstrates "progression" beyond our current target to reduce emissions to 5% below 1990 levels by 2020. "Progression" is defined narrowly in the paper to mean our new target must have a higher "headline number" (i.e. 6% below 1990 levels, *at a minimum*) and cover the same gases as our current target.

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Treasury comment: There is a strong scientific basis to argue that a target focusing on carbon dioxide reductions would demonstrate progression from New Zealand's current target. Because carbon dioxide is the main driver of long-term temperature increase, greater carbon dioxide reductions over the 2020s make a stronger contribution to the global goal of limiting long-term temperature increase to 2 degrees Celsius. Appendix 1 provides additional information on the relative contribution of methane and carbon dioxide to global warming.

Paragraphs 11-12 below discuss how a carbon dioxide reduction target could form part of a broader target that demonstrates progression from our current target.

We suggest you raise the following questions about the meaning of "progression":

- *To what extent could New Zealand's negotiators credibly argue that an ambitious carbon dioxide target demonstrated progression from our current target?*
- *How would this argument be received outside by the broader public outside the negotiations?*

b. A less stringent target, or one that does not cover all of New Zealand's emissions, would have greater overall costs. The Cabinet paper argues that these greater costs would stem from the following factors:

- a loss of influence in the climate change negotiations (particularly in relation to negotiating access to markets and favourable forestry rules);
- greater direct economic costs arising from this loss of influence; and
- negative impacts on New Zealand's wider foreign policy interests.

Treasury comment: The paper assumes that these factors will arise unless New Zealand takes the proposed target. However, there is significant uncertainty about the likelihood of these factors arising and the impacts if they do. For example:

- Precedent suggests that any loss of negotiating influence from taking a less stringent target may be minimal and temporary. In 2012, New Zealand (along with Japan) decided not to take our pre-2020 target under the Kyoto Protocol. This had a small impact on our negotiating influence, but we were subsequently able to take steps to improve our standing. That decision has not stopped us from pursuing our negotiating priorities for the new Agreement.
- Many countries have a strong interest in markets and forestry rules, so those are likely to form part of the Agreement regardless of the target New Zealand takes.
- It is unclear how likely it is that a less stringent target would damage New Zealand's wider foreign policy interests, what the impact would be, or whether the costs are greater than the costs of meeting the proposed target.

We suggest you raise the following questions about the extent to which a less stringent target would result in higher overall costs:

- *If New Zealand did lose negotiating influence, what options would we have to regain it?*
- *What role are markets and forestry likely to be play under the new Agreement, with or without New Zealand's influence?*
- *How likely is it that taking a less stringent target would damage our wider foreign policy interests, what are the likely impacts, and do we have means available to limit the risk of damage?*

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- c. **The proposed target provides New Zealand with maximum flexibility to manage risk:** The Cabinet paper argues that the proposed target maximises New Zealand's flexibility to manage risk, primarily because it preserves our position to negotiate access to markets and favourable forestry rules.

Treasury comment: The costs of the proposed target are still high, even with access markets and forestry rules:

- Cumulative economic costs of around \$37 billion (2021-2030) or an annual average cost of around 1.2% of RGNDI;
- A cumulative \$4.5 billion fiscal risk (2021-2030) from covering agricultural emissions (assuming the agriculture sector is not included in the ETS).

The proposed target leaves New Zealand with little choice to reduce these costs other reducing the target or failing to meet it, both of which will have the reputational impacts the proposed target is seeking to avoid.

An alternative option gives New Zealand *greater* flexibility to manage cost. It would considerably lower costs at the outset, although it would increase the risk of not having access to markets and forestry rules. If it became apparent that our target was risking access to markets and forestry rules, then Ministers could respond by changing the target to improve our negotiating position.

We suggest you raise the following questions at EGI about the flexibility of the target options to manage costs:

- *If no new significant opportunities emerge to reduce agricultural emissions, what options does New Zealand have to reduce the costs of the proposed target?*
- *What options would New Zealand have to improve our negotiating position if it appeared we could lose access to markets and forestry rules?*

Part 2: An alternative option: split target

9. Based on the balance of risks given the current information available, Treasury considers that a split target may be in New Zealand's best interests. The key arguments in favour of a split target are:
- a. since carbon dioxide is the main driver of long term temperature increase, more stringent targets for carbon dioxide can credibly be argued to demonstrate progression from our current target (see more at paras 11-12);
 - b. the costs of achieving a split target would be considerably lower, although there could be greater risk of not securing access to markets and favourable forestry rules;
 - c. if this risk materialises in a way that threatened to increase the costs of the split target above those of the proposed target, Ministers would have flexibility to change the target to improve New Zealand's negotiating position.
10. The following sections provide information on what a split target could consist of, the justification that could be made for it domestically and in the negotiations, and measures to mitigate the risks that may arise.

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The target

11. Treasury's view is that the most appropriate split target is one that covers the whole economy (including the agriculture sector), but gives priority to carbon dioxide reductions. As an illustration, the target could consist of commitments to:
 - a. reduce New Zealand's carbon dioxide emissions to 25% below 1990 levels by 2030; and
 - b. reduce the emissions intensity of agriculture sector below business-as-usual, with a detailed target and measures to achieve it agreed by 2020;
 - c. increase R&D into solutions for agricultural emissions; and
 - d. consider increasing our target if new opportunities to reduce agricultural emissions emerge before 2030.
12. We have suggested a carbon dioxide reduction target of 25% because, at this level, the target would make a greater contribution than our current target towards limiting temperature increase in 2100.
13. Table 1 compares New Zealand's current target with the Minister's proposed target and potential alternative targets focusing on carbon dioxide. It shows the emission reductions associated with each target, the economic and fiscal costs, and the change in New Zealand's emissions by 2030 under each target.

Table 1: Comparison of proposed target and different levels of carbon dioxide targets

	Current target: 2013-2020	Proposed target: 2021-2030	Alternative targets: 2021-2030 ¹	
	5% below 1990, all gases	10% below 1990, all gases	25% below 1990, CO ₂	70% below 1990, CO ₂
Emission reductions over 8 years (GTP) ²	119	153	128	260
Emission reductions over 8 years (GWP)	149	260	128	260
Economic cost (\$ billion)	n/a	-37	-27	-37
Economic cost (% RGND)	n/a	-1.23	-0.89	-1.23
Fiscal cost of covering agriculture (\$ billion) ³	n/a	-4.5	0	0
Change in NZ's emissions by 2030 (1990 baseline, GWP)	n/a	-10%	+15%	-10%
Change in NZ's emissions by 2030 (2005 baseline, GWP)	n/a	-29%	-10%	-29%

¹ Targets do not include any agricultural methane or nitrous oxide.

² The 8 period is 2021-2028 for the proposed and alternative targets.

³ This fiscal cost would arise if agricultural emissions are included in New Zealand's international target but excluded from the Emissions Trading Scheme, requiring the Crown to purchase overseas offsets to cover the agricultural sector's emissions. There is no fiscal cost for alternative (CO₂) targets because the target would no longer require New Zealand to purchase offsets to meet the agriculture sector's emissions.

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14. The emissions reductions shown in the first line of the table are calculated using the GTP metric, which is based on the impact of emissions on the climate in 2100. The GTP metric reflects the short-term effects of methane, which are not captured by the GWP₁₀₀ measure used to measure emissions under the international climate change framework. The GTP metric shows that a narrow target that reduces carbon dioxide by 25% compared with 1990 (and leaves other emissions unchanged) would contribute more to temperature reduction in 2100 than New Zealand's current target. The table also shows that a 70% carbon dioxide reduction target has a much greater impact on 2100 temperatures for the same economic cost as the proposed target.
15. The Treasury **is not proposing** that New Zealand uses a different metric as this would require international agreement. But the failure of the GWP metric to capture the different effects of carbon dioxide and methane is an important part of the scientific justification for targets that focus on carbon dioxide in the near term. Appendix 1 provides more detail.
16. Other countries are certain to recalculate New Zealand's targets at the all-emissions level on a GWP basis. The last two rows of the table provide these figures for both a 1990 and 2005 baseline.
17. It is important to note that a carbon dioxide reductions target of 25% does not necessarily increase the costs to the parts of the economy responsible for carbon dioxide emissions. Because the economic modelling assumes agricultural emissions are not priced, most of the costs of the proposed target fall on firms emitting carbon dioxide. These costs arise directly through mitigation and the costs of international purchasing, and indirectly through additional taxation required to support the Crown's purchase of overseas offsets to cover agricultural emissions. Preliminary analysis indicates the cost to those parts of the economy responsible for carbon dioxide would be similar between the proposed target and Treasury's proposed alternative.

The justification for a split target

18. There are strong reasons that could be advanced domestically and in the negotiations to justify a split target. The key reasons include:
 - a. a split target demonstrates progression from our current target because it:
 - i. involves larger carbon dioxide reductions than our current target and, since carbon dioxide is the main driver of long-term climate change, it makes a greater contribution to limiting long-term temperature increase;
 - ii. includes a commitment to develop measures to address agricultural emissions, whereas that sector is not currently subject to domestic climate change measures;
 - b. by covering both carbon dioxide and agricultural emissions, the target signals meaningful action on all New Zealand's major sources of emissions;
 - c. the target is fair and ambitious given New Zealand's unique emissions profile;
 - d. the target involves greater costs and therefore greater effort than our current target.

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Risk mitigation

19. The key risk with a split target is that New Zealand loses influence in the negotiations and access to markets and favourable forestry rules, which would increase the cost of the target significantly.
20. If this risk materialised, Ministers would have flexibility to change the target to improve New Zealand's negotiating position. This could mean increasing the level of the split target (e.g. more carbon dioxide reductions) or converting it to a single target covering all emissions in the same way (i.e. the proposed target).

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APPENDIX 1

METHANE AND CARBON DIOXIDE: CLIMATE EFFECTS AND ACCOUNTING METHODS

The different temperature effects of methane and carbon dioxide

New Zealand's emissions profile features a high proportion of methane emissions compared with other developed countries. Methane has a large short-term impact on temperature increase, but a relatively small impact over the long-term. In contrast, the impact of carbon dioxide remains at a relatively constant level for many centuries after initial emission (see figure 1 below).

These different effects are critical when considering how to most efficiently focus *near-term* efforts towards meeting the global goal of limiting temperature rise to 2°C. In the context of New Zealand's post-2020 emissions reduction target, limiting methane over the 2020s will have a relatively little impact on temperature increase in 2100, while the influence of carbon dioxide and other long-lived gases, including nitrous oxide, emitted over that time will be significant and ongoing.

Different methods to convert different gases into a single measure of total emissions

Under the international climate change framework, greenhouse gases are weighted using an "exchange rate" that values the additional energy each gas causes the earth to receive. Based on this framework, the weighted measure currently used is called the Global Warming Potential, which aggregates the radiative forcing of emissions today in each of the next 100 years (AR4 GWP₁₀₀).

In the context of a 2100 temperature goal, the AR4 GWP₁₀₀ overvalues the temperature impact of methane compared with carbon dioxide by around 6 times.

The Global Temperature Change Potential (GTP) measure is an alternative weighted measure that defines the effect of different gases on temperature at a particular time. Using this measure with a 2100 timeframe reduces New Zealand's current total level of emissions by more than one third, and reduces methane's contribution from 43% (under GWP₁₀₀) to 11%.

Implications for Climate Change and New Zealand's Contribution

The choice of measure is of little consequence to the *global* effort to reduce greenhouse gas emissions. However, it has very significant implications for New Zealand because of our high levels of methane emissions. This conclusion is supported by the latest IPCC report: "despite its conceptual shortcomings, the GWP₁₀₀ performs roughly similarly to GTP... in terms of aggregate costs of reaching prescribed target, although regional and sectoral differences may be significant".⁴

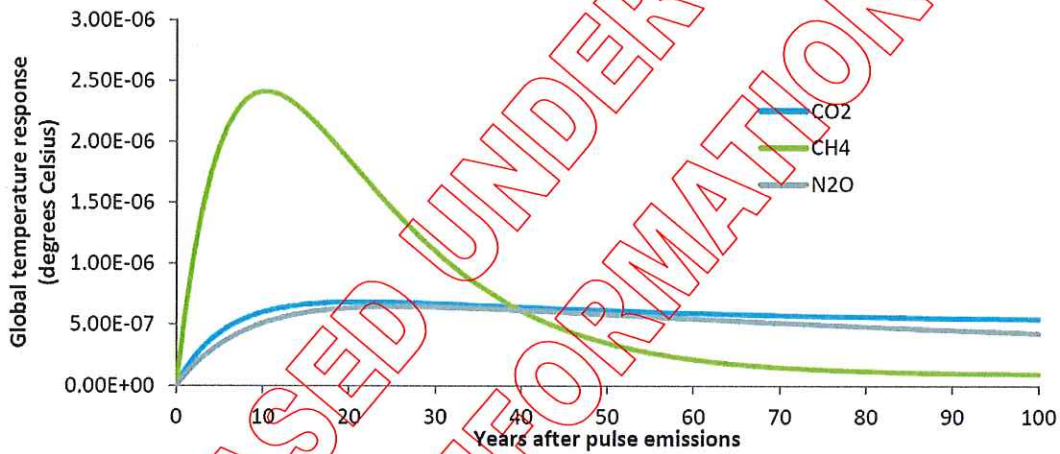
Using the GWP₁₀₀ as the basis for New Zealand's climate change policy risks perverse outcomes both with respect to New Zealand's costs and our contribution to mitigating global climate change. It leads to disproportionately costly effort being expended in the short-term on mitigating methane emissions, which have little long-term consequence, at the expense of greater focus on mitigating carbon dioxide, which drives long-term temperature rise.

⁴ IPCC Working Group 3 (*Mitigation of Climate Change*, 2014, Chapter 3, section 3.9.6.

Implications

Changing the metric New Zealand uses to measure its greenhouse gas emissions from GWP₁₀₀ to GTP would require international agreement, which is not possible in the short-term. Nonetheless, New Zealand can point to the impacts of using GWP₁₀₀ on countries with high methane emissions as part of the justification for an approach that prioritises carbon dioxide emissions over the 2020s.

Figure 1: Global temperature impact of one megatonne carbon dioxide-equivalent emissions⁵



Source: Ministry for the Environment

⁵ Using IPCC AR4 metrics and a 100 year time horizon.

APPENDIX 2

Suggested questions to raise at EGI

Questions about the meaning of "progression":

- To what extent could New Zealand's negotiators credibly argue that an ambitious carbon dioxide target demonstrated progression from our current target?
- How would this argument be received outside the negotiations?

Questions about the extent to which a less stringent target would result in higher overall costs:

- If New Zealand did lose negotiating influence, what options would we have to regain it?
- What part are markets and forestry likely to be play under the new Agreement, with or without New Zealand's influence?
- How likely is it that taking a less stringent target would damage our wider foreign policy interests, what are the likely impacts, and do we have means available to limit the risk of damage?

Questions about the flexibility of the target options to manage costs:

- If no new significant opportunities emerge to reduce agricultural emissions, what options does New Zealand have to reduce the costs of the proposed target?
- What options would New Zealand have to improve our negotiating position if we took a target that risked us losing access to markets?