

## Submission on the Climate Change Response (Zero Carbon) Amendment Bill

To the Environment Committee

I generally support the intent of this bill, but I feel it falls over on some of the details. I have put my comments under the following headings as well as the approximate clauses they relate to:

Cumulative Emissions Target (5O)

2050 Target Comment #1 (5Q(2))

2050 Target Comment #2 (5O(1)(a))

2050 Target Comment #3 (5P)

Net Budget Emissions (5S)

Likely Policy (5Y(1))

Bark without a bite

Blinders on for Foreign Emissions. Estimated cost of policy options.

### **Cumulative Emissions Target (5O)**

The Bill does not have a cumulative emissions target and without one, the whole world could do really well by setting and achieving ambitious targets of net zero in 2035 and yet still fail to limit warming to 1.5°C. How could this happen? Well if you looked at the actions of each country it could be that they did a whole heap of emissions-intensive projects in the years leading up to 2035, so they could have those things and still achieve their target; never mind that the projects were enough to blow the budget before they got to 2035.

I suppose this is covered by the Bill in an indirect way though. Countries will think they can do emissions-intensive projects and still achieve the target. A couple of years later the science will show emissions are not dropping fast enough and countries need to be more ambitious, so they will adjust their targets, panic about how to achieve them and perhaps because of the indirect approach not even realise they were responsible for their own problems. So ultimately they both work to limit cumulative emissions; just without an explicit cumulative emissions target you might get more of a headless chicken approach.

### **2050 Target Comment #1 (5Q(2))**

Following on from my Cumulative Emissions Target comment, after reading 5Q(2), it seems the Commission would not be able to recommend changing the target because the fact that there are now less cumulative emissions available because NZ did not do enough does not represent a significant change in scientific understanding of climate change nor does inaction represent a significant change in global action, and it also is not a significant change to NZ's obligations under the Paris Agreement as the obligations are the same, NZ is just not living up to them. So the Commission could not recommend changing the 2050 Target in this situation, so there is no limit on cumulative emissions and no guarantee that the 2050 Target has any meaningful value other than to distract people from what is important.

Recommendation. Change 5O(1)(a) to:

"net emissions of greenhouse gases in a calendar year, other than biogenic methane, are zero by the calendar year beginning on 1 January 2050 and below zero for each subsequent calendar year; and"

Rationale:

Technically 5O(1)(a) at present requires that after 2050 even if you could easily do net emissions below zero, they are in fact required to be zero.

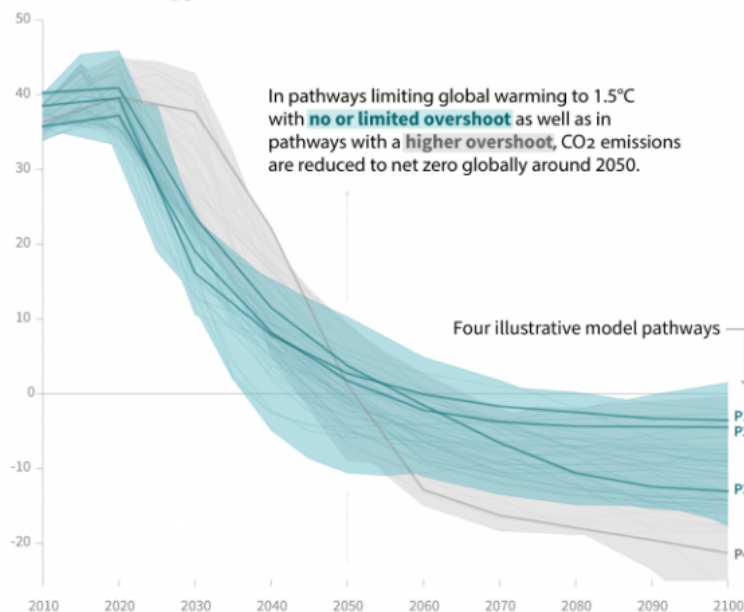
The target is also not consistent with the Paris Agreement and explanatory note for the Bill. The explanatory note roughly said that an IPCC special report concluded that to stay within 1.5°C "global emissions of carbon dioxide need to reduce to net zero around 2050, and below zero thereafter"; however, the 2050 target does not cover the "below zero thereafter" part, it just covers not exceeding zero thereafter (from the figure below taken from the IPCC special report, it looks like 'below zero' could require net removals of 0 to 25% of current net emissions each year. The figure can be found at <https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/c/spm3a/>).

### Global emissions pathway characteristics

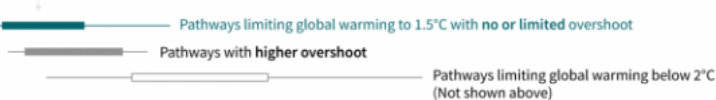
General characteristics of the evolution of anthropogenic net emissions of CO<sub>2</sub>, and total emissions of methane, black carbon, and nitrous oxide in model pathways that limit global warming to 1.5°C with no or limited overshoot. Net emissions are defined as anthropogenic emissions reduced by anthropogenic removals. Reductions in net emissions can be achieved through different portfolios of mitigation measures illustrated in Figure SPM.3b.

#### Global total net CO<sub>2</sub> emissions

Billion tonnes of CO<sub>2</sub>/yr



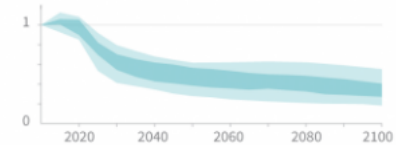
**Timing of net zero CO<sub>2</sub>**  
Line widths depict the 5-95th percentile and the 25-75th percentile of scenarios



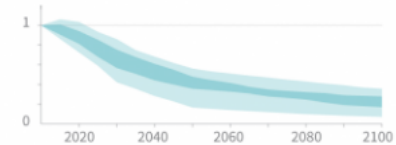
#### Non-CO<sub>2</sub> emissions relative to 2010

Emissions of non-CO<sub>2</sub> forcers are also reduced or limited in pathways limiting global warming to 1.5°C with **no or limited overshoot**, but they do not reach zero globally.

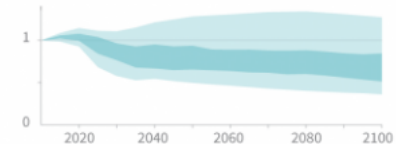
##### Methane emissions



##### Black carbon emissions



##### Nitrous oxide emissions



Given that the Commission should be actively keeping up with the science it seems better if they could be able to provide advice on the 2050 Target whenever they feel it is appropriate. From the Bill it seems like the only way the Commission could advise a change to the 2050 target, other than every 5 years and only once they have provided advice on the budget starting in 2036, is if the Minister requests a review or they prepare a budget early. Preparing an emissions budget so far in advance can be problematic because of uncertainty. Also, even if at some point in the future the Commission (made up of experts) comes to the view that the target is inappropriate for NZ's circumstances, they would not be able to recommend changing the target if that view is based on information known at the time the Bill commences (because no significant change has occurred). Until the 2050 target can be changed, the Commission would have to prepare for the next 15 years using an inappropriate target so the advice they give might not be the best advice they could give.

I doubt whether the 2050 Target is good enough because it likely requires significant removals post-2050 (though the Bill has no requirement for this) and I don't see how this would be possible unless there is significant depopulation by Governments starting to advise people in the present day to only have one child (I am skeptical of whether Carbon Capture & Storage technologies other than covering more land in trees will work and there is also the risk of stored carbon leaking).

I feel the Government is trying to make it hard for a future Government to change the target from what the current Government has set. The provisions preventing the Commission from recommending a change to the target would be fine if the change they were recommending was less ambitious, but the Commission should be able to advise a more ambitious target whenever they want in order to ensure that NZ is aiming to achieve its international obligations. The problem is that if something should go wrong such as the Commission advising or the Minister setting emissions budgets too high, or a Minister failing their obligation in a period, then there is no way for the Commission to recommend changing the target to one consistent with the Paris Agreement; the change would have to be prompted by a Government interested in the issue, or by the Government signing up to a new international obligation. As such the only way things would remain on track for the Paris Agreement is the requirement when setting an emissions budget for the Commission and Minister to have regard to 5Z(2)(b)(xi) "New Zealand's relevant obligations under international agreements."

### **Net Budget Emissions (5S)**

The interpretation of 'net budget emissions' undermines the Bill, because it sounds like you can have as much emissions as you want from deforestation without affecting the budget, but any forests planted helps achieve the budget, i.e. removals from the land use sector count towards the emissions budget but emissions from the land use sector do not.

“net budget emissions means gross emissions, offset by removals and offshore mitigation” (Part 1 clause 8 new Part 1B 5S)

“gross emissions means New Zealand’s total emissions from the agriculture, energy, industrial processes and product use, and waste sectors (as those sectors are defined in the New Zealand Greenhouse Gas Inventory)” (Part 1 clause 6 (1))

“removals means carbon dioxide equivalent greenhouse gases that are removed from the atmosphere” (Part 1 clause 8 new Part 1B 5S)

## **Likely Policy (5Y(1))**

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Recommendation:

Insert the following after 5Y (1)(b) in the amendment bill:

"(c) includes likely policy options the Government would use to achieve the proposed emissions budget; and"

Rationale: Without the recommendation, everyone would know what policy options were being advised by the Commission at the time and the emissions budget the Minister adopted, but they would not know which of the policy options the Minister felt were appropriate for achieving the budget.

The Government that has to set the plan for the emissions budget period might not agree with the Minister's policy options and so might have trouble coming up with a realistic way of achieving the budget, but would also have a hard time of explaining why they could not because they would have to guess as to the previous Minister's thoughts, which is a waste of their time and may make the previous Minister look bad unnecessarily.

Also, when you go to do the emissions reduction plan for the emissions period that starts in a year, and find out that the previous Minister's plan included starting to build a train station (or EV charging infrastructure) two years ago, but for whatever reason it was not started, isn't exactly helpful.

It would also give the public more time to voice their views about the intended policy options, as it may be the case that voters don't like the plan and would rather the Government had gone with doing something two years ago, but it is too late by the time they were consulted.

Finally it provides more information to people making investment decisions.

## **Bark without a bite**

I saw Russel Norman's view on Checkpoint about the bill being bark, but no bite; but I feel it is fine without the bite as it is good just having an agency tasked with looking at the bigger picture given the often short-term focus of politics. Norman is right that it is not really action on climate change; I expect a lot of action and bite to come from improving the ETS.

I support the decision to have the Government as the decision maker on ETS settings, because otherwise the Commission might be used as a scapegoat for failing to achieve targets when it is the Government that has the most resources and tools to throw at the problem. I think it also helps to depoliticise the Commission if it is mostly an advisory role, so there would be less concerns about the advice given. Though I can see merit in the Commission being the decision maker because they would be tasked with achieving the target, and it would take voters to be really upset for other considerations to be seen as more important than achieving the target.

It could be good though if the Commission had some protest/nuisance actions that they could take, other than harshly written reports, to try and keep things on track to achieving targets if they felt the Government was not acting responsibly (similar to how opposition MPs can filibuster). For example, the Commission could have the option of forcing a public organisation/agency to use the shadow price of carbon when they calculate the cost-benefit of building a stadium, though really public organisations should be doing this anyway.

Finally, it always bugs me how Governments focus on reducing domestic emissions rather than limiting warming to 1.5°C. If people bought less crap from overseas then the countries they bought the crap from would have reduced emissions as well as there being reduced international transport emissions. However, the approach that seems to be taken on this issue is that if you throw your problem over the fence then it is not your problem anymore. Another example is that you might plan to use a certain material or technology because it has low emissions during operation even though it has high emissions for the country producing it.

Also, from the Bill I am unsure as to whether the Commission has to provide estimates of the cost of policy methods that realistically meet the emissions budgets and 2050 target (It might come under 5Z(2)(b)(vi) "the impact of the actions taken to achieve the 2050 target", or 5L(c) "the likely economic effects"). Obviously knowing the costs is an important consideration for the Minister. It might also allow the Commission to consider the effect of the policy on foreign emissions because most countries would be aiming for low emissions under the Paris Agreement, so if a policy has high emissions for another country then you could expect it to have a higher cost.

## **Conclusion**

**Cumulative Emissions Target:** There should be one as it would lead to better planning, and otherwise the Bill lacks a bit of scientific grounding and consistency with limiting warming to 1.5°C (Paris Agreement).

**2050 Target Comment #1:** Due to the restrictive requirements on changing the 2050 Target, the 2050 Target may become meaningless.

**2050 Target Comment #2:** The wording for the 2050 Target 5O(1)(a) should be changed to say "below zero after 2050" to make it more in line with the Paris Agreement and intent of the Bill.

**2050 Target Comment #3:** The 2050 Target may not be good enough and the Commission should be able to provide advice on it whenever they want. The conditions for recommending a change should be less restrictive if recommending a more ambitious target.

**Net Budget Emissions:** The interpretation potentially defeats the Bill.

**Likely Policy:** The Minister should include likely policy options for achieving the budget when proposing an emissions budget.

**Bark without a bite:** I support the approach of the Bill. Also, it would be good if public organisations (e.g. local councils) must use the shadow price of carbon emissions for cost-benefit analysis.

**Blinders on for Foreign Emissions. Estimated cost of policy options:** Just disappointed about lack of consideration for foreign and international emissions, and also querying if the Bill means the Commission has to provide estimated costs of policy options.