

## Individual submission on the Zero Carbon Bill

As a professional with over 15 years experience in New Zealand and international climate and energy policy, I am delighted to have the opportunity to submit on the proposed Zero Carbon Bill. My most recent role, as Head of the Climate Change Unit at the International Energy Agency, has given me a deep understanding of approaches that can inform New Zealand's low-carbon legal and policy framework, while bearing in mind New Zealand's unique emissions profile. I would be happy to follow up with publication references to expand on the points made below, and look forward to a more hands-on involvement in helping move New Zealand onto a low carbon pathway in the future.

Before turning to the specific questions raised in the discussion document, I want to stress one critical overarching point: **the Zero Carbon Bill should focus squarely on driving a transition in New Zealand's energy, transport, industrial and agricultural systems, rather than only on meeting numerical emissions budgets at particular dates.** Offsetting via forestry and international carbon markets can help smooth the transition, but a key focus should also be on how New Zealand's *domestic gross emissions* can be shifted onto a trajectory consistent with the Paris Agreement's long-term goals. This distinction between *targets* and *transition pathways* is critical from a policy perspective because the least-cost set of policy actions to drive long-term transition are not usually the same as those actions that would deliver a short- or medium-term emissions budget at least cost. With a deep transition in mind, some higher-cost investments in the short term, such as investment to underpin electrification of transport, or early deployment of advanced technologies, can lower overall long-term costs by creating (or keeping open) a wider range of options in future periods.

### 2050 target

1. What process should the Government use to set a new emissions reduction target in legislation?
  - the Government sets a 2050 target in legislation now
  - the Government sets a goal to reach net zero emissions by the second half of the century, and the Climate Change Commission advises on the specific target for the Government to set later.

#### Comment

I support setting a 2050 target in legislation now, as this has significant value in signalling overall direction to those making decisions across the economy and society. However to be effective there would need to be multi-party support for such a target (it has little signalling value if there is a belief it will be changed by

the next government).

If the second option is taken, I would reformulate the request to the Commission to provide advice on “goals for New Zealand’s gross and net emissions of long- and short-lived greenhouse gases, consistent with the Paris Agreement goal for global emissions to reach net zero by the second half of this century”. The current wording could be read to imply that New Zealand’s emissions could reach net-zero as late as 2100, whereas pathways consistent with the Paris Agreement have developed-country emissions falling more rapidly.

2. If the Government sets a 2050 target now, which is the best target for New Zealand?

Pick one:

- net zero carbon dioxide:** Reducing net carbon dioxide emissions to zero by 2050
- net zero long-lived gases and stabilised short-lived gases:** Long-lived gases to net zero by 2050, while also stabilising short-lived gases
- net zero emissions:** Net zero emissions across all greenhouse gases by 2050.

### Comment

1. Regarding short-lived gases

I acknowledge the scientific difference between short and long-lived gases, but personally favour a net-zero approach for both, for a number of reasons:

- Looking into 2<sup>nd</sup> half of this century, when global CO<sub>2</sub> emissions must go not only to zero but negative through massive deployment of negative-emission technologies, I find it implausible that ongoing human-caused emissions of short-lived gases that increase temperature (even if only temporarily) would be ignored. Rather, I expect there would be an expectation to offset their effect on climate, e.g. through temporary increased forest sequestration.
- Strong action on methane can significantly reduce the need for (as yet unproven) negative emission technologies, and make the possibility of limiting temperature rise to 1.5 degrees more feasible. NZ leadership in farming practises and technologies to reduce agricultural methane can make a global contribution in this way.
- With competition looming from artificial meat and milk, natural agricultural products will need to demonstrate strong environmental credentials. Offsetting their effect on climate (e.g. via increased forestry sequestration) is a step in this direction.

However the concept of what “net-zero” means for a short-lived gas could be rethought, and the Climate Commission could advise on this. Given the shorter lifetime of these gases, it may be that time-limited sequestration (e.g. non-permanent forestry) could provide a full offset of their effect on climate.

If the second formulation is chosen (“stabilising short-lived gases”) I would suggest adding “at a low level” to avoid the false perception that stabilising at current or 1990 levels of these gases would be adequate.

2. Regarding “net-zero” framing

I am concerned that a sole focus on “net-zero” emissions at a particular date could lead to an over-emphasis on offsetting measures (forestry, markets) compared to taking the necessary steps to put New Zealand’s domestic gross emissions on a clear downward path that is consistent with the transition articulated in the Paris Agreement. This concern was strengthened when I looked at the economic modelling, which finds that massive forestry planting could be a least-cost way to deliver a 2050 net-zero target, with domestic gross emissions reduced quite modestly. I would favour explicitly mentioning domestic gross emissions in the target, either numerically or more qualitatively, e.g.

*By 2050, New Zealand should achieve net-zero emissions across all greenhouse gases, including at least a [50%/other] reduction in domestic gross emissions*

*By 2050, New Zealand should achieve net-zero emissions across all greenhouse gases, including deep reductions in domestic gross emissions consistent with transition to a low-carbon economy.*

3. How should New Zealand meet its targets?

Pick one:

- domestic emissions reductions only (including from new forest planting)
- domestic emissions reductions (including from new forest planting) and using some emissions reductions from overseas (international carbon units) that have strong environmental safeguards.

**Optional comment**

Use of international markets and forestry plantings should each been seen as temporary measures to smooth the path in transition in gross emissions.

The UK had “easy” reductions available in the first few budget periods by shifting power generation away from coal. New Zealand’s domestic mitigation options are harder – for example transforming the transportation sector. In the New Zealand context, forestry and international markets will likely need to play a significant role in the first few budget periods to keep net emissions on track while getting gross emissions onto a downward path.

4. Should the Zero Carbon Bill allow the 2050 target to be revised if circumstances change?

Pick one:

- yes

no.

**Optional comment**

I don't see the need to address this in the Zero Carbon Bill itself: governments always have the ability to amend legislation at a future date. A change to the overall target – whether strengthening or weakening – should be made only if there is wide support of Parliament.

## Emissions budgets

5. The Government proposes that three emissions budgets of five years each (ie, covering the next 15 years) be in place at any given time. Do you agree with this proposal?

Pick one:

yes

no.

**Optional comment**

Broadly speaking I support the option of around 15 years visibility: it is good to give forward visibility to those making investment decisions. I would suggest examining three issues more carefully however:

1. Sequencing issues: the timing of submission of Paris Agreement targets vs the finalisation of domestic targets, and the timing with respect to election cycles. My feeling is that there should be a formal progress check-in to Parliament at least once every electoral cycle, which suggests that the PCE's suggested 6/3 year cycles could be more appropriate.

2. What are the goals for each "budget" period. The Climate Commission should develop a set of indicators to measure progress in domestic transition during each period (e.g. milestones for electrification of transport), as well as setting an emissions goal, to maintain a focus on transition of New Zealand's domestic economy not just net emission levels.

3. The process for agreeing the budget politically. In New Zealand's MMP environment, minority governments are common. In my view, maintaining cross-Parliamentary buy-in to the budgeting process is important to creating an enduring framework. I feel that any proposed budget should be able to command a majority support in Parliament, rather than a minority-government Minister having direct regulatory powers. Procedurally I'm not an expert on the best approach, but options might be for carbon budgets to be treated as confidence and supply issues, or to hold a confirming vote in Parliament following promulgation of a budget.

6. Should the Government be able to alter the last emissions budget (ie, furthest into the future)?

Pick one:

- yes, each incoming Government should have the option to review the third budget in the sequence
- yes, the third emissions budget should be able to be changed, but only when the subsequent budget is set
- no, emissions budgets should not be able to be changed.

**Optional comment**

As mentioned above, an issue to consider further is the timing of finalisation of budgets in conjunction with the timing of submission and revision of Paris Agreement targets. Governments may want some flexibility on a ~10-year timeframe, so that domestic and international targets can align. A lot can change in a five to ten year timeframe, for example the dramatic fall in renewable energy costs between the Copenhagen Accord (2009) and Paris Agreement (2015) was a contributor to political willingness to commit in Paris. Locking in targets for too long, without possibility for revision, may leave budgets out of step with realities. One possibility would be for the 3<sup>rd</sup> budget to be indicative, to be confirmed/revised when the subsequent budget is announced.

7. Should the Government have the ability to review and adjust the second emissions budget within a specific range under [exceptional circumstances](#)?

Pick one:

- yes
- no.

**Optional comment**

If there is cross-Party support (i.e. a clear majority in Parliament) then I think a budget could be *strengthened* at any time. I would oppose weakening the budget in this timeframe, as there is a need for certainty for low-carbon investors.

I don't expect that there would be any particular penalty for not achieving the budget exactly, so the government of the day could just explain the failure to meet the budget given the exceptional circumstances, and lay out its plans to get back on track for future periods.

8. Do you agree with the [considerations](#) we propose that the Government and the Climate Change Commission take into account when advising on and setting budgets?

Pick one:

- yes
- no.

**Comment**

Broadly yes, but there should be greater emphasis on domestic gross emissions,

and transition in New Zealand's infrastructure and economy. An indicators framework for monitoring that goes beyond emissions levels is important here.

## Government response

9. Should the Zero Carbon Bill require Governments to set out plans within a certain timeframe to achieve the emissions budgets?

Pick one:

yes

no.

### Comment

10. What are the most important issues for the Government to consider in setting plans to meet budgets? For example, who do we need to work with, what else needs to be considered?

### Comment

One key issue will be to achieve/maintain the buy-in of relevant government departments and Agencies, so that they see themselves as having ownership over policy development and implementation, rather than there being a perception that the Climate Commission has taken over this work. Given the broad impact that climate policy has across society and the economy, employment and social development Agencies, as well as environmental and economic ones, should be involved.

More broadly, clear sectoral policy pathways are critical that have political, public and business buy-in, and support Treaty of Waitangi obligations. This implies that the Commission must have strong transparent consultation procedures.

## Climate Change Commission

11. The Government has proposed that the Climate Change Commission [advises on and monitors](#) New Zealand's progress towards its goals. Do you agree with these functions?

Pick one:

yes

no.

### Optional comment

Yes – and a broad monitoring framework should be established that includes indicators of transformation, not just emission levels.

12. What role do you think the Climate Change Commission should have in relation to the New Zealand Emissions Trading Scheme (NZ ETS)?

Pick one:

- advising the Government on policy settings in the NZ ETS
- makes decisions itself, in respect of the number of units available in the NZ ETS.

**Optional comment**

The Commission should be advisory in all respects. Carbon pricing is a cornerstone tool, but is not always the best or only policy instrument in every situation – regulations, standards, subsidies can also be effective. Government is in the best position to consider what set of climate policy choices best meet social and economic objectives, and how ETS unit supply should be set in light of the wider policy mix (where many other policies also have an impact on reducing emissions).

13. The Government has proposed that Climate Change Commissioners need to have a range of [essential and desirable expertise](#). Do you agree with the proposed expertise?

Pick one:

- yes
- no.

**Optional comment**

Experience in energy policy (including transport and industrial energy use) should be specifically mentioned

## Adapting to the impacts of climate change

14. Do you think the Zero Carbon Bill should cover adapting to climate change?

Pick one:

yes

no

### Optional comment

The Zero Carbon Bill is an excellent opportunity to strengthen New Zealand's adaptation framework. There are many serious issues to tackle, including developing clear rules for coastal property as sea level rises.

I don't think the Climate Commission is necessarily correct home for this work, as they have urgent business in getting mitigation policy in line, and the set of expertise in adaptation does not necessarily intersect with mitigation. The Commission could have an oversight role to ensure that adaptation work keeps moving forward, and should certainly be expected to apply latest knowledge in adaptation to its mitigation analysis.

15. The Government has proposed a number of new [functions](#) to help us adapt to climate change. Do you agree with the proposed functions?

Pick one:

yes

no.

### Optional comment

16. Should we explore setting up a targeted adaptation reporting power that could see some organisations share information on their exposure to climate change risks?

Pick one:

yes

no.

### Optional comment