

Submission on the Zero Carbon Bill





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About Us

Seniors Climate Action Network (SCAN) is a Dunedin group of senior citizens, established in 2014. We aim to raise awareness amongst our own generation of the existential threat posed by climate change and to take actions to inform the wider public, lobby those in power, and network with other groups to work to reduce carbon emissions and mitigate climate change.

We feel a strong sense of responsibility for the serious threats facing present and future generations caused by climate change, as we have been slow to act in our lifetime.

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Introduction

Climate change, the gradual warming of the Earth's atmosphere and oceans, due to a steadily increasing mass of CO₂ in the atmosphere from the burning of fossil fuels, and other greenhouse gases, is having serious effects on the planet from increasingly severe weather events, loss of biodiversity, increasing sea levels, food insecurity through droughts, floods and changing crop - growing conditions, and mass migration of people as a result of these changes.

Scientists warned of this phenomenon over 30 years ago but governments and commercial interests have been slow to react. The international community finally came together and signed the Paris Accord in 2016. The present government is to be congratulated on developing this legislation, the Net Zero Carbon Bill, that will enable New Zealand to reduce its net emissions as part of the international commitment in Paris Accord.

Crucial to this process is the Climate Commission. This body must be guided by the best science and it is to be hoped the climate scientists' voice will carry the most weight. While its members represent diverse interests, Health is a significant omission which should be rectified. We support the Commission being independent and advisory, the elected government remains the body accountable to the public.

As this Bill is setting out a process for New Zealand to reduce carbon emissions over the next 30 years, it is imperative that all political parties support the Bill and commit to ensuring the ensuing Act will be effective in achieving net zero carbon emissions as soon as possible, so that New Zealand plays its part in keeping the Earth's temperature increase to no more than 1.5C. Recent scientific reports suggest even 1.5 C degrees increase may result in more severe effects than was previously thought.

France, Germany, Sweden, Norway and Europe have already enacted zero carbon emissions by 2050 or earlier so New Zealand is in step with international emissions frameworks, while the UK passed a Climate Change Act in 2008 which the Parliamentary Commissioner for the Environment and the Productivity Commission consider would be a useful model for developing a strong legal framework in New Zealand.



Discussion Document

The discussion document draws attention to the potential economic effects (costs and benefits) of the changes that achieving net zero carbon entails. However, it does not address the economic effects, let alone the social and environmental effects, of continuing to emit greenhouse gases at the same rate as we do now, a business as usual model.

In particular, the analysis by NZIER suggests that following the path of reducing net emissions in order to reach net zero, GDP will be in the range of 10-22% less by 2050 compared with taking no action. The assumption that we can take no action on emissions and that business will continue as usual is irresponsible and unrealistic. Lord Stern for the UK government is one of many who have shown that the economic costs of climate change are huge as we are already learning from the floods, droughts and fires all round the world.

In any case it is highly unlikely we would take no further action on climate change as the discussion document points out, because we have committed to the Paris Agreement, and we cannot gamble with the future of the planet. In fact all the latest trends show that sustainable industries like building renewable electricity generation, and insulating houses, produce more and healthier jobs than the fossil fuel industry.

Discussion document questions

(1) What process should the Government use to set a new emissions reduction target in legislation?

The target date of 2050 that is set in the Bill is quite arbitrary but for the sake of the legislation It is important to have a programme of planned reductions and 30 years is a realistic period.. The science and technology may change within that 30 years so If climate change accelerates we may need to reduce emissions more quickly than 2050.

What matters is the total amount of GHGs (giga tonnes of carbon equivalents) emitted; ie the area under the graph between the amount in the atmosphere now and when the line meets the zero



emissions point hopefully before 2050. We need a sharp decline to start with not a steady regular decrease. Once we start the decrease feed backs may accelerate the reduction

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

Given the gravity and urgency of the situation option 3 (Net zero emissions across all greenhouse gases by 2050) must be the preferred option and we may well be forced to go with that option if the rate of temperature increase appears to be exceeding 1.5 C.

However reducing methane to zero could only be achieved by getting rid of all ruminants from New Zealand agriculture. Given the place of ruminant farming in the New Zealand way of life, and given there is no mechanism to capture methane at present, this option is unrealistic at least in the next 15 years.

It seems then we must work with the 2 basket approach, Net Zero Long-Lived Gases – carbon dioxide and nitrous oxide, and Stabilised Short-Lived Gases - methane.

Growth in methane emissions will do more short term damage than growth in any other gas. So reducing methane substantially in the next 10 years will bring us closer to the target than reducing an equivalent amount of CO₂. Achieving that target must take priority over short term economic impacts and trade balances.

There is no mention in the discussion paper of what the methane stabilized target ought to be but it must be considerably lower than at present. This will be a decision made by the Climate Commission based on the best science

Our economy has become over dependent on dairy exports but we need to begin now to reduce the size of the dairy herd. Reducing current export quantities of meat and dairy products will require a carefully developed strategy but it may be the development of plant based "meat" and "dairy" happens quite quickly. Also a considerable increase in horticultural production means substantial changes in land use.



There is a valid argument that animal-produced methane is part of the short term carbon cycle perhaps only taking days for the carbon to be taken from the atmosphere by the grass and then emitted as methane by the animal. Obviously the CO₂ from respiration of humans isn't counted nor the respiration of all fauna because that is part of the carbon cycle, so some farmers suggest methane fits this category. However methane is not taken up as methane and takes a minimum of 11 years to be broken down to CO₂. Furthermore it is acknowledged that methane is far more potent than CO₂ in causing warming so we must aim to reduce its production as quickly as possible. As that reduction can only be achieved by substantial reduction in the number of ruminant animals the agricultural sector faces considerable change and must be supported through that change.

It is possible to change the animals' fodder to mixed herbage which would be more easily digested than ryegrass so reducing methane emissions. It is also possible to reduce inputs of fertilizer and supplementary feed and move to a regenerative or an organic model of agriculture; smaller herd sizes without reducing farm income.

N₂O like CO₂ is cumulative in the atmosphere for thousands of years and therefore, like CO₂, should be reduced to zero. This can be done by stopping the use of nitrogen fertilisers like urea. New Zealand agriculture used to be clover-based and the use of urea was in part a follow-on from the natural gas industry. There is already too much nitrogen being discharged to the environment as nitrate into the water table. Reducing N₂O would also help to reduce this. One last thought on methane. New Zealand is unique in that agricultural emissions are around 30% of the total as compared with most densely populated industrial nations and the per capita emissions of methane in New Zealand are 6 times the global average. We cannot rely on copying other countries solutions we must produce a system which deals with New Zealand's situation.

Methane emissions also come from natural gas leaks from the oil and gas industry. Fracking in Taranaki and gas leaks from oil drilling both contribute to this. They add significantly to the warming from the CO₂ produced by burning the gas. They are in a different basket from biological methane and should go to zero along with all fossil fuels. Old gas wells may need to be managed for some time to prevent such leaks adding to methane in the atmosphere.



(3) How should New Zealand meet its targets?

SCAN considers that NZ should achieve its targets using domestic emissions reductions only. International trading credits offers no guarantee of environmental safeguards and transfer New Zealand's emissions to another country. It is unfortunate that aviation and shipping emissions are not accounted for under the Paris Agreement, it is to be hoped the government will push for their inclusion in future international climate change agreements.

The government can reduce emissions by moving away from fossil fuels as follows

- 100% renewable electricity generation
- Developing extensive public transport with electric buses, light rail and trains
- Encouraging EVs ensuring a good supply of second hand vehicles and an extensive charging network
- Building standards with triple glazing, passive heating and good insulation
- Encourage private and community energy schemes both solar and wind
- Encourage strong local economies, that are more self-reliant especially in food and manufactured necessities
- Reduction in long distance road haulage
- An end to coal mining and oil and gas exploration
- Encourage a circular economy

If these recommendations are too specific for this legislation it is important that the legislation has at least a general direction to cover the move away from fossil fuels.

Sequestration of carbon: New Zealand is fortunate to have land suitable for planting trees.

The government should encourage change in land use from ruminant farming to forestry and horticulture. Gradual regeneration and planting could lead to much greater areas of native forest. Plantation forestry has uncertain carbon sequestrations depending on how the timber is used. Stable pasture and organic farming sequester carbon in the soil and there are other ways to sequester carbon such as Biochar.



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

The 2050 target should only be revised following a significant change in scientific knowledge or international law (such as the Paris Agreement becoming more ambitious). Any revision should require input from the Climate Change Commission and approval by Parliament.

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

Yes. Legally-binding emission budgets, set 10-15 years in advance so that 3 budgets are in effect at all times, at a level recommended by the Climate Change Commission and approved by Parliament, are a cornerstone of the Zero Carbon Act.

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

Yes; the third emissions budget should be able to be changed but only when the subsequent budget is set.

This means the third emissions budget can respond to developments in the preceding years (climate developments, new science, international legal changes) but is in continuity with the new budget.

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

Probably not although if there are dramatic changes in climate or world crises it may be necessary.



(8) Yes we generally agree with the proposed list of considerations that should be taken into account when setting budgets.

- scientific knowledge about climate change
- technology relevant to climate change
- economic circumstances and, in particular, the likely impact of the decision on the economy and the competitiveness of particular sectors of the economy
- fiscal circumstances and, in particular, the likely impact of the decision on taxation, public spending and public borrowing
- social circumstances and, in particular, the likely impact of the decision on fuel poverty
- energy policy and, in particular, the likely impact of the decision on energy supplies and the carbon and energy intensity of the economy
- the Government's obligations under the Treaty of Waitangi
- the three Government objectives for climate change policy: sustainable economy, global and local leadership and creating a just and inclusive society

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

Yes a framework of 6 months allows time for public consultation.

(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?

The most important issues for the government to consider in setting plans to meet budgets are the same as in Q8.



(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 proposed functions?

Yes we agree that the Climate Change Commission should advise on and monitor progress towards the Government's goals. There is some similarity here with the role of the Parliamentary Commissioner for the Environment except the CC Commission has a diverse range of members with wide expertise and advises and monitors the government. However never before has the health of the planet been at the forefront of government policy making.

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

SCAN agrees with Wise Response on the pricing of carbon. We support a Tax and Dividend scheme over the ETS because it is more socially equitable. An ETS is based on "market rules" and while it may work in the early years it could become dysfunctional as less and less carbon can be emitted. However if the Government continues with an ETS, we think the CC Commission may advise the Government on policy settings in the NZ ETS but should not make decisions itself in respect of the number of units available in the NZ ETS.

(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?

Yes we agree with the list of expertise which should be included in the membership of the Commission. Again we support Wise Responses submission on this and agree with their suggested additions.

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

Yes the Zero Carbon Bill should cover adapting to climate change. This means much greater co-operation with local government who will be making the infrastructure changes for



adaptation. The issue of insurance is also important since people will find it increasingly difficult to get insurance for their homes which are at risk because of climate change.

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

SCAN supports the preparation of a national climate risk assessment, a national policy plan to address those risks identified and a monitoring and reporting framework.

(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?

Yes. SCAN supports introducing a mandatory adaptation reporting power.