

Submission from Straterra To the Climate Change Commission Consultation Documents May 2024

Introduction

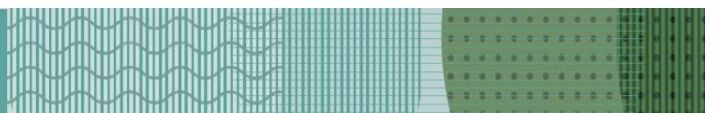
1. Straterra is the industry association representing the New Zealand minerals and mining sector. Our membership is comprised of mining companies, explorers, researchers, service providers, and support companies.
2. We would like to thank the Climate Change Commission for the opportunity to make this submission on three consultation documents released by the commission in April 2024.
3. The documents covering three areas of work, namely:
 - [Review of the 2050 Emissions Target](#)
 - [Draft advice for preparation of emissions budgets](#)
 - [Review of inclusion of emissions from international shipping and aviation in 2050 target](#)

Preamble

4. Straterra acknowledges the international imperative to reduce carbon dioxide emissions and we support New Zealand's target of net-zero emissions by 2050. New Zealand needs to play its part in global commitments to meet the objectives of the 2015 Paris Agreement.
5. In reducing New Zealand's emissions, it is essential that policies do not lead directly to increased global emissions through domestic economic activity closing down and/or shifting offshore. Integral to this is that we maintain the international competitiveness of affected sectors of our economy including primary production, food production, steel manufacturing.
6. Any initiative aimed at reducing emissions should be assessed in terms of its impact on both global and domestic emissions, as well as its impact on the New Zealand economy.
7. Consistent with this, New Zealand's response to climate change should align with that of the rest of the world. We support the notion of New Zealand being a fast follower rather than a leader in this regard.
8. Consequently, we oppose the conclusions in the discussion documents around strengthening the target, reducing the budgets, and bringing international aviation and shipping into the target.

Mining and climate change

9. Mining plays an important role in reducing global emissions. Minerals are needed in increasing abundance as the world transitions towards a low-carbon future. For example, they are essential components in solar panels, batteries, electric vehicles, wind turbines, etc.



10. New Zealand has the potential to supply some of these minerals e.g. vanadium, lithium, rare earth elements, and nickel-cobalt, among others. We are pleased that the coalition Government's recently released [Draft Minerals Strategy for New Zealand to 2040](#) recognises this and provides a platform to enable the potential extraction of some of these minerals.
11. It should also be noted that our existing production of ironsands, coal, gold, silver, mineral sands, and limestone are also needed for these low carbon technologies, or in helping New Zealand adapt to the effects of climate change.

Review of the 2050 Emissions Target

12. This document considers the factors the Government will need to weigh up when deciding whether to amend the existing net-zero by 2050 target. While it does not recommend changes, there is an underlying theme that a tighter target is warranted.
13. We do not agree with the commission's arguments, and we do not support a change to the 2050 target.
14. While we support the legislation which provides for a five yearly review of the target, actually deciding to change the target should not be done lightly. Any other change would be akin to shifting the goal posts, which would be destabilising for the economy.

Checking for significant change

15. Chapter 3 of the document considers what's changed since the target was set by Parliament in 2019. It argues that some things have significantly changed, meaning a case for strengthening the target may be made. We broadly agree with the assessment as to which factors have changed and which haven't, but we disagree with the conclusion that this warrants a strengthening of the target.
16. Factors identified in the document as having changed significantly include:
 - Global action
 - The scientific understanding of climate change
 - Technological developments
 - The principal risks and uncertainties associated with emissions reductions and removals
17. We discuss these factors in turn.

Global action

18. The analysis from page 52 looks at the climate change targets of various groups of countries. As signalled in the preamble, New Zealand's response to climate change should align with that of the rest of the world. Comparing New Zealand's climate change action with global actions is important. However, we have two concerns with the commission's analysis.
19. Firstly, the most important group of countries to make international comparisons with is our trade competitors; but this set of countries and economies is not selected as a group. Comparisons with these economies are important because if our policies are too stringent relative to theirs, economic activity and carbon emissions will simply transfer to those countries (carbon leakage). We see merit in linking New Zealand's target with an index of our trade partners' targets and think the commission should consider this as part of future reviews.

20. Secondly, there is too much emphasis on the targets or commitments of individual countries and not enough on their actions. Too often actions are not in line with targets and there is no certainty that countries that set ambitious targets will meet them. This is applicable to the bullet point examples at the top of page 53 which lists targets, not actions or progress towards those targets.
21. We acknowledge the developments in some countries to introduce and bring forward targets, as well as the varying degrees of actions to achieve these targets. This is encouraging global development, but it is not sufficient justification to change New Zealand's target.
22. New Zealand's target should be conditional on how other countries, particularly our trading partners and competitors, are progressing. This condition is required if we are to maintain our competitiveness.
23. On page 29 of the document, it says "the 2050 target also matters for Aotearoa New Zealand's international reputation as a country focused on sustainability and protecting the environment, which in turn benefits tourism and export industries". We do not disagree, but we argue achieved emissions reductions and policies matter more.

Scientific understanding

24. The document argues that improved scientific understanding and evidence of climate change and its risks justifies strengthening the target.
25. While it may be true that these have improved, at the time of setting New Zealand's target in 2019, policymakers (to their credit) fully accepted the science of climate change which was built into the target. The fact that there is greater evidence might explain why other countries have belatedly strengthened, or need to strengthen, their targets and policies. However it is not a case for further strengthening New Zealand's target which already reflects the science.

Technological developments

26. The technological developments cited in the document (renewable energy, industrial processes, etc) are welcome and will facilitate emissions reductions and achievement of the target, but they do not warrant strengthening the target as they are no more than what was anticipated when New Zealand set its target and so were built into it.

Risks associated with emissions removals / forests

27. This section of the document questions the place of forests in New Zealand's net emissions target, pointing to a lack of durability and a declining acceptance of forestry as a carbon sink.
28. It argues forests are no longer a durable sink due to factors such as fires, extreme weather events, pests, etc and that the acceptability of forestry has diminished due to the problem of slash, citing the loss of social licence for the forest industry in Tairāwhiti Gisborne.
29. We think these concerns are grossly overstated as a reason for excluding forestry from the target.
30. The increase in wildfires and the establishment of new pests posing a risk to forests in recent years are not enough of a development to make forests less important as a carbon sink as they were in 2019.
31. As the document says: "forests, which remove and store carbon dioxide from the atmosphere, are critical for any path to achieving the net zero component of the 2050 target". Climate science dictates that removing carbon from the atmosphere is just as important as reducing gross carbon emissions and so net emissions matter more than gross.

32. Forests as carbon sinks are a major tool in New Zealand's arsenal to reduce emissions and it would be unwise not to allow for them in our target.

Conclusion – the changes do not warrant changing the target

33. In conclusion, we don't think the change of circumstances identified in the document are significant enough to warrant a change in the target.

34. In 2019 an ambitious target was arrived at and accepted by the community. It was ambitious because of anticipated factors such as technological development, increasing evidence of climate change, greater acceptance by other countries, etc. It is disingenuous to argue the target should be tighter just because those factors have come to fruition.

Impacts of changing the target

35. Chapter 4 of the document looks at the potential impacts of changing the target. In our view it overstates the benefits of a tighter target and understates the costs and consequences.

Circular argument

36. The document says strengthening the 2050 target, i.e. adjusting the time frame and level to reduce emissions further and faster, would result in more rapid uptake of non-fossil fuel technology and other responses to reduce emissions. This is something of a circular argument given the target is enshrined in legislation and must be achieved through the emissions budgets.

Economic impact

37. The document implies Gross Domestic Product (GDP) is only marginally negatively impacted by a strengthened target. But the contraction is much more significant than is implied by the document. For example, graph 4.1 on page 76 shows the annual GDP impact is about \$40 billion by 2050. That equates to about \$24 billion of GDP in today's dollars.

Distribution effects

38. There is not enough balance in the discussion document about the cost and distribution effects on people and the economy from strengthening the target.

39. The analysis looks at the "likely economic effects and distribution of impacts across generations, and te ao Māori", but needs to go further and look at the economic distribution across society generally including between regions and households.

40. For example, the burden is likely to impact disproportionately upon the poor (who may struggle to afford new technology such as EVs and will be disadvantaged by higher energy costs etc.), and it is surprising that the document doesn't go into this in more detail.

41. Regarding the regions, the document acknowledges that "climate policy will have distributional impacts on employment between industries and regions" but defends this by saying the nationwide net impact on total employment is likely to be relatively small. This overlooks the impacts on individual regions which could be significant and detrimental.

42. On the West Coast for example, mining represents a significant part of the region's employment and economic output. Mining in Buller directly contributes 18.6% of the district's total GDP (which means Buller's economy is more dependent on mining than Wellington's is on the public service). There needs

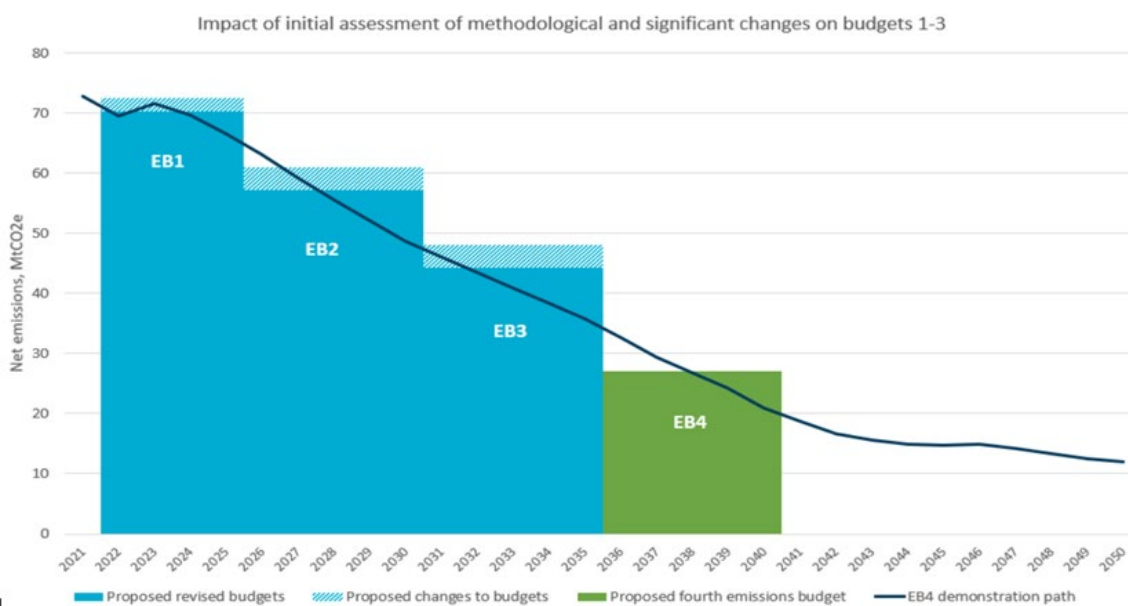
to be more than lip service paid to the just transition in that all factors should be considered and there is evidence it is in fact “just” across the board.

Draft advice for preparation of emissions budgets

43. The commission is preparing its advice on the fourth emissions budget (EB4), for the period 2036–2040. At the same time, it is assessing whether there is a need to reduce emissions budgets one, two, and three (covering the period 2022–2035,) which have already been set by the Government.

44. We do **NOT** support the commission’s proposed reductions to emissions budgets one, two, and three.

45. The commission’s proposed fourth emissions budget and proposed revisions to earlier budgets are shown below.



46. We consider the commissions conclusions to be flawed because, due to the timing of the commission’s work, they have not been able to take account of:

- changes to government policy under the coalition Government
- the latest Greenhouse Gas Inventory figures for 2022 (1990-2022).

47. The 2022 Greenhouse Gas Inventory figures (released in April 2024) reveal New Zealand’s emissions fell 4% in 2022. This means the demonstration path is out of date and needs to be revised.

48. While we are pleased that the coalition Government broadly supports New Zealand’s existing climate change framework, it has made a number of changes to existing policy platforms which are likely to alter the pathway to net zero.

49. These are well documented, and we do not comment on them here but suffice to say the commission’s final advice will need to take them into account as they will likely result in a different demonstration pathway and emissions budgets.

Sector contributions

50. This section of our submission comments on the energy sector contribution, particularly the role coal plays in electricity generation and industrial processes.

Electricity generation

51. The commission's track shows electricity generation increasing significantly between now and 2050 (an approximately 77% increase) most of the increase being renewables. Fig 4.1 on page 86, shows non-renewable generation in 2050 contributing not just a smaller proportion, but also a smaller level than today.
52. We agree that renewable electricity generation is likely to increase significantly in the coming decades as increased electrification of transport and energy occurs. There seems to be genuine political bipartisan support for this, and steps have been taken by the coalition Government to increase New Zealand's renewable energy generation capacity.
53. We disagree with the commission's analysis which concludes that fossil fuels' share (and level) of electricity generation declines as total electricity generation increases. (See figure 4.1 on page 85).
54. As the commission is aware, coal and other fossil fuels provide energy security by acting as a backup fuel for renewable electricity generation. That back up occurs in dry years when the hydropower is limited; at times when the wind isn't blowing, and the sun is not shining; and also in times of gas outages.
55. We think that the commission has underestimated the role that fossil fuels will need to continue play as a backup as renewable energy increases and the contribution they can make to reducing New Zealand's emissions overall.
56. Where the commission does see a role for fossil fuels as a backup in electricity generation for security of supply, it sees gas playing this role not coal.
57. Last year's demonstration path had coal fired generation ending in 2024 with gas given a longer life path.
58. Even with the Government policy to overturn the ban on oil and gas exploration, uncertainty in gas supply remains as outages at producing assets occur. In April 2024, Genesis Energy announced that it would resume coal imports for at least the next two years to ensure security of supply. Coal is a reliable and flexible energy input, easily stored and transported, and coal should continue to play its vital role to safeguard New Zealand's energy security.
59. This in itself should challenge the assumption in the [background data](#) which shows that coal for electricity generation is expected to drop sharply from 1425GWh in 2024 to 389GWh in 2025.
60. In conclusion, coal (and gas) can make the increased electrification goal easier to achieve and reduce emissions in the process.

Industrial process heat

61. Irrespective of possible changes to government policy (e.g. the discontinuation of the Government Investment in Decarbonising Industry (GIDI) fund), we do not think the assumption of eliminating coal use for food processing before 2037 is achievable.
62. There are a number of issues that need to be considered as New Zealand industry decarbonises. First and foremost, any policies to transition out of coal for industrial process heat must avoid carbon leakage. That is, as already stated, they must not result in economic activity and emissions simply being transferred offshore.

63. Secondly, the commission's emissions budgets must be realistic in terms of how the transition out of coal (and other fossil fuels) occurs and how easily industry is able to take up alternative energy sources.
64. We think the commission is overly optimistic in its assessment of how easy it is for industry to make this transition. The danger of this is that providers of coal (and other fossil fuels) close down before alternative fuels have been found which would be significantly disruptive.
65. Electrification of coal boilers and the increased use of alternative fuels such as biomass and, in the North Island, natural (fossil) gas is likely to occur, but it's highly likely that this won't be to the extent assumed as part of the commission's emissions budgets.

Electrification of boilers

66. In the case of electrification of boilers, the document does not seem to acknowledge that the GIDI Fund has been withdrawn. This will increase the capital cost of boiler conversion which is likely to have an impact on the degree and speed with which conversions occur.
67. Other challenges include the cost of arranging electricity transmission and addressing insufficient electricity capacity in places. The cost of electricity for industrial consumers will be an ongoing issue and this feeds through to both domestic and export customers. It has been estimated that the cost of electricity, in terms of operating costs, is roughly three to four times that of coal per unit of heat produced.

Biomass

68. We also question the extent that biomass is expected to replace coal for industrial process heat, shown for example in Figure 4.2 on page 89.
69. Challenges associated with biomass include its cost, limited quality (e.g. moisture content), the availability and reliability of supply, transport logistics.
70. While we know some individual users have switched or have signalled their intentions to switch to biomass, we are not aware of any evidence that supports the replacement of coal with biomass at the scale proposed. Fonterra once said that to replace its coal-fired boilers with wood biomass it would need access to a forest the size of Belgium, every year, to keep them running. That's just one company. There is not enough biomass currently and new plantings will take decades to mature – a timeframe which does not align with the phasedown period proposed.
71. Add to this the fact that other industries will still need wood products, which biomass to replace coal may be diverted away from, it seems unlikely that New Zealand will be able to create enough biomass in the right locations to meet the commission's demonstration path.
72. It should also be noted that biomass is more emissions intensive than many assume given that the calorific value of biomass is not high and with higher total moisture, efficiency is lost in driving off the water. The impact of this is the huge volume of biomass required, which has an impact on transport emissions to truck larger volumes of biomass to industrial sites, all contributing to higher emissions. In fact, available research, which we are happy to share, shows that in total biomass emits more CO₂ than coal when combusted to produce a unit of energy.
73. For all these reasons it is doubtful that demand for coal will be phased out of industrial process heat as fast as the commission assumes and that leads to a risk that coal supply ends before alternative, affordable and readily available energy sources are in the market. This would result in significant disruption with business closures, job losses, and reliance on imported coal. It makes no sense to close

down coal mining in New Zealand and then import coal to fill the gap. There is no guarantee we will continue to have access to imported coal as global supply tightens.

Review of inclusion of emissions from international shipping and aviation in 2050 target

74. This document considers whether international aviation and shipping should be brought into the target. Currently, the 2050 target includes emissions from domestic shipping and aviation sectors only.
75. We oppose the inclusion of international shipping and aviation emissions into New Zealand's 2050 target.
76. It is true that international shipping and aviation are major contributors to global emissions and need to be addressed but New Zealand should not lead the way on this.
77. As a small, open, remote island nation dependent on international trade and tourism, international transport (sea and air) is very important for New Zealand. These features mean New Zealand will possibly be impacted more than any other country as international shipping and aviation emissions are tackled by the global community.

Impact on trade

78. Including international shipping and aviation emissions in New Zealand's target would prompt policy action to reduce these emissions faster perhaps by encouragement of alternative fuels, or measures to reduce demand. Under both of these, costs would rise and demand for international shipping and aviation to and from New Zealand would reduce.
79. This could have significant impacts for tourism and two-way trade (imports and exports) with flow-on economic and social impacts. New Zealanders' ability to travel overseas would also be impeded.
80. It would impact negatively on the Government's recently announced targets to double the value of New Zealand exports – generally, and mineral exports specifically – over the next 10 years.

Market access / environmental credentials

81. The document argues that a lack of action from New Zealand at this time could enhance the risk of reduced market access through a diminished view of New Zealand's environmental practices among our trade partners.
82. We disagree with this. Firstly, we already meet our obligations under international treaties that have responsibility for these emissions, the International Civil Aviation Organization (ICAO) and the International Maritime Organisation (IMO). Secondly, New Zealand's distance from markets has always allowed overseas protectionist elements to point to the emissions impact of New Zealand exports due to the distance travelled (e.g. "food miles"). To counter this, New Zealand is able to point to its domestic environmental regulations and practices, including its climate change policies as being world class. This applies to the mining sector and the minerals we export.

In conclusion

83. We accept that a carbon price or some other measure to restrict demand is likely to be adopted internationally leading up to 2050 but New Zealand would be foolish to implement these before other countries do. The inevitable outcome of New Zealand leading the way in this area would be a diversion of tourism, trade and international business away from New Zealand to other countries with minimal or no reduction in global emissions.