

Transformational change required across all sectors to meet Climate Change targets

The Climate Change Commission has just released its first package of advice to Government (the Report). The Report includes three proposed emissions budgets and advice on the policy direction for the Government's first Emissions Reduction Plan.

The focus has noticeably shifted to decarbonising and reducing emissions at the source, leaving carbon removals to offset the more challenging sectors. While the Report doesn't discuss policies to achieve this, its supplementary evidence does discuss research into optimising stocking rates which can lead to increased productivity per cow and lower emissions.

The Commission acknowledges that the proposed course requires transformational change across all sectors of the economy. The Report finds that New Zealand is not on track to meet the targets set by the Climate Change Response (Zero Carbon) Amendment Act 2019 (**Zero Carbon Act**) and that accelerated action is required to put New Zealand on a pathway to quickly, significantly and permanently reduce greenhouse gas emissions.

The Zero Carbon Act set emissions targets for New Zealand, aiming to reduce emissions of all greenhouse gases (except biogenic methane) to net zero by 2050 and reduce emissions of biogenic methane to at least 10% by 2030 and 24-47% by 2050, compared to 2017 levels. It established a system of emissions budgets to reach those targets, requiring the Government, with input from Māori/iwi and local government, to produce an Emissions Reduction Plan outlining policies to implement those budgets.

The Climate Change Commission was established through the Zero Carbon Act to provide independent,

expert advice to Government on climate change issues and to monitor and review its progress towards emission reduction. Consultation with the public is an important part of its role and when engaging with iwi the Commission has sought to give effect to Treaty principles, with an emphasis on rangatiratanga and prioritising a kaitiaki approach to resource management.

In this article we provide a high-level summary of the key recommendations in the Report, with particular focus on the coal, oil and gas, forestry and agriculture sectors.

Emissions budgets

Three emissions budgets are proposed which set the maximum amount of greenhouse gases New Zealand can emit over a five year period up until 2035:

- Budget 1 (2022-2025);
- Budget 2 (2026-2030);
- Budget 3 (2031-2035).

The budgets are based on analysis informing the Commission about the rate at which New Zealand should move towards the 2050 targets. We summarise how the Commission is proposing to achieve these targets and look at what this will mean in practical terms below.

Coal, oil and gas

2022-2030	Replace coal with biomass and electricity
2031-2035	Replace gas with biomass and electricity
By 2037	Eliminate coal for food processing

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Numerous industries regularly use coal fired heat to grow, clean, manufacture and process food. Fossil fuel used in heating and industry is to be phased out where possible and boilers should be rapidly converted to electricity or biomass (providing an opportunity for the forestry sector, discussed below).

The Commission expects no new natural gas connections to buildings to be made after 2025 and existing connections to be phased out by 2050. The move away from gas connections will particularly impact small businesses, such as restaurants and cafes which predominantly rely on gas for hot water and cooking equipment.

The coal mining and oil and gas sectors and the services that support them are likely to experience a rapid decline with the transition away from fossil fuels. It is estimated that these could result in 600 -1,100 fewer jobs across these sectors by 2035.

Regions which are able to use biomass as a fossil-fuel alternative will benefit from its low cost. There will be opportunity for employment brought about by the need for supply chains for gathering and processing biomass, along with establishment of local markets. In regions where there is not significant forestry, electric boilers will be needed at significantly higher operational cost. Expansion of the electricity transmission and distribution grids will be necessary to meet electricity needs.

Agriculture

2022-2025	Adopt low emissions practices on-farm
From 2025	Transforming dairy land into horticulture at a rate of 1,000 ha per year
2026-2030	Adopt low emissions breeding for sheep
By 2030	Seek to reduce beef and sheep numbers by around 15%
2031-2035	Encourage the adoption of new low methane technologies when available

In agriculture, methane reduction targets can be met purely through existing farm management practices and the use of selective breeding for low emissions sheep. There are changes farmers can make now to reduce emissions on their farms while maintaining or even improving productivity. This includes reducing animal numbers and better animal, pasture and feed management. Policy support is needed to make this happen.

New technologies are not needed to meet the current targets. The Commission has designed the emissions budgets to be met with currently available technology and not reliant on new technologies like methane vaccines or inhibitors or selective breeding for low emissions dairy cattle. However, it acknowledges we are going to need those technologies post 2035 in order to meet the next set of targets.

Forestry

2022-2030	Ramp up establishing new native forests; Average 25,000 hectares per year of new exotic plantation forests
2031-2035	Establish 25,000 hectares native forests per year; Ramp down planting new exotic plantation forest for carbon storage

Waste from plantation forests should be turned into biofuel and new, permanent native forests should be planted to serve as a long-term sink for residual emissions. Incentives are needed to get more native trees planted. However, pine trees will still play an important role in reaching the 2050 targets and could support a future bioeconomy, as bioenergy to replace fossil fuel and as timber for building.

Ministry for Primary Industries forecasts around 12,000 ha new native forests will be established in 2021. The Commission proposes ramping this up to 25,000 ha per year from 2030, assuming no further native deforestation occurs after 2025.

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Transport

Transport is a focus for change and is an aspect of all sectors we have touched on. The Commission wants to see the majority of vehicles coming into New Zealand for everyday use to be electric by 2035. Use of low carbon fuels, such as biofuels and hydrogen, need to increase, in particular in heavy trucks, trains, planes and ships. The Commission says significant amounts of freight should be moved off the roads and onto rail and coastal shipping, which are easier to electrify. Heavy trucks are slower to electrify as current battery technology does not allow for the greater daily distances needed.

By 2035 the goal is for 69% of heavy trucks to be electric. The switch to electric vehicles, change in fuel and the pressure to move freight off roads will require all sectors to reconsider the role of transport in their businesses.

Renewable energy

New Zealand will be maximising its use of electricity which makes increasing our renewable energy sources a priority. More renewable generation sources will need to be built in the 2020s, with rapid expansion of renewable wind and solar generation required in the 2030s to meet increasing electricity demands.

In 2018, 40% of New Zealand's electricity supply was from renewable generation. The remaining 60% came from oil, natural gas and coal. The Commission advises Government to set a renewable generation target to increase the renewable proportion to at least 60% by 2035. The Commission recommends that Government set milestones for 2025 and 2030 and produce an energy strategy to provide clear objectives and infrastructure to support its delivery. The Commission's aspirational target is 100% renewable electricity supply, which is to be considered in the broader context of the energy system, including electricity, process and building heat and transport.

Government support needed to transition

While the overall costs of meeting the targets are likely to be less than 1% of the projected GDP, the Report acknowledges they will not be evenly felt. The Government will need to address this through careful policy design and targeted support, while recognising and encouraging the benefits that come from the changes.

There is no question there will be changes to employment as New Zealand moves to low emissions. While some businesses will need to close, the Commission points out there will also be many opportunities for new industries, businesses and employment. It is recommended that the Government develop an Equitable Transitions Strategy to support New Zealanders and to ensure an equitable, inclusive and well-planned climate transition. The Commission recognises that to achieve this goal we need to understand that all things are connected: the people, the land, the atmosphere, the oceans. This connectivity – material and non-material – is central to Te Ao Māori.

What are the next steps?

Public consultation on the Report is open from **1 February-14 March 2021**. The preferred method to provide your feedback is by completion of an online survey (haveyoursay.climatecommission.govt.nz) although it is still possible to supply a written submission.

The final Report is to be released before 31 May 2021. The Minister is not bound to follow the Commission's advice but must give reasons for any departures.

The Government has until 31 December 2021 to accept the Commissioner's proposed budgets or to produce its own and to create an Emissions Reduction Plan for meeting the budgets.

A number of other target dates are proposed for Government in the Report, including: creating a separate climate change appropriation for budget funding by 31 March 2022; outlining a plan for developing partnerships between iwi/Māori and central and local government by the end of 2022; and drafting

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an Equitable Transitions Strategy linked to the country's Economic Plans by 31 December 2023.

The Commission will continue to monitor Government's progress and provide further advice as necessary in its Annual Monitoring Reports. It will also conduct a Climate Risk Assessment at least every six years, to provide a picture of how New Zealand may be affected by climate change related hazards and to identify the most significant risks and opportunities.

Want to know more?

If you have any questions about the [Climate Change Commission Report](#) or would like our assistance preparing a submission, please contact our specialist [Environment, planning, and natural resources team](#); [Corporate team](#); or [Commercial Property team](#).