



Potential domestic contribution to New Zealand's second Nationally Determined Contribution

A Ministry for the Environment summary of the report released by He Pou a Rangi | Climate Change Commission in November 2024. [Read the full report.](#)

Nationally determined contributions

Under the [Paris Agreement](#), Parties set [Nationally Determined Contributions \(NDCs\)](#), to indicate their contribution to the collective global effort on climate change during a set period. This can be made up of domestic reductions and international contributions (that is, supporting other countries to reduce emissions overseas). The Paris Agreement states that successive NDCs should always represent a progression from the current one and reflect that country's highest possible ambition.

New Zealand's first Nationally Determined Contribution (NDC1) covers 2021–30. Its headline target is a 50 per cent reduction of net emissions below gross 2005 levels by 2030.

Our second Nationally Determined Contribution (NDC2) will:

- cover 2031–35, the same period as our third domestic emissions budget
- be based on a range of evidence and information that the Government uses to determine New Zealand's *highest possible ambition*
- be set by the Government by February 2025.

The Climate Change Commission report

In June 2024, the [Government](#) requested a report from He Pou a Rangi | Climate Change Commission (the [Commission](#)) on the domestic emissions reductions that New Zealand could

achieve as part of NDC2¹. The Commission provided this report to the Minister of Climate Change in October 2024. The report provides important context for people wishing to provide feedback to the Government on NDC2

Scope of the report

The Commission's report:

- only examines one aspect (domestic emissions reductions) of setting the NDC
- does not make any recommendations about what level NDC2 should be set at

When setting NDC2, the Government will need to consider other domestic and international factors, including whether New Zealand should use international emissions reductions (offshore mitigation) as part of achieving NDC2.

Key findings

The Commission's main finding is that New Zealand could achieve greater net emissions reductions in the NDC2 period (2031–35) than in NDC1 through domestic action alone. Compared to NDC1 (which had a headline target of 50 per cent below 2005 levels), the Commission found that domestic action could contribute to emissions reductions of up to 69 per cent² below 2005 levels by 2035 for NDC2 (assuming the same accounting approach to NDC1 is applied to NDC2). It also notes that:

- actions to achieve these emissions reductions would need to start before 2031 to be effective
- delaying action, or introducing policies that encourage high-emission activities, may make it impossible to make these contributions to emissions reductions through domestic action
- the target contribution of 69 per cent requires New Zealand to assume faster and higher adoption rates of technology and systems changes than are currently expected.

Modelled scenarios

The Commission modelled three potential scenarios³. These scenarios represent different emissions reduction trajectories that could realistically meet our 2050 target. The Government can consider these scenarios when determining the domestic contribution to NDC2.

The Commission's modelled scenarios include:

¹ Request made under Section 5K of the Climate Change Response Act 2002, to help the Government make decisions when setting NDC2.

² Taking the point-year method results.

³ Taken from their draft advice to the Government on the fourth emissions budget.

² Potential domestic contribution to Aotearoa New Zealand's second Nationally Determined Contribution

- a high-ambition scenario called High Technology and High Systems Change (draft HTHS)
- a scenario with a lower level of change called Low Technology and Low Systems Change (draft LTLS)
- a central pathway (the draft demonstration path for EB4)
- a reference scenario, which reflects Government policies as of 1 July 2023.

Table 1: Key findings from the Commission’s NDC2 advice when NDC2 is expressed as a point year target

Scenario	Domestic contribution to an NDC2 target when presented as a point-year ⁴				Corresponding emissions budget (2031–35) (Mt CO ₂ -e)
	NDC2 starts at projected 2030 net emissions (same accounting approach to NDC1)	NDC2 starts at NDC1 endpoint (as set in 2021)	NDC2 starts at NDC1 endpoint (updated for 2023 GHGI, holding 50% constant)	NDC2 starts at NDC1 endpoint (updated for 2023 GHGI, holding 41% constant)	
Low Technology, Low Systems Change	47%	40%	39%	40%	240
EB4 Demonstration Path	58%	54%	53%	54%	205
High Technology, High Systems Change	69%	69%	69%	69%	165

For the full findings, including the target presented following the ‘budget approach’, see table A3 in the [Climate Change Commission’s report](#).

Notes to the Commission’s analysis

- The Commission applied several approaches to calculate percentage emissions reductions in 2035, each of which gives different results. It did not advise which method to use.
- The scenarios are based on data from the 2023 New Zealand Greenhouse Gas Inventory and consider Government policies as of July 2023.
- The data sources have since been updated and will be incorporated into the Commission’s final advice on emissions budget 4, due by the end of 2024.
- The report shows the range of feasible domestic reductions New Zealand could achieve for NDC2, although the precise findings for NDC2 target contributions and corresponding emissions budgets could change when recalculated with more up-to-date data. The Commission does not plan to update its NDC2 advice for these data updates but will provide supporting data on its website so that others can update its analysis.

⁴ The NDC2 headline targets assume NDC2 uses the same accounting approach as NDC1.

Relevant sector actions

The three modelled scenarios include different levels of uptake of actions from six key sectors (energy, industrial processes and product use, transport, agriculture, forestry and waste). The actions that could contribute significantly to emissions reductions in the NDC2 period include:

- electrifying road transport and shifting transport modes
- decarbonising industrial heat and production processes
- adjusting sheep, beef, and dairy herd sizes through land use and stock choices, and other productivity improvements
- developing low-methane livestock breeds
- expanding geothermal carbon capture and reinjection
- diverting organic waste and capturing landfill gas
- maintaining high rates of afforestation
- increasing renewable electricity generation
- managing the electricity system (including demand management and increased storage) to support decarbonisation

Economic and other impacts

The Commission's report reviews the economic impacts of each scenario compared to a reference economic scenario (based on 2023 projections). The report shows that GDP would increase in all scenarios between 2030 and 2035.

The economic analysis does not capture all the costs and benefits of reducing emissions, but studies show significant health benefits from decarbonising transportation. For instance, reduced air pollution in 2031–35 could have benefits worth \$2.3 billion (under the LTLS scenario), \$9.3 billion (EB4 demonstration path) or \$12.1 billion (HTHS).

Next steps

New Zealanders will have an opportunity to give their feedback on NDC2 from 19 November – 8 December 2024. [Provide your feedback here.](#)

The Ministry for the Environment will analyse this feedback to help form its advice to the Government on the NDC2 target.

The Government will publish NDC2 in February 2025.

