

The NZ Climate Change Commission



- The Zero Carbon Act 2019
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The Zero Carbon Act 2019



Climate Change Response (Zero Carbon) Amendment Act 2019

Public Act 2019 No 61
Date of assent 13 November 2019
Commencement see section 2

Contents

- 1 Title
- 2 Commencement
- 3 Principal Act

Part 1

Climate Change Commission, emission reduction, and adaptation

- 4 Section 3 amended (Purpose)
- 5 Section 3A amended (Treaty of Waitangi (Te Tiriti o Waitangi))
- 6 Section 4 amended (Interpretation)
- 7 New section 4A inserted (Transitional, savings, and related provisions)

4A Transitional, savings, and related provisions

- 8 New Parts 1A to 1C inserted

Part 1A

Climate Change Commission

Subpart 1—Establishment and appointments

- 5A Climate Change Commission established
- 5B Purposes of Commission
- 5C Commission is Crown entity
- 5D Membership of Commission

The Zero Carbon Amendment Act

Amends the *Climate Change Response Act 2002*, which established NZ's emissions trading scheme [Kyoto Protocol \(1997\)](#)

The amendment adds:

- National Adaptation Plans [Cancún \(2010\)](#)
- Reduction target and budgets [Paris Agreement \(2015\)](#)

Amendments are in sections 5A to 5ZX

www.legislation.govt.nz



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Part 1A

Climate Change Commission

Subpart 1—Establishment and appointments

5A	Climate Change Commission established
5B	Purposes of Commission
5C	Commission is Crown entity
5D	Membership of Commission

Part 1A: Climate Change Commission

Functions:

- Provide advice
- Make recommendations
- Monitor and report on progress (target and budgets)
- Prepare and provide other reports

Role covers all three aspects of Act:

- Emissions trading scheme
- Emission reduction
- Adaptation

Part 1A: Climate Change Commission

Subpart 1—Establishment and appointments

Subpart 2—Commission's functions, duties, and powers



Adaptation

Part 1C:

- First risk assessment was completed ([August 2020](#))
- National Adaptation Plan due by August 2022
- Extensive powers to require information from reporting organisations
- Minister or Commission can request information
- Act and regulations specify information to be reported

Part 1C: Adaptation

- *National climate change risk assessment*
- *National adaptation plan*
- *Progress reports*
- *Power to request provision of information*

Reporting Organisations:

- Local authorities
- Council-controlled organisations
- Crown entities (Crown Entities Act) not school boards
- Crown companies (Public Finance Act)
- State-Owned Enterprises (SOE Act)
- Lifeline utilities (Emergency Management Act)
- New Zealand Police
- New Zealand Defence Force

Emissions Reduction Part 1B:

2050 target

- Set in statute
- All GHG to be zero by 2050 (from 2017) except biogenic methane
- Target range for biogenic methane: 24% to 47% less by 2050
- By end of 2024, advise Minister on whether the 2050 target should include emissions from international shipping and aviation

Part 1B: Emission reduction

Subpart 1—2050 target

Subpart 2—Setting emissions budgets

Subpart 3—Role of Commission to advise on emissions budgets

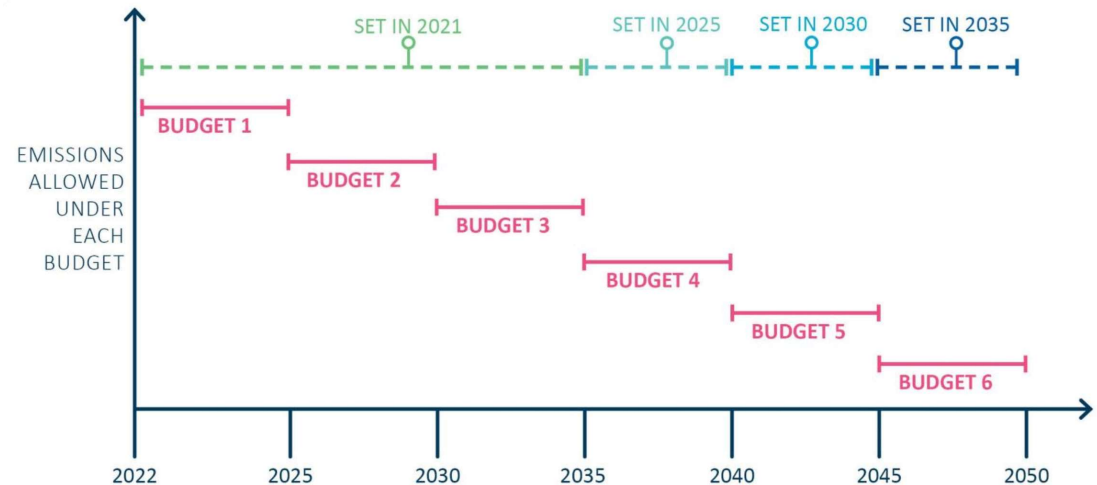
Subpart 4—Monitoring

Subpart 5—Effect of 2050 target and emissions budgets

Subpart 6—Recommendations about making regulations

1B: Subpart 2 Emissions Budgets

- Six budget periods
- One in place and 2 prospective at any time
- Must state total emissions permitted, for all gasses, for the period
- Met by domestic reductions and removals, as far as possible



1B: Subpart 3 CCC to advise on budgets

Must advise Minister on:

- Quantity of emissions
- Rules for measuring progress
- How budgets will be realistically met
- Amount of each gas
- Domestic & offshore reductions

Must consult with public

Must have regard for matters in section 5ZC

Subpart 3—Role of Commission to advise on emissions budgets

Subpart 3: inserted, on 14 November 2019, by section 8 of the Climate Change Response (Zero Carbon) Amendment Act 2019 (2019 No 61).

5ZA Commission to advise Minister

- (1) The Commission must advise the Minister on the following matters relevant to setting an emissions budget:
 - (a) the recommended quantity of emissions that will be permitted in each emissions budget period; and
 - (b) the rules that will apply to measure progress towards meeting emissions budgets and the 2050 target; and
 - (c) how the emissions budgets, and ultimately the 2050 target, may realistically be met, including by pricing and policy methods; and
 - (d) the proportions of an emissions budget that will be met by domestic emissions reductions and domestic removals, and the amount by which emissions of each greenhouse gas should be reduced to meet the relevant emissions budget and the 2050 target; and
 - (e) the appropriate limit on offshore mitigation that may be used to meet an emissions budget, and an explanation of the circumstances that justify the use of offshore mitigation (*see* [section 5Z](#)).
- (2) In preparing advice for the Minister under subsection (1), the Commission must have regard to the matters set out in [section 5ZC](#).
- (3) Before the Commission provides advice to the Minister on an emissions budget, it must—
 - (a) make the proposed advice publicly available and invite comments on that advice; and
 - (b) allow adequate time and opportunity for any submissions to be received, heard, and considered by the Commission.
- (4) The Commission must provide its advice to the Minister,—
 - (a) in the case of the first 3 emissions budgets, no later than—
 - (i) 1 February 2021; or
 - (ii) after a request by the Commission to extend the deadline, any date on or before 1 August 2021 that is specified by the Minister (whether once or more) by notice in the *Gazette*;
 - (b) in the case of all subsequent emissions budgets, at least 12 months before an emissions budget must be notified under [section 5ZD](#) (or at least 15 months before, if a general election is to take place in that year).

Section 5ZA: inserted, on 14 November 2019, by section 8 of the Climate Change Response (Zero Carbon) Amendment Act 2019 (2019 No 61).

Section 5ZA(4)(a): replaced, on 23 June 2020, by section 14 of the Climate Change Response (Emissions Trading Reform) Amendment Act 2020 (2020 No 22).

Click on image for source

Consideration & Consultation

Commission must consider:

- Scientific knowledge
- Technological developments*
- Economic effects
- Social, cultural, etc circumstances
- Distribution between generations
- Crown/Māori relationship
- Changes to UNFCCC

Commission must:

- *Must* proactively engage
- *May* invite submissions on discussion papers
- *May* undertake other consultation (*must* in 5ZA)

5M Matters Commission must consider

In performing its functions and duties and exercising its powers under this Act, the Commission must consider, where relevant,—

- (a) current available scientific knowledge; and
- (b) existing technology and anticipated technological developments, including the costs and benefits of early adoption of these in New Zealand; and
- (c) the likely economic effects; and
- (d) social, cultural, environmental, and ecological circumstances, including differences between sectors and regions; and
- (e) the distribution of benefits, costs, and risks between generations; and
- (f) the Crown-Māori relationship, te ao Māori (as defined in [section 5H\(2\)](#)), and specific effects on iwi and Māori; and
- (g) responses to climate change taken or planned by parties to the Paris Agreement or to the Convention.

Section 5M: inserted, on 14 November 2019, by [section 8](#) of the Climate Change Response (Zero Carbon) Amendment Act 2019 (2019 No 61).

5N Consultation

(1) In performing its functions and duties and exercising its powers under this Act, the Commission must—

- (a) proactively engage with persons the Commission considers relevant to the functions, duties, and powers; and
- (b) where the Commission considers it is necessary, provide for participation by the public.

(2) The Commission may—

- (a) make publicly available, and invite submissions on, discussion papers and draft reports; and
- (b) undertake any other type of consultation that it considers necessary for the performance of its functions and duties under this Act.

Section 5N: inserted, on 14 November 2019, by [section 8](#) of the Climate Change Response (Zero Carbon) Amendment Act 2019 (2019 No 61).

Section 5N(2)(a): replaced, on 23 June 2020, by [section 13](#) of the Climate Change Response (Emissions Trading Reform) Amendment Act 2020 (2020 No 22).

1B: Subpart 3

Then what happens?

The Minister of Climate Change

- prepares and publishes a plan, based on advice from the Commission,
- then publishes it and presents it to Parliament.

5ZG: The Minister must prepare and make publicly available a plan setting out the policies and strategies for meeting the next emissions budget.

5ZH: The Commission must provide to the Minister advice on the direction of the policy required in the emissions reduction plan for that emissions budget period.

5ZI: The Minister must—

- (i) publish the plan in the *Gazette*; and
- (ii) make the plan publicly available; and
- (iii) present a copy of the plan to the House of Representatives.

5ZI (3): The Minister may, at any time, amend the plan and supporting policies and strategies to maintain their currency... using the same process as required for preparing the plan.

Click on image for source

1B: Subpart 5: Constraint on Legal Action

There is no legal remedy or relief for failure to meet 2050 target or an emissions budget, but;

A court may make a declaration to that effect, and then, (after all rights of appeal are disposed of);

the Minister may table the Court's declaration in the House of Representatives.

Subpart 5—Effect of 2050 target and emissions budgets

Subpart 5: inserted, on 14 November 2019, by section 8 of the Climate Change Response (Zero Carbon) Amendment Act 2019 (2019 No 61).

5ZM Effect of failure to meet 2050 target and emissions budgets

- (1) No remedy or relief is available for failure to meet the 2050 target or an emissions budget, and the 2050 target and emissions budgets are not enforceable in a court of law, except as set out in this section.
- (2) If the 2050 target or an emissions budget is not met, a court may make a declaration to that effect, together with an award of costs.
- (3) If a declaration is made and becomes final after all appeals or rights of appeal expire or are disposed of, the Minister must, as soon as practicable, present to the House of Representatives a document that—
 - (a) brings the declaration to the attention of the House of Representatives; and
 - (b) contains advice on the Government's response to the declaration.

Section 5ZM: inserted, on 14 November 2019, by section 8 of the Climate Change Response (Zero Carbon) Amendment Act 2019 (2019 No 61).

Click on image for source

The CCC's draft advice



2021 Draft
Advice for
Consultation

The Advice document

Executive Summary is 11 pages.

Advice Report is 193 pages, consultation questions scattered throughout

Evidence Report is 630 pages in 18 Chapters

Chapter 4b: Reducing emissions from transport, buildings and urban form

EXECUTIVE SUMMARY

This is a high-level summary of our draft advice to Government on climate action in Aotearoa. It covers our key themes and recommendations. Read this if you are looking for an introduction to our advice.

[Download executive summary](#)  - (PDF 446kb)

[Download executive summary](#)  - (Word 255kb)

ADVICE REPORT

This is our core document. It contains the full draft advice of He Pou a Rangi – the Climate Change Commission. It outlines our recommendations for reducing emissions in Aotearoa and suggests the direction of policy that Aotearoa could take to get there. This is a comprehensive read and provides the detail you need to make a submission.

Part A of the advice document includes:

- Recommendations on the first three emissions budgets
- Policy direction for the Government's first emissions reduction plan.

Part B of the advice document includes:

- A review of the country's first Nationally Determined Contribution
- Advice on the eventual reductions needed in biogenic methane emissions.

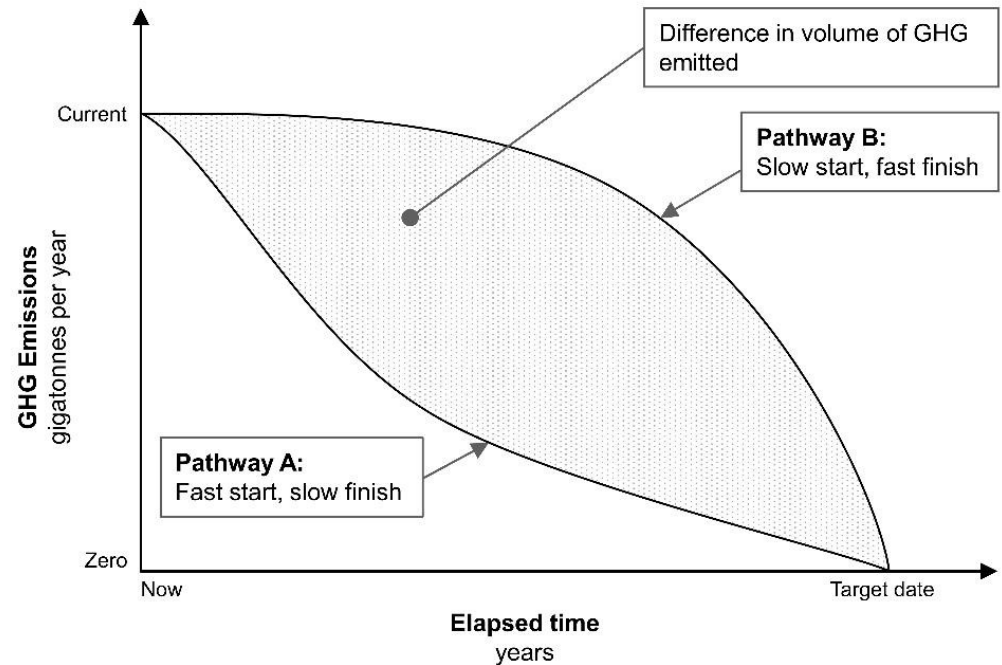
[Download advice report](#)  - (PDF 4 mb)

[Download advice report](#)  - (Word 4.37mb)

Pathways to Zero Emissions

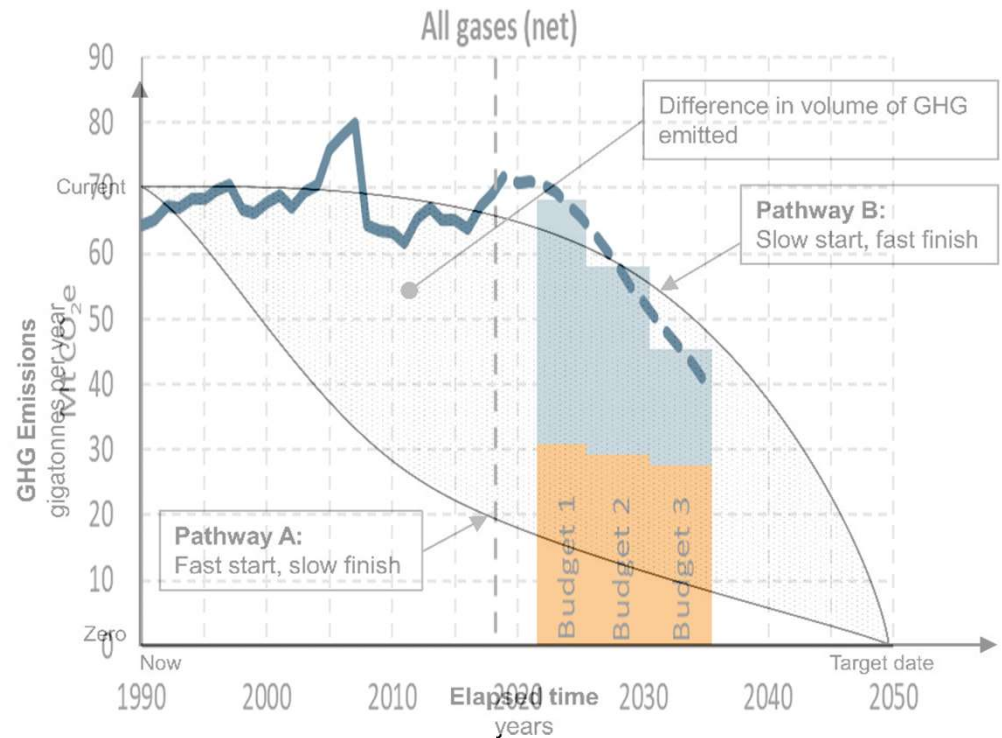
Areas under each curve represent different budgets

The difference between pathways (and budgets) is an irrecoverable volume of GHG emissions.



Commission's proposed 1st three budgets

Taking 1990 as the starting point, NZ is on the **Slow start, fast finish** pathway.

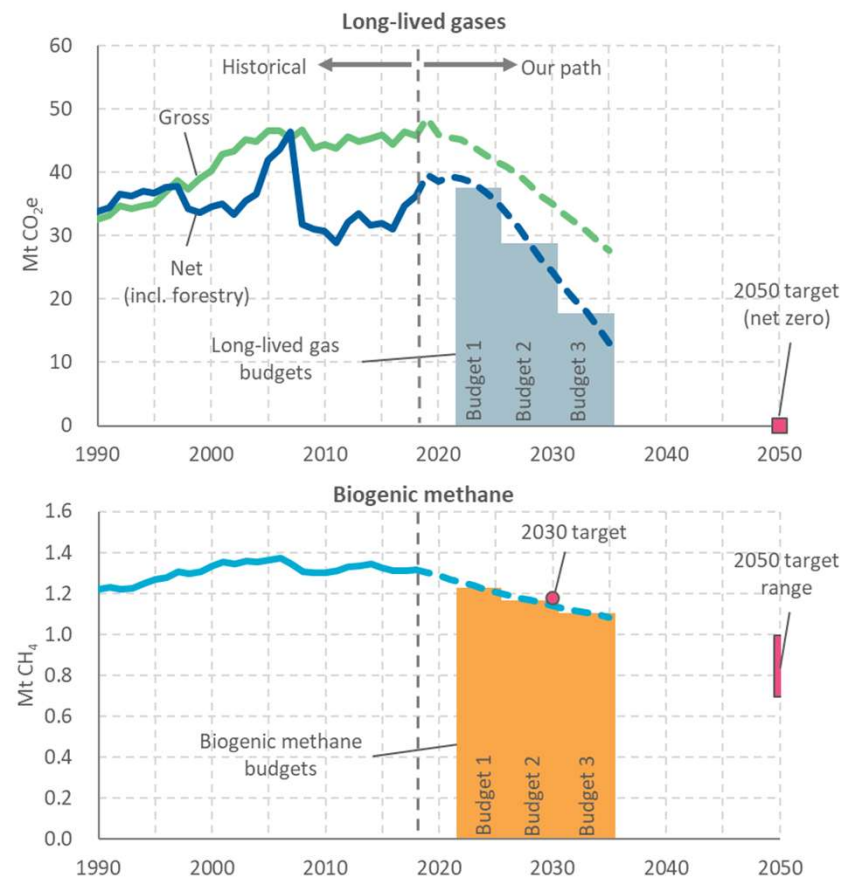


Biogenic Methane

The 2050 target range for methane (CH_4) is set in the Act.

Climate Change Commission cannot advise the Minister to review the CH_4 target range.

CO_2 reductions (esp. transport) have to reduce dramatically.



Scenarios

Four scenarios were fed into economic analysis modelling

Outcomes dependent on:

- Technology Change
- Behaviour Change

Neither = *Headwinds*

Both = *Tailwinds*

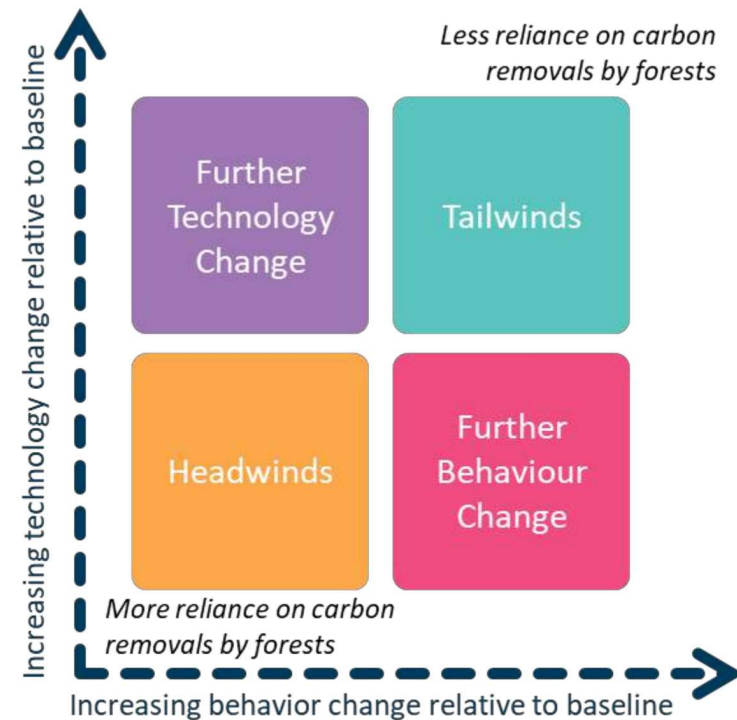


Figure 8.1: Scenario structure

CO₂ Scenario Pathways

CCC budgets would meet 2050 target for carbon dioxide under all scenarios

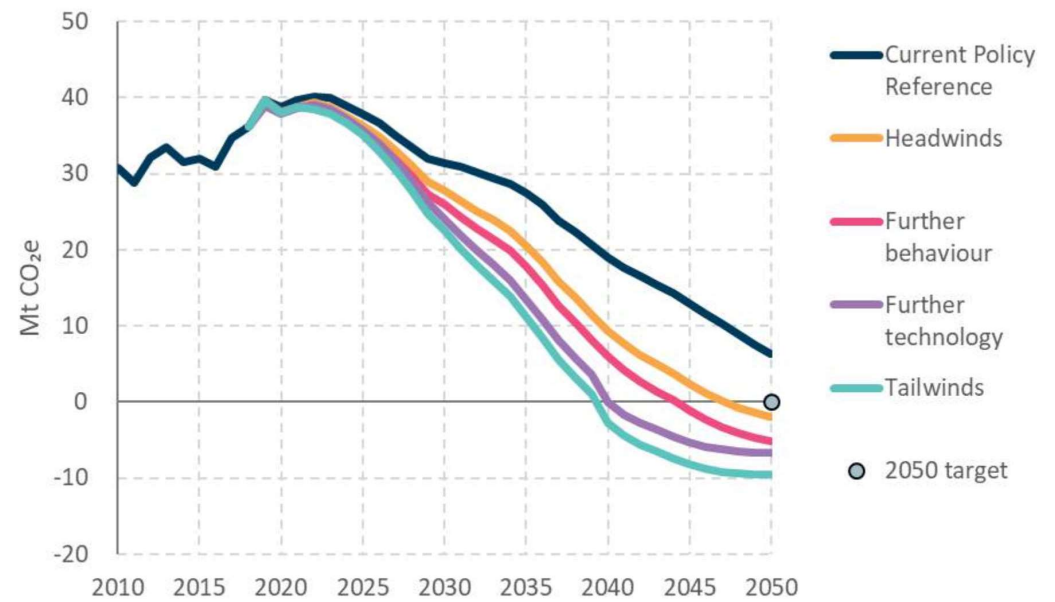


Figure 8.3: Net long-lived gas emissions from 2010-2050

CH₄ Scenario Pathways

CCC budgets could exceed 2050 CH₄ target range under favourable conditions.

Requires development and deployment of methane vaccines/inhibitors.

Modest reduction in national dairy and sheep herds.

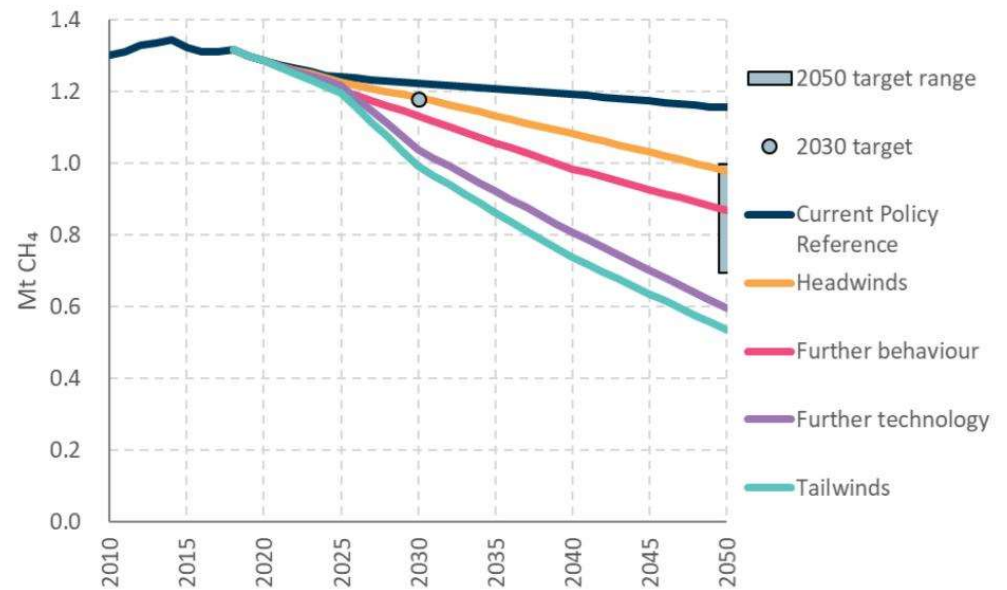


Figure 8.6: Biogenic methane emissions from 2010-2050

Ministerial Requests

The Act allows the Minister to request reports from the Commission.

And he has requested reports on two matters, as part of the current process:

- NZ's Nationally Determined Contribution (NDC) under the Paris Agreement
- The 2050 Targets in the Act

5K Reports to Government

- (1) The Minister may, at any time, request that the Commission prepare reports to the Government on matters related to reducing emissions of greenhouse gases and adapting to the effects of climate change.
- (2) Before making a request, the Minister must consult the Commission about the terms of reference for the requested report, which may, without limitation, specify—
 - (a) the scope of the report; and
 - (b) requirements concerning consultation; and
 - (c) matters relating to the Commission working jointly with other agencies (including overseas agencies) concerned with the subject matter of the report; and
 - (d) the date by which the Commission must submit its report to the Minister.
- (3) On receiving a request from the Minister, the Commission must,—
 - (a) as soon as practicable, make the terms of reference publicly available; and
 - (b) prepare a report in accordance with the terms of reference; and
 - (c) provide the report to the Minister.

Section 5K: inserted, on 14 November 2019, by [section 8](#) of the Climate Change Response (Zero Carbon) Amendment Act 2019 (2019 No 61).

Part B of the Advice Report

Initial response to Minister's Requests

NDC in Chapter 8:

NZ's promised contribution is not enough to achieve 1.5 degrees.

Biogenic Methane in Chapter 9:

We will have to set stronger methane targets than currently specified in the Act.

Page 158:

NDC recommendation 1

Compatibility of the NDC with contributing to a global effort towards keeping warming to 1.5°C

We advise that the first NDC is not compatible with Aotearoa making a contribution to global efforts under the Paris Agreement to limit warming to 1.5°C above pre-industrial levels.

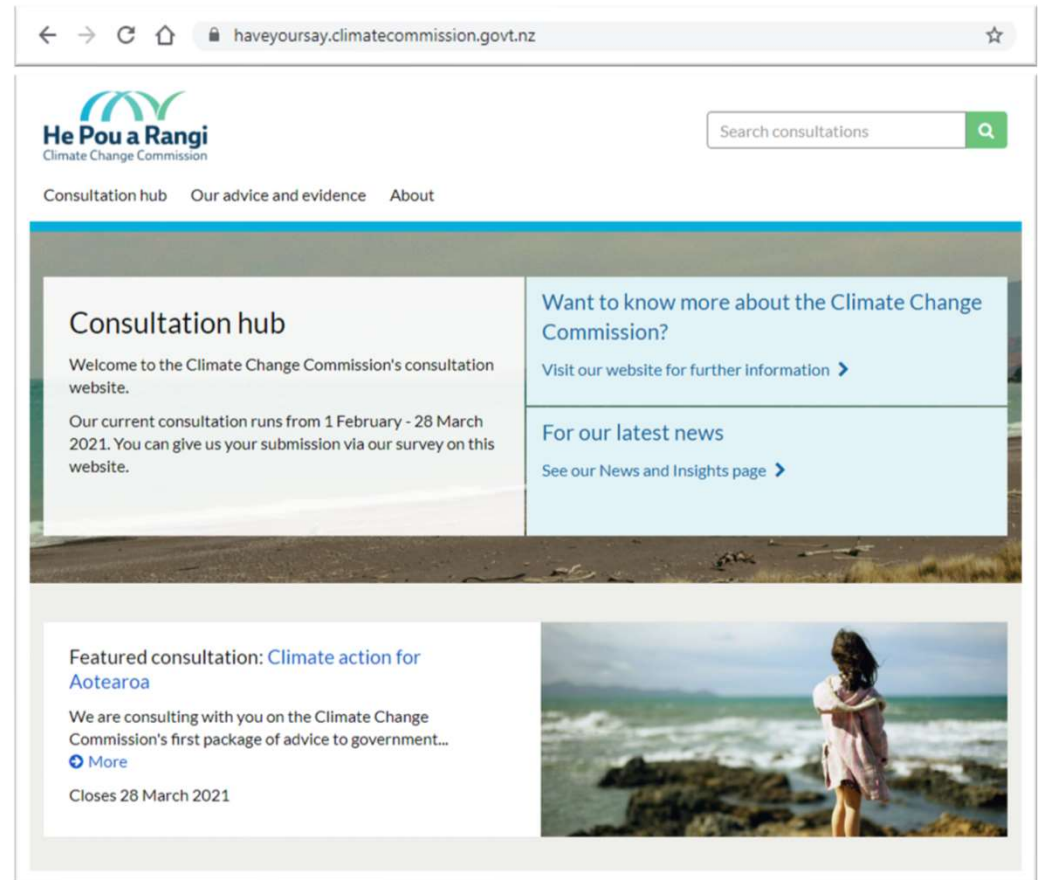
Page 185:

Biogenic methane recommendation 1

Reductions in biogenic methane that might be required of Aotearoa in the future as part of a global effort to limit warming to 1.5°C

We advise that the reductions in emissions of biogenic methane that Aotearoa may eventually need to make as part of a global effort to limit temperature increase to 1.5°C could be between 49% and 60% below 2017 levels by 2100.

ANZSEE submission



Don't let the perfect be the enemy of the good!

ANZSEE commends and supports:

- CCC has done a lot of work in a short timeframe.
- Their advice is constrained by legislation.
- But some improvements could be made in future budget-setting rounds.

We recognise that the Commission's advice on biogenic methane emissions in the first three budget periods has been constrained by statutory targets and shaped by other requirements in section 5M of the Climate Change Response Act 2002 such as taking "anticipated technological developments" into account, rather than relying on proven available technologies.

Within that statutory context, we recognise that the Commission has gone to a great deal of effort, in a relatively short space of time, and produced advice that ANZEE commends and supports.

The comments that follow are submitted as thoughts and reflections on the policy development process and economic modelling that has been done to date, and how it has been communicated in the Advice Report and Evidence Report.

We present this feedback as suggestions for future consideration when the Commission comes to producing its next set of budget recommendations.

Moral, not technical, decisions

Climate Change is pure market failure:

“... future generations are unable to bid for natural resources or emissions in contemporary markets, so we (current generations) cannot know what value they would place on them...”

Inevitably, then, the wellbeing of future generations is dependent on decisions that we make about the price and quantity of GHG emissions today.

The question that we face is fundamentally a stark moral choice: should we value the wellbeing of future generations as much as we value our own?

The economic analysis and policy recommendations must necessarily follow from how we answer that question.

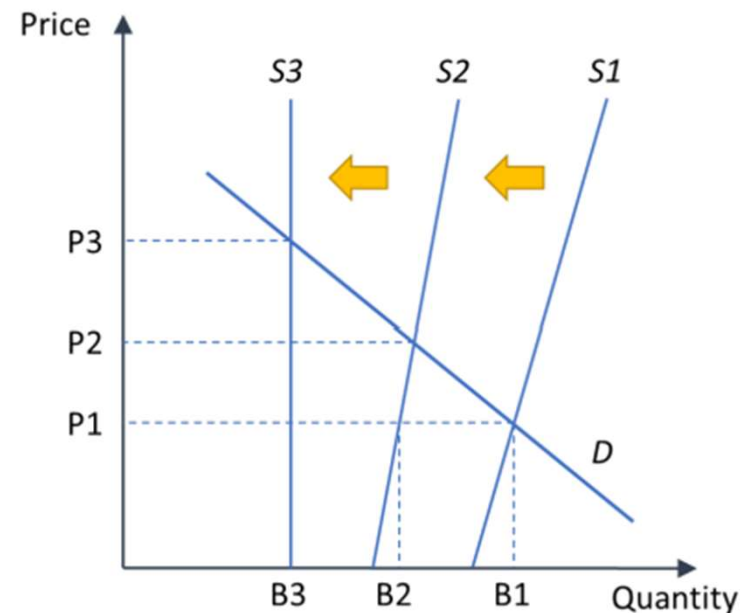
It seems to us that the Commission has not taken a clear position on answering that question. Nor has the Commission clearly expressed the moral choice as one that the Minister and Parliament must make, when deciding to set GHG emissions budgets, then developing the Emissions Reduction Plan in accordance with section 5ZG of the Act, and then implementing it.

Carbon Budgets, Supply Elasticities, Substitution, and Political Naivety

...a rational, self-interested, economic actor might make the moral choice of ignoring the interests of future generations and focusing instead on their own short-term interests.

They might then decide it is cheaper and more profitable to “change the rules of the game”, rather than responding to market signals and embracing innovation and change.

Figure 1: Supply quantity and elasticity - sequential budgets




Economic Modelling

Based on the EPPA Model

ANZSEE gave feedback on:

- Intergenerational discounting
- The financial sector
- Ownership of natural resources
- Assumptions about economic growth

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SCIENCE AND POLICY
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JOINT PROGRAM REPORT

The MIT Emissions Prediction and Policy Analysis (EPPA) Model: Version 4

Paltsev, S., J.M. Reilly, H.D. Jacoby, R.S. Eckaus, J. McFarland, M. Sarofim, M. Asadoorian and M. Babiker (2005)
Joint Program Report Series, 72 pages

Report 125 [\[Download\]](#)

Abstract/Summary:
The Emissions Prediction and Policy Analysis (EPPA) model is the part of the MIT Integrated Global Systems Model (IGSM) that represents the human systems. EPPA is a recursive-dynamic multi-regional general equilibrium model of the world economy, which is built on the GTAP dataset and additional data for the greenhouse gas and urban gas emissions. It is designed to develop projections of economic growth and anthropogenic emissions of greenhouse related gases and aerosols. The main purpose of this report is to provide documentation of a new version of EPPA, EPPA version 4. In comparison with EPPA3, it includes greater regional and sectoral detail, a wider range of advanced energy supply technologies, improved capability to represent a variety of different and more realistic climate policies, and enhanced treatment of physical stocks and flows of energy, emissions, and land use to facilitate linkage with the earth system components of the IGSM. Reconsideration of important parameters and assumptions led to some revisions in reference projections of GDP and greenhouse gas emissions. In EPPA4 the global economy grows by 12.5 times from 2000 to 2100 (2.5%/yr) compared with an increase of 10.7 times (2.4%/yr) in EPPA3. This is one of the important revisions that led to an increase in CO2 emissions to 25.7 GtC in 2100, up from 23 GtC in 2100 projected by EPPA3. There is considerable uncertainty in such projections because of uncertainty in various driving forces. To illustrate this uncertainty we consider scenarios where the global GDP grows 0.5% faster (slower) than the reference rate, and these scenarios result in CO2 emissions in 2100 of 34 (17) GtC. A sample greenhouse gas policy scenario that puts the world economy on a path toward stabilization of atmospheric CO2 at 550 ppmv is also simulated to illustrate the response of EPPA4 to a policy constraint.

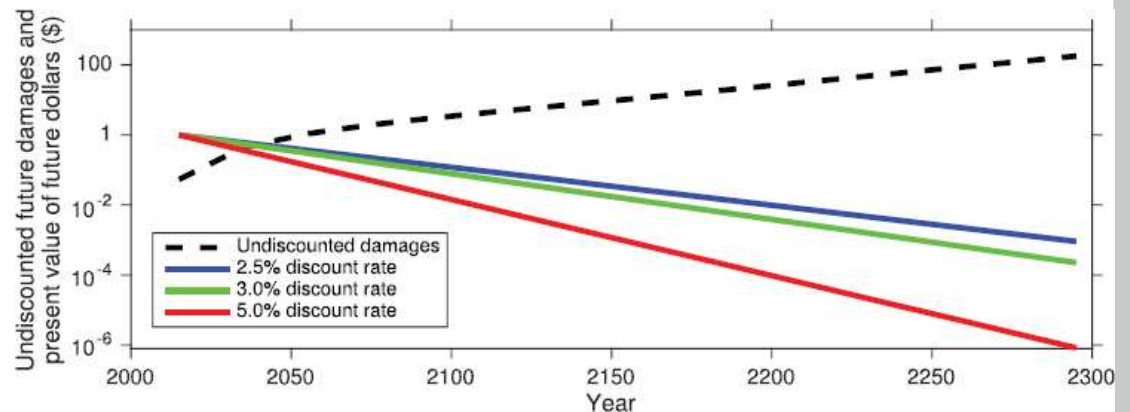
Citation:
Paltsev, S., J.M. Reilly, H.D. Jacoby, R.S. Eckaus, J. McFarland, M. Sarofim, M. Asadoorian and M. Babiker (2005): The MIT Emissions Prediction and Policy Analysis (EPPA) Model: Version 4. *Joint Program Report Series Report 125*, 72 pages (<http://globalchange.mit.edu/publication/14578>)

Supersedes:
Report 71. The MIT Emissions Prediction and Policy Analysis (EPPA) Model: Revisions, Sensitivities, and Comparisons of Results (*Joint Program Report Series*, 2001)

<https://globalchange.mit.edu/publication/14578>

Intergenerational Discounting

A discount rate is not explicitly declared in descriptions of EPPA, or in Climate Change Commission's economic modelling.



Intergenerational discounting

Nowhere in the documentation of C-PLAN or the EPPA can we see any statement about the application of a discount rate, which is a common feature in economic modelling.

We think it essential that the Commission should state whether their modellers placed a lower value on the well-being of future generations than we place on our own (by applying a positive discount rate), and if they did, to state what the rate was, and why they chose it.

Finance Sector

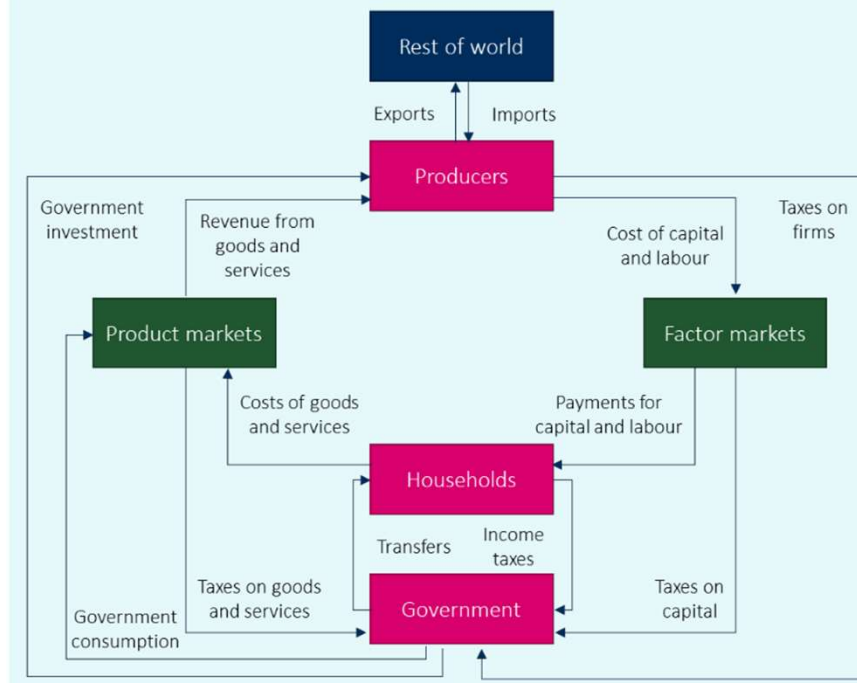
EPPA Model:

“Saving in each period is equal to investment, which both compensates for current-period depreciation and contributes to the next period’s stock of capital.”

ANZSEE:

“We interpret this as meaning that savings and investment... have been essentially eliminated from the model and are assumed to have no influence on its outcomes.”

CPLAN includes a detailed representation of economic sectors and their interactions

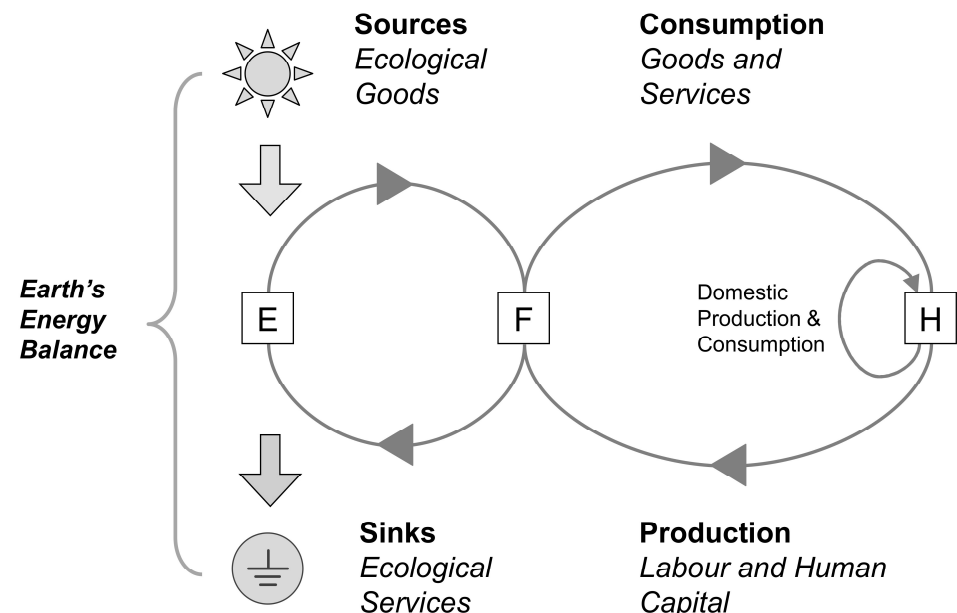


Ownership of natural resources

EPPA Model:

“EPPA also separately identifies natural resource capital as fixed factors in agriculture (arable land) and in the oil, coal, and natural gas industries (fossil fuel resources).

These assets are owned by households, and their returns (associated with their rental values to producers) accrue to households as income. The value of these assets thus reflects the annual flow of returns to the economy.”



Assumptions about economic growth

EPPA Model:

Assumes an ongoing economic growth at a rate of around 2% to 2.5% per annum.

C-PLAN Model:

Not stated

Assumptions about Economic Growth

Finally, the EPPA model appears to assume ongoing economic growth at a rate of around 2% to 2.5% per annum with no real justification other than historical trends and some assertions about capital accumulation and technological change.

The discussion about growth trends in the documentation posits high, moderate and low levels of ongoing positive economic growth each of which in turn implies an accelerating use of energy and physical resources (only ameliorated by resource use efficiency and substitution, both of which are limited).

However, the long-term effects of climate change (and other forms of depletion or destruction of natural resources) on growth are more likely to be a choice between various levels of “degrowth”, weighed against the possibility of “collapse”. There is ample evidence from history, and plentiful warnings from the science community, that such is the case.

Cool it

**IS ANYONE ELSE
GETTING HOT IN HERE?**

