Low-Emission Pathways for Aotearoa New Zealand

The Climate Change Commission Draft Advice

Crawford School of Public Policy

11 March 2021

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Climate Change Commissioner

He Pou a Rangi
Climate Change Commission

VISION OF THE CLIMATE CHANGE COMMISSION

We are committed to leading a fair and equitable transition that ensures a thriving, climate-resilient, low emissions Aotearoa for current and future generations.

OUR ADVICE

Our advice provides Aotearoa with a comprehensive strategy for tackling climate change.

FOUR AREAS:

- Level of the first three emissions budgets from 2022-2035.
- Direction of policy for the Government's Emission Reduction Plan.
- Consistency of New Zealand's first NDC with staying below 1.5 degrees of warming.
- Eventual reductions in biogenic methane which might be required.

AOTEAROA'S CURRENT TARGETS

International targets

2020	Net emissions 5% below 1990 gross emission levels
2030 NDC	Net emissions 30% below 2005 gross emission levels (11% below 1990)

Domestic targets

2030	Biogenic methane: at least 10% below 2005 emission levels
2050	Biogenic methane: at least 24-47% below 2005 emission levels
	All other GHGs: Net zero

ANALYTICAL APPROACH + HE ARA WAIORA 2.0

Lens

People

Te Ao Māori

(includes The Treaty of Waitangi)

Environment

Values

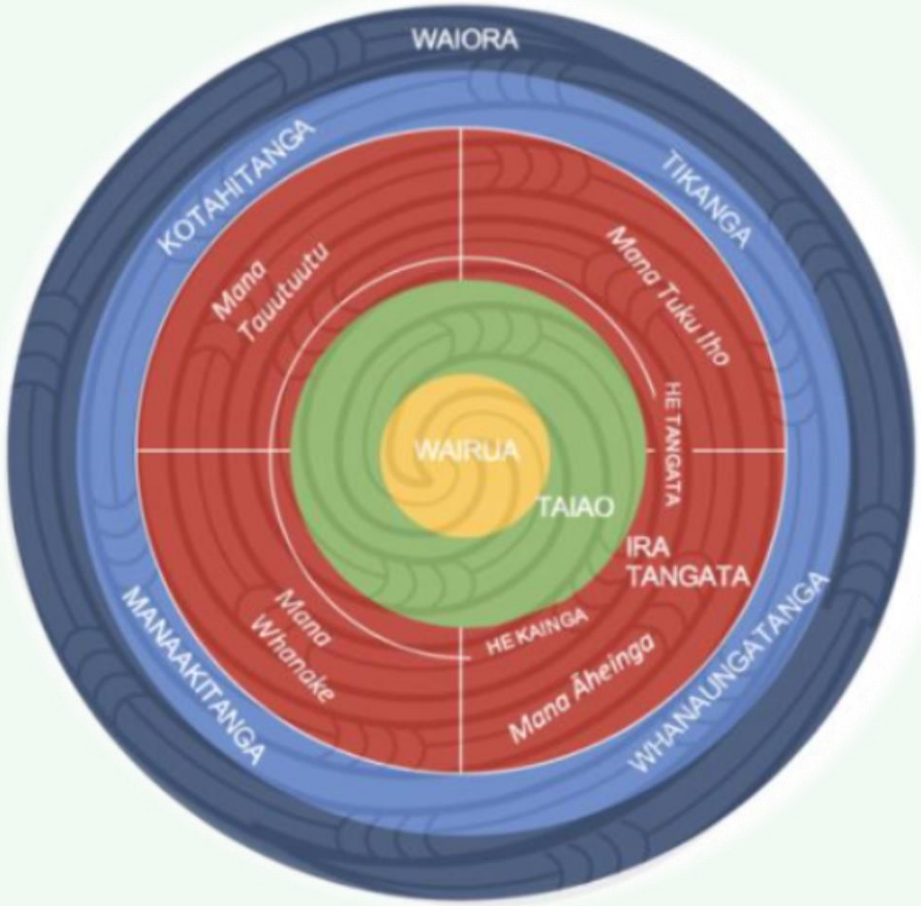
- Manaakitanga
- Tikanga
- Whanaungatanga
- Kotahitanga

System

- Ecology / Environment
- Individuals / Households
- Social / Cultural
- Economy

Dimensions

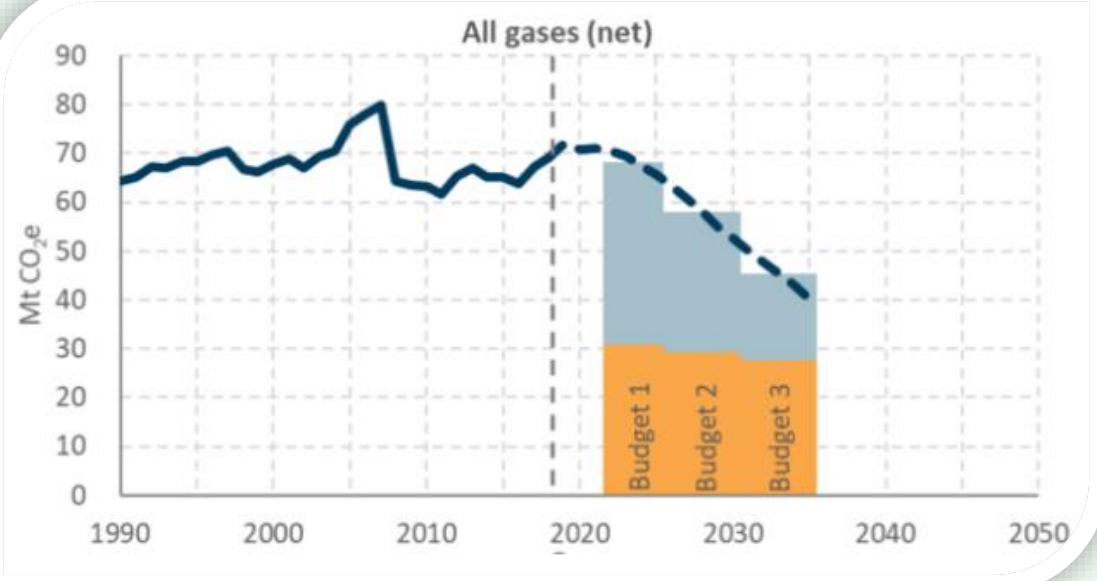
- People
- Place
- Time



THE BIG DECISIONS

1. The pace of the transition, by sector and by greenhouse gas.
2. Whether the potential impacts of the transition can be addressed.
3. How much work the ETS can do.
4. The role of removals in the transition.
5. The role of offshore mitigation.
6. What New Zealand’s contribution to the global effort should be.

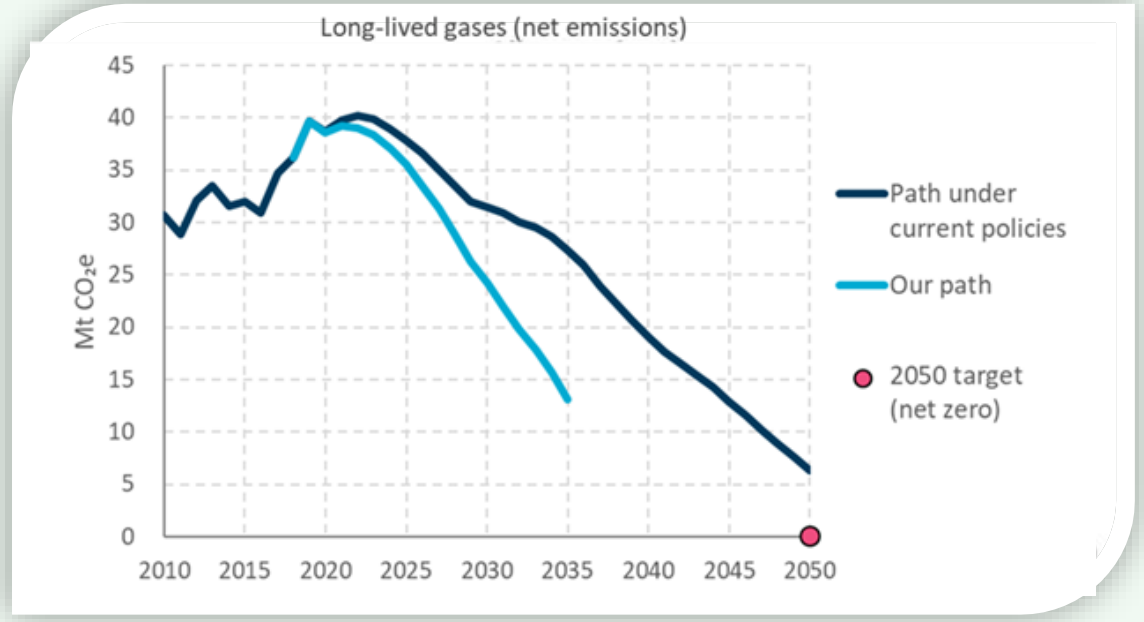
PROPOSED EMISSIONS BUDGETS



	2018	EMISSIONS BUDGET 1 (2022 – 2025)	EMISSIONS BUDGET 2 (2026 – 2030)	EMISSIONS BUDGET 3 (2031 – 2035)
ALL GASES, NET (AR4)		271 Mt CO_2e	286 Mt CO_2e	223 Mt CO_2e
ANNUAL AVERAGE	69.2 Mt CO_2e	67.7 Mt CO_2e/yr	57.3 Mt CO_2e/yr	44.6 Mt CO_2e/yr
AVERAGE REDUCTION ON 2018		2%	17%	36%

Our proposed emissions budgets – grey is emissions of long-lived gases; orange is biogenic methane emissions.

OUR PATH TO THE 2050 TARGETS



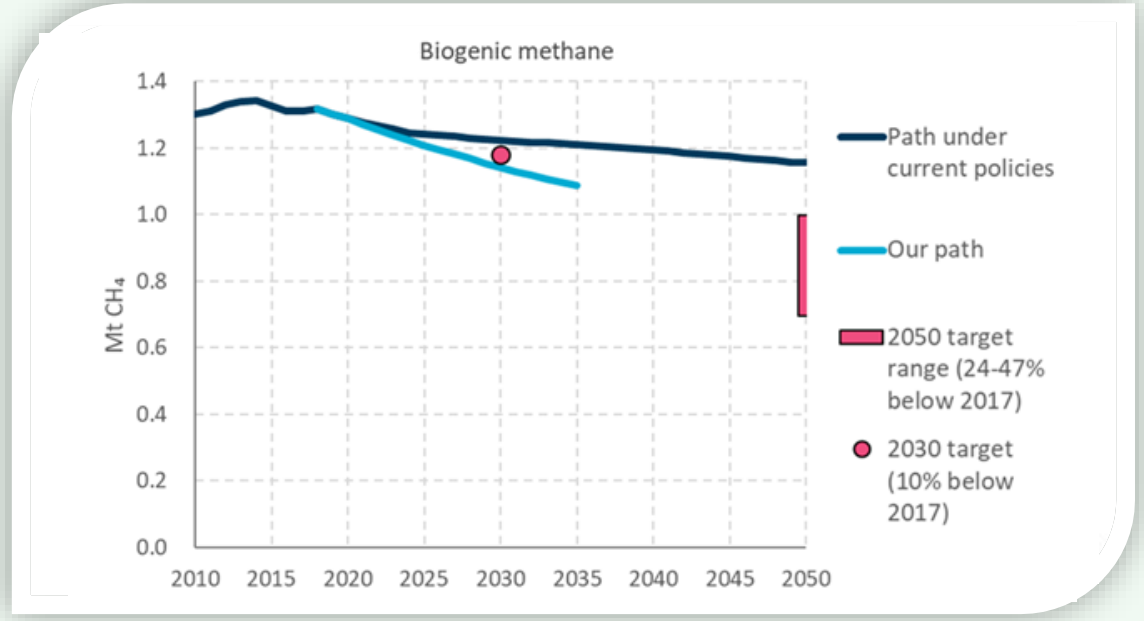


Figure 1: How our path to 2035 would reduce emissions of long-lived gases (left figure) and biogenic methane (right figure) compared with current policies and put Aotearoa on track to meeting its emissions targets.

OUR PATH: BREAKDOWN BY GAS

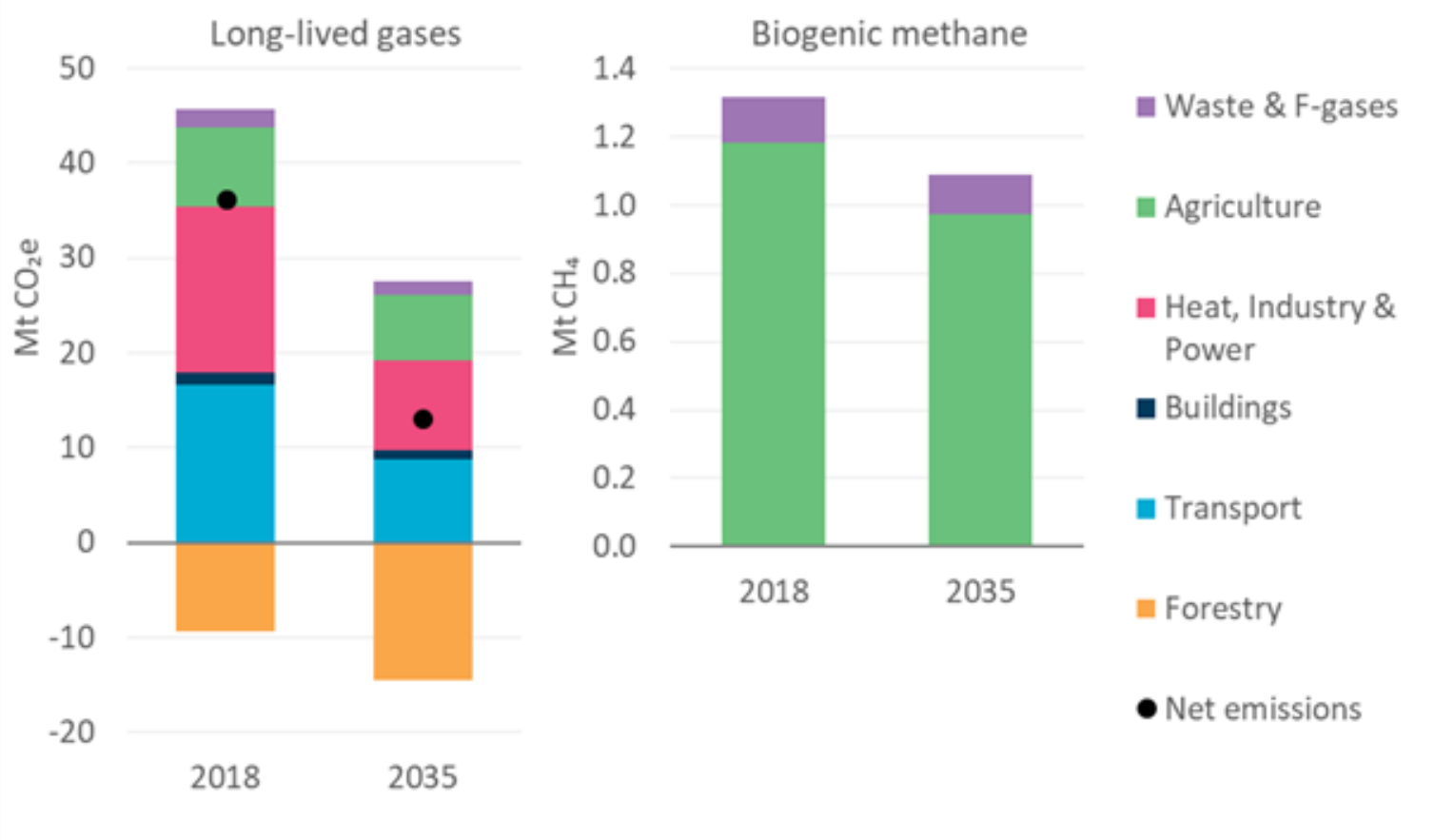


Figure 2: How our path would reduce emissions across all sectors by 2035.
Note long-lived gases from agriculture are mainly nitrous oxide and some carbon dioxide.

AGRICULTURE & FORESTRY

- A cohesive strategy should address water, biodiversity and climate.
- A long-term plan is needed for targeted R&D to reduce emissions from agriculture.
- 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.
- Forests need to be managed to provide a long-term sink, with particular focus on increasing permanent native forest.

HEAT, INDUSTRY, POWER

- To transition away from fossil fuels, we need a long-term national energy strategy, including a target of 60% renewable energy (compared to 40% today) by 2035.

- The homes, buildings and infrastructure we build now will still be here in 2050. This means investment decisions now need to factor in their impact on climate change and co-benefits.

- In the long term, we will need to reduce how much gas we use in homes and businesses.

TRANSPORT

- An integrated national transport network should be developed to reduce travel by private car. There needs to be much more walking, cycling and use of public and shared transport.

- Electric vehicles are key and need to be widely adopted. Most new light vehicles entering the fleet will need to be electric before 2035. The government will need to provide support policies and incentives to make this happen.

- Use of low carbon fuels, such as biofuels and hydrogen, needs to increase, particularly in heavy trucks, trains, plane, and ships.

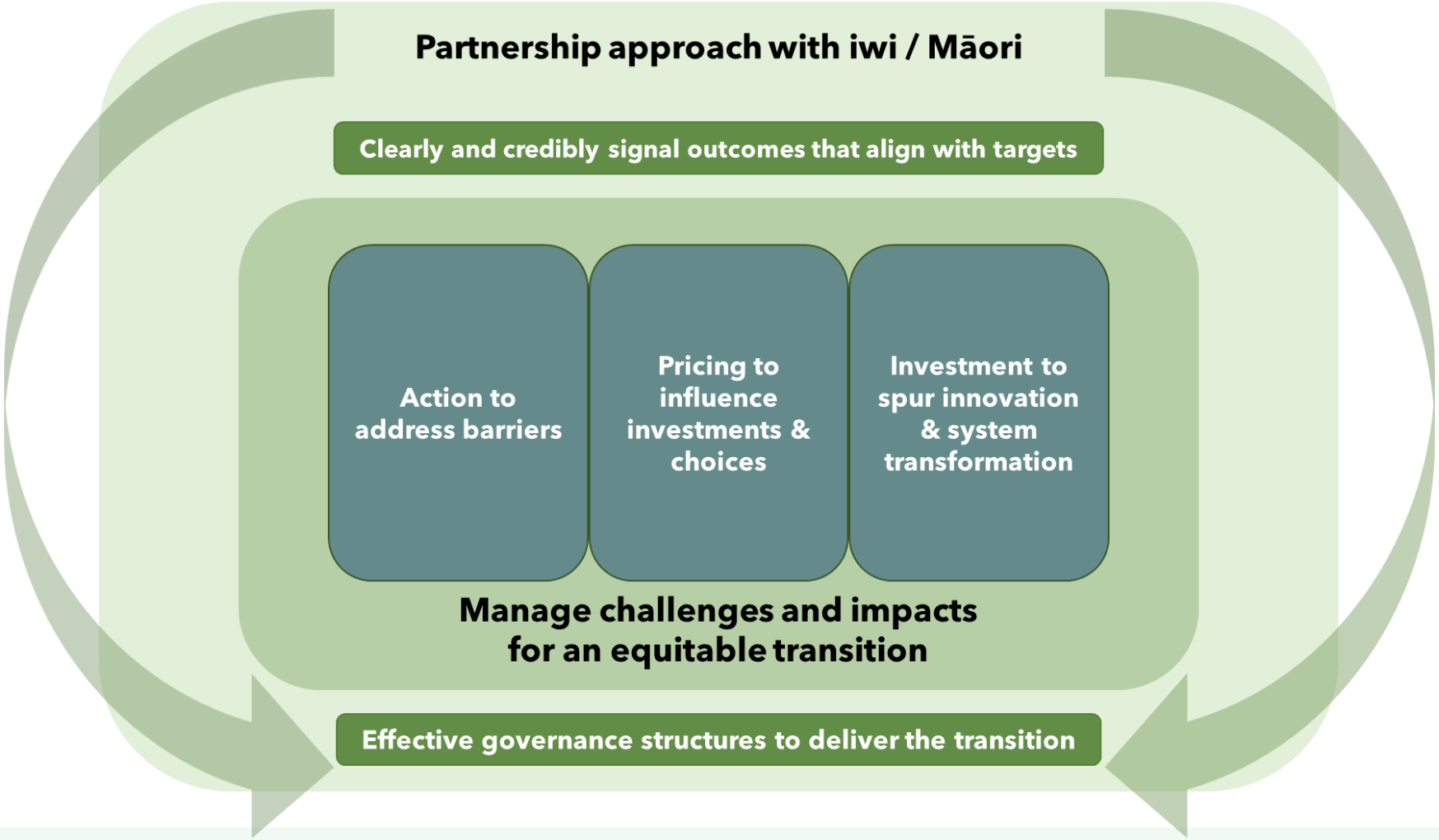
WASTE

- Creating a circular, self-sustaining economy will reduce Aotearoa's waste emissions and cut biogenic methane emissions.

- Strengthened product stewardship and a commitment to resource recovery and reuse must be part of this approach.

- Capturing methane from any remaining waste that makes it to landfill will further reduce emissions.

POLICY FRAMEWORK

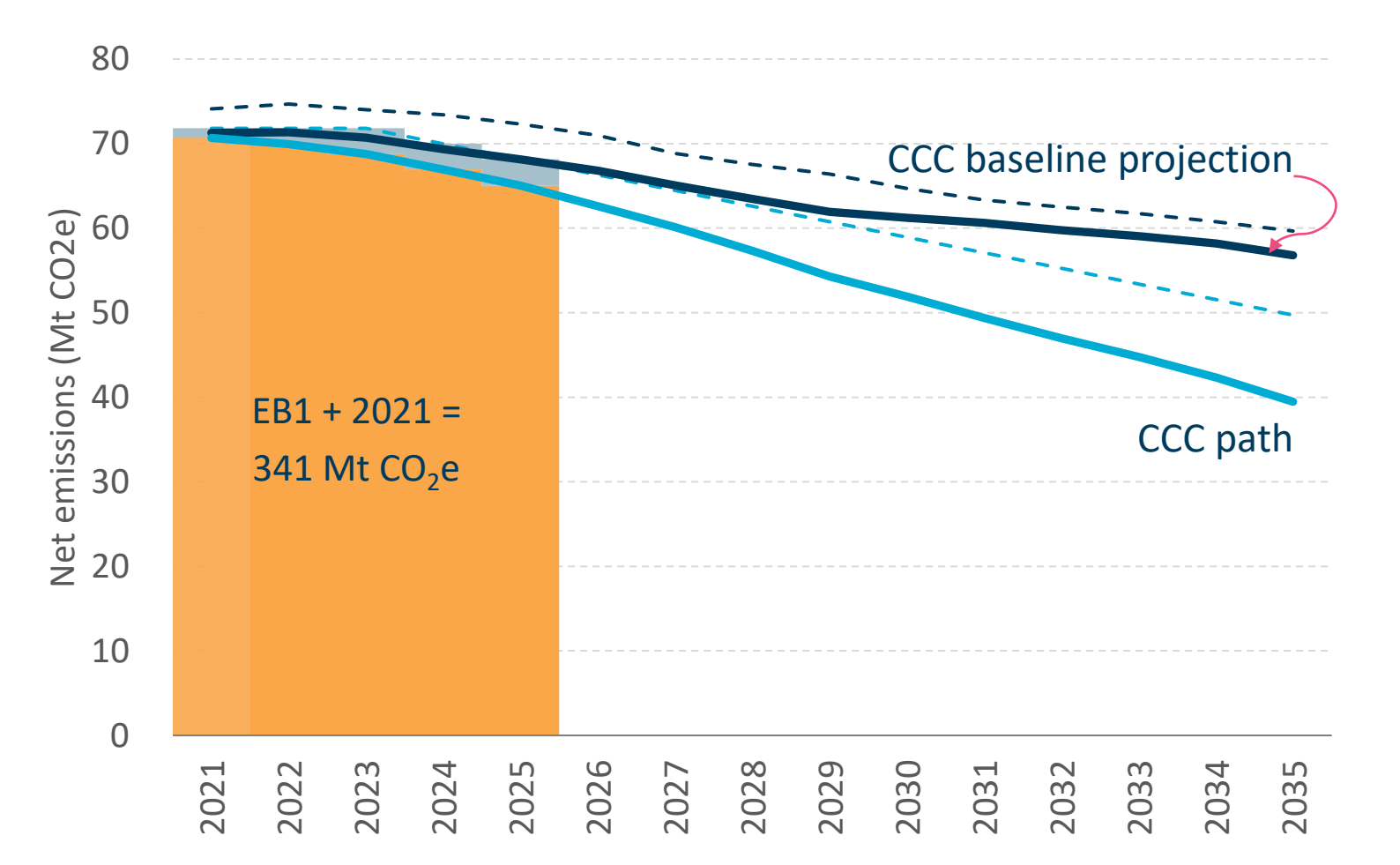


DRIVING LOW EMISSIONS THROUGH NZ ETS

Time critical necessary action 7 (advice report, page 133):

- Align unit volumes to emissions budgets
- Increase price control settings to reflect evidence about abatement costs
- Amend the NZ ETS to help deliver the recommended amount of removals
- Establish sound market governance for the NZ ETS

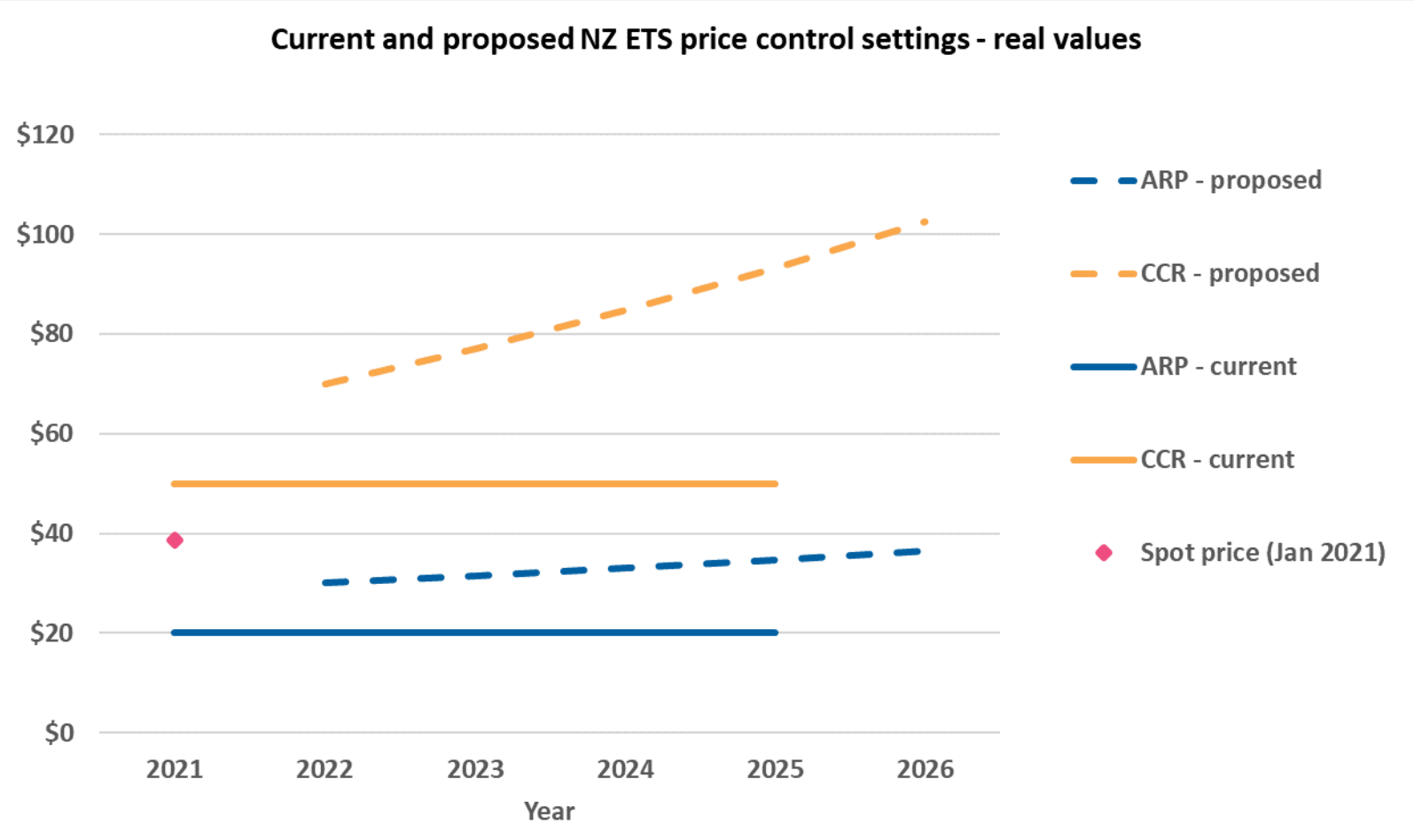
COMPARING EMISSIONS BUDGETS WITH THE PEB



Total 2021-2025 (Mt CO_2e)

	PEB	CCC
Baseline net emissions	368.5	350.8
Budget path	353.6	341.4
Abatement required	14.9	9.5

RECOMMENDED PRICE CONTROL SETTINGS



ARP: auction reserve price

CCR: cost containment reserve trigger price

Note: this graph shows real prices. The Commission has recommended that the CCR and ARP values include an annual inflation adjustment (the Government used 2% per year for current settings).

OUR NDC UNDER THE PARIS AGREEMENT

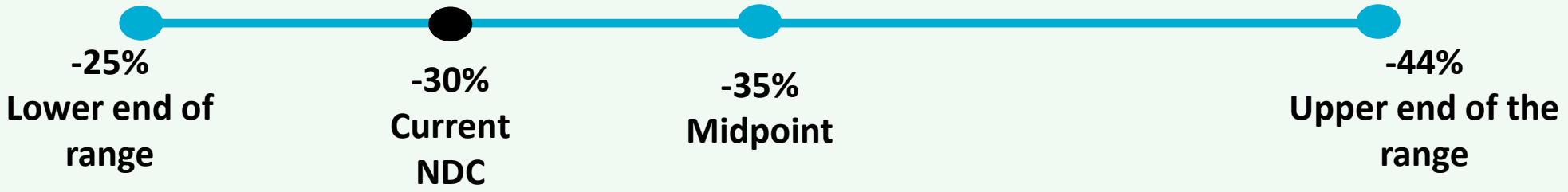
- We were asked to assess whether our current target is compatible with contributing to limiting warming to 1.5 degrees

- Our analysis has found that Aotearoa's commitment to reduce net emissions by an average of 30% from 2005 emissions levels over the 2021-2030 period is not compatible with global efforts.

- If Aotearoa is to play its part as a developed nation, the NDC would need to be strengthened to represent reductions of <u>much more than</u> 35% below 2005 emissions levels by 2030.

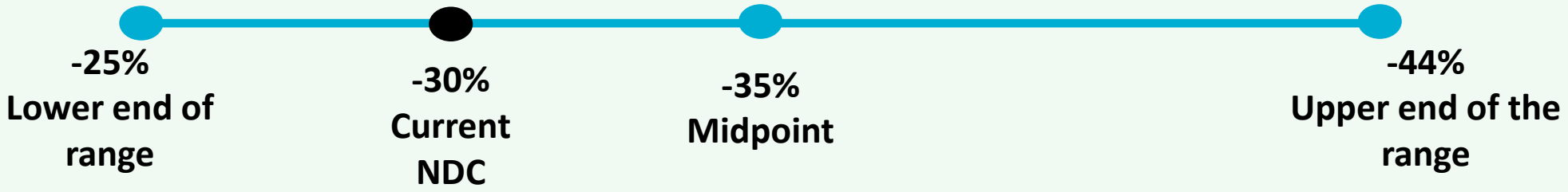
APPLYING THE PATHWAYS TO AOTEAROA

- The IPCC modelling provided a range of reductions of different gases that could keep warming to 1.5 degrees
- We can apply these modelled pathways to Aotearoa to compare to our NDC.
- If we set the reductions of different gases as modelled by the IPCC as targets, what would our overall NDC look like?
- Our current NDC is at the lower effort end of the range applying this approach

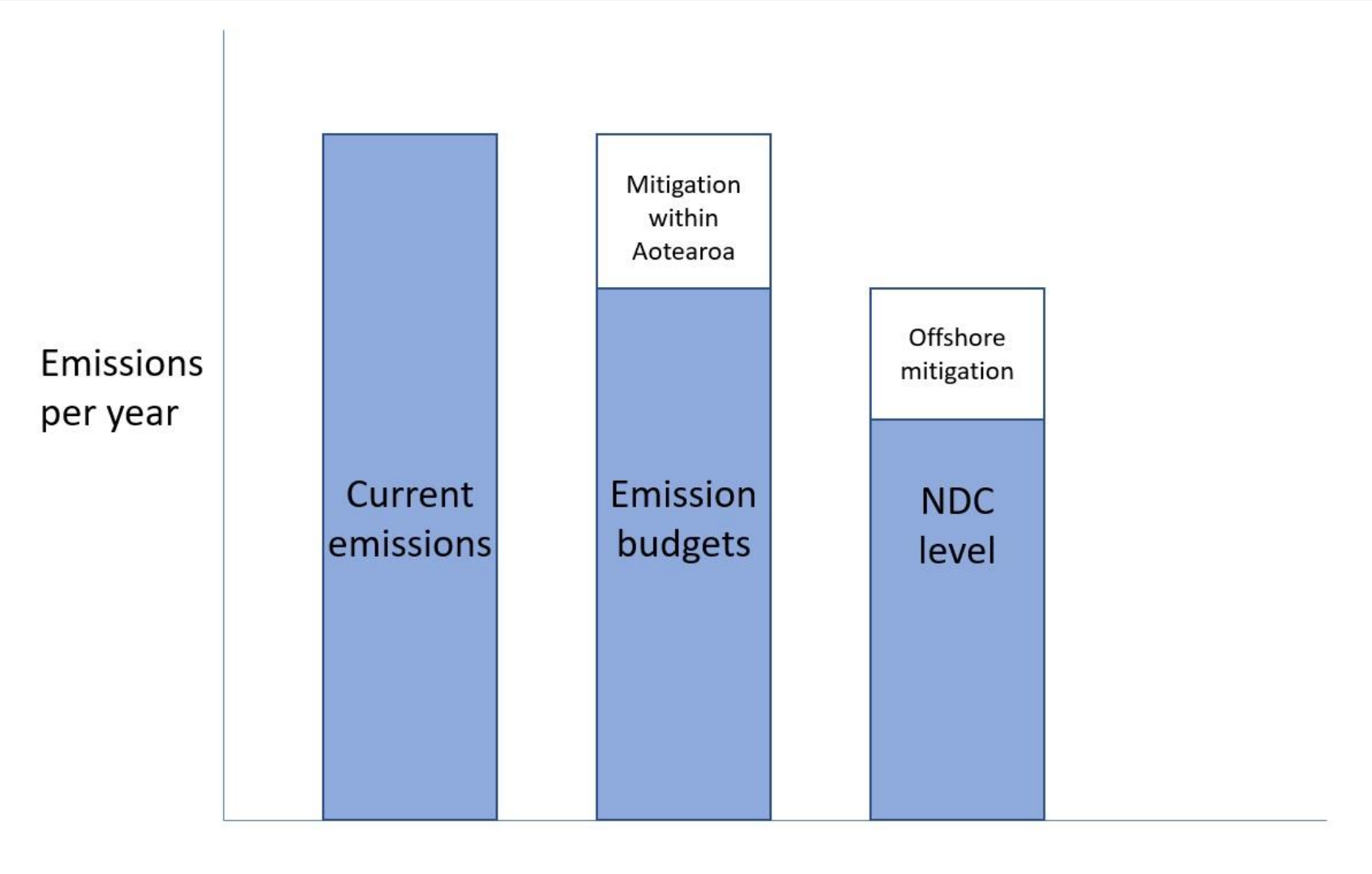


OUR COMPATIBILITY WITH THE 1.5ºC GOAL

- The scenarios modelled by the IPCC have a 50-66% chance of keeping warming to 1.5ºC
- Our judgement is that our NDC cannot be in the bottom half of the range of effort as this decreases the chance of keeping to 1.5ºC
- As a developed country we cannot do less than is needed of the rest of the world



OUR NDC CAN GO BEYOND EMISSIONS BUDGETS



A STRONGER NDC WILL REQUIRE MORE OFFSHORE MITIGATION

NDC approach	Level allowed emissions (Mt CO_2e)	Implied offshore mitigation (Mt CO_2e)
2017 estimate of the first NDC	601	27
Latest estimate of the first NDC	585	43
Middle of the IPCC interquartile range	564	64
Upper end of the IPCC interquartile range	524	104

WHAT'S NEXT

- Our consultation period and submissions on our draft advice run until 28 March 2021.
- We will submit our final advice to the Minister by 31 May 2021.
- The Minister must table the advice in Parliament no later than 10 days after receipt. The Commission must make the advice public no later than 20 working days after giving it to the Minister, even if Parliament is not sitting.
- The Government must respond to our advice by 31 December 2021, outlining what recommendations from our advice they will legislate.

HOW TO SUBMIT

OUR CONSULTATION RUNS FROM FEB 1 – MARCH 28

HEAD TO haveyoursay.climatecommission.govt.nz
TO READ OUR ADVICE AND SUBMIT YOUR FEEDBACK.

YOU CAN STAY IN THE LOOP ON OUR CONSULTATION VIA OUR TWITTER @CLIMATECOMMNZ AND LINKEDIN.

Q&A

Want to get in touch?
hello@climatecommission.govt.nz

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Climate Change Commission