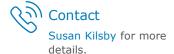
NZ Insight: Emissions Reduction Plan

17 May 2022



This is not personal advice nor financial advice about any product or service. It does not take into account your financial situation or goals. Please refer to the Important Notice.



Confused by acronyms or jargon? See a glossary here.

Emissions plan pulls together initiatives

Key points

- Yesterday the Government outlined how it plans to meet the emissions reductions budget, including many initiatives already announced.
- The initiatives will cost \$2.9bn to fund, which will come out of the \$4.5bn Climate Emergency Response Fund.
- Swapping private car trips for public transport or walking and biking is a key initiative.
- More funding has been allocated to researching how to reduce agricultural emissions, with a new organisation being formed, supported by the existing New Zealand Agricultural Greenhouse Gas Research Centre.
- Renewable energy is to account for half of all energy used by 2035, up from 28% in 2020.

What's the plan?

This week the Government outlined how it plans to meet its 2022-25 emissions reduction budget in its Emissions Reduction Plan. A week ago, the Government outlined the numbers it is targeting within each of its 5-year budgets.

The plan is part of the Zero Carbon Framework, which has an emissions reduction targets of:

- all greenhouse gases, other than biogenic methane, to reach net zero by 2050;
- emissions of biogenic methane to reduce to at least 10% below 2017 levels by 2030, and to at least 24–47% below 2017 levels by 2050.

The Zero Carbon Framework consists of:

- · Emissions reductions targets
- Emissions budgets
- Emission reduction plans (which this paper focuses on)
- Adaption measures

Emissions are forecast to peak at 76.7 MT CO₂e this year (2022) when measured on a target accounting basis.

Table 1. Government emission budgets

	3			
Megatonne CO ₂ e	Emission budget periods			
	2022-2025	2026-2030	2031-2035	
5yr period	290	305	240	
Annual equivalent	72.4	61	48	
Change from 2022	-5.6%	-20.5%	-37.4%	

Source: NZ Government

As expected, the plan shows that a concerted effort across numerous sectors will be required to reach the desired reduction in emissions.

There is to be \$2.9bn allocated to fund the various emissions reduction initiatives. This will come out of the \$4.5bn Climate Emergency Response Fund, which is funded by the Emissions Trading Scheme.

While the reduction plan provides breakdowns by sector, many of the initiatives had previously been announced.

Agricultural initiatives

Agriculture has been allocated \$710m over the next four years to help fund emissions reductions. Nearly half of this funding (\$339m) has been allocated to establish a Centre for Climate Action on Agricultural Emissions. It is envisaged this unit will help develop commercial products for reducing agricultural emissions. The centre will be a public-private joint venture, supported by the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC). This research centre, based in Palmerston North, has been working to develop technologies to reduce agricultural methane emissions since 2009.

The Government has also said it is considering supporting an initiative to encourage early adoption of on-farm changes that will reduce emissions, including on-farm trials of technologies developed overseas. There are also plans in place to develop more climate-focused extension services, including MPI's advisory services.

Rural communities will certainly welcome plans to improve digital connectivity services via a two-year rural Capacity Upgrade Programme, which has already commenced.

Additional details about how agriculture emissions will be priced are expected to be released by He Waka Eke Noa by the end of May.

Table 2. Agricultural emission budgets

Megatonne CO₂e	Emission budget periods			
	2022-2025	2026-2030	2031-2035	
Baseline	163.1	199.0	194.8	
Annual equivalent	40.8	39.8	39.0	
Emission budget	159.4	191.0	183.0	
Annual equivalent	39.9	38.2	36.6	

Source: NZ Government

Forestry initiatives

A budget of \$256.2m has been allocated to support forestry sequestration initiatives and \$73.5m to increase the use of woody biomass to allow for a reduction in coal use. The Government has stated that they want more permanent forests and more production forests, but have acknowledged that getting the mix, quality and location of these forests correct is paramount.

They have acknowledged there is a need to adjust the ETS rules to ensure the incentives are more balanced and don't simply drive plantation of exotic forests on productive land.

They are also looking at ways to reduce the cost, or increase the incentive, to plant native forests to act as long-term carbon sinks. This includes sharing knowledge within the nursery sector, as it is currently expensive to plant natives and the success rate for establishing new plantings is relatively low.

Transport initiatives

The transport sector is responsible for 17% of NZ's greenhouse gas emissions and 39% of domestic emissions. It is a sector that impacts most New Zealanders and we all have a role to play in helping to reduce transport emissions.

The Government is targeting a 20% reduction in the number of kilometres travelled by light vehicles by 2035 by improving alternative formats of transport such as public transport, and walking and cycling paths.

There are plans underway to make it safer for children to walk or cycle to school, which will help reduce the use of cars for these daily commutes.

Public transport frequency and reach is expected to be significantly improved. All new buses purchased after 2025 will need to be zero-emission vehicles. But it will also be important to ensure that emissions from existing public transport are also reduced. Plans are underway to find solutions to reduce emissions from buses and other heavy vehicles.

By 2035, it is expected that 30% of all cars will be zero-emissions vehicles. There is also research planned to reduce emissions in maritime transport, including initiatives for zero-emission boats. Electric pleasure craft already exist but replacing our fishing fleet with zero-emission boats will be a much harder ask.

A trial is planned to lease electric vehicles to encourage low-income families to replace their older, high emission vehicles. In 2023 there will also be a trial to pay low-equity households to scrap older vehicles.

The Government is also considering progressing legislative changes to enable congestion charging.

A 35% reduction in emissions caused from transporting freight via trucks, rail and ships) is planned by 2035.

Getting people out of cars and decarbonising heavy transport and freight is expected to have the greatest impact on transport emissions leading up to 2030.

Energy initiatives

The Government has a target of 50% of total energy consumption in New Zealand being from renewable sources by 2035. In 2020 this figure was 28%.

The Government also has a target of 100% of electricity coming from renewable sources by 2030. This target is considered aspirational as it will be difficult to produce all our electricity from renewable sources such as hydro and wind unless we are able to develop better ways to store electricity. Changes to average temperatures, rainfall or wind patterns, and the frequency of extreme weather events, could affect our ability to produce renewable energy too. The New Zealand Battery Project is looking at ways to manage the risk of a dry year impacting the production of hydro-electricity.

Energy production that is reliant on fossil fuels will be gradually phased out.

Building and construction

The building sector in New Zealand accounts for 9.4% of NZ's GHG emissions and we also import a lot of building materials that are not accounted for in our domestic emissions budgets.

Buildings emissions occur in both the construction of the building and also operating the building. For example, well-insulated homes have much lower heating costs, and are therefore more efficient to operate, than uninsulated homes.

A 'whole-of-life approach' is being used to consider the impact of various construction materials.

There are also plans underway to work more closely with the forestry and wood-processing sector through initiatives such as the Wood Processing and Manufacturing Industry Transformation Plan and the Timber Design Centre, which provides advice on how timber can be used in the design and construction of buildings.

Summary

Clearly, both climate change and climate change mitigation policies are set to affect all of us in the years to come. Like all big looming structural problems, such as the fiscal cost of an aging population, the earlier you start addressing the issue, the lesser the total disruption – but the more difficult the politics. And what's extremely clear, is that no matter where you participate in this economy – dairy farmer or city-dwelling keyboard pusher – you will feel the impacts. Whether it's higher-than-otherwise consumer prices, higher-than-otherwise regulatory costs, lower-than-otherwise output, lower-than-otherwise productivity; it'll hurt. But for some, these impacts will be a lot more direct, and that burden unsurprisingly appears to correlate well with the various opinions on these things. This is extremely important stuff, and New Zealand has a lot to gain by building a reputation in global markets as a clean and green food producer.

A lot of effort has gone into trying to link the various policy initiatives across sectors. There is still a lot more consulting and decisions to be made to clarify exactly what will be done, and we ultimately need to see actions being taken sooner rather than later if we are to achieve our climate goals.



Contact us

Meet the team

We welcome your questions and feedback. Click here for more information about our team.



Sharon Zollner Chief Economist

Follow Sharon on Twitter @sharon_zollner

Telephone: +64 9 357 4094 Email: sharon.zollner@anz.com General enquiries: research@anz.com

Follow ANZ Research (global)



David Croy Senior Strategist

Market developments, interest rates, FX, unconventional monetary policy, liaison with market participants.

Telephone: +64 4 576 1022 Email: david.croy@anz.com



Susan Kilsby Agricultural Economist

Primary industry developments and outlook, structural change and regulation, liaison with industry.

Telephone: +64 21 633 469 Email: susan.kilsby@anz.com



Miles Workman Senior Economist

Macroeconomic forecast coordinator, fiscal policy, economic risk assessment and credit developments.

Telephone: +64 21 661 792 Email: miles.workman@anz.com



Finn Robinson Economist

Macroeconomic forecasting, economic developments, labour market dynamics, inflation and monetary policy.

Telephone: +64 21 629 553 Email: finn.robinson@anz.com



Kyle UerataEconomic Statistician

Economic statistics, ANZ proprietary data (including ANZ Business Outlook), data capability and infrastructure.

Telephone: +64 21 633 894 Email: kyle.uerata@anz.com



Natalie DennePA / Desktop Publisher

Business management, general enquiries, mailing lists, publications, chief economist's diary.

Telephone: +64 21 253 6808 Email: natalie.denne@anz.com

Important notice

Last updated: 28 February 2022

This document (which may be in the form of text, image, video or audio) is intended for ANZ's Institutional, Markets and Private Banking clients. It should not be forwarded, copied or distributed. The opinions and research contained in this document are (a) not personal advice nor financial advice about any product or service; (b) provided for information only; and (c) intended to be general in nature and does not take into account your financial situation or goals.

This document may be restricted by law in certain jurisdictions. Persons who receive this document must inform themselves about and observe all relevant restrictions.

Disclaimer for all jurisdictions: This document is prepared and distributed in your country/region by either: Australia and New Zealand Banking Group Limited (ABN11 005 357 522) (**ANZ**); or its relevant subsidiary or branch (each, an **Affiliate**), as appropriate or as set out below.

This document is distributed on the basis that it is only for the information of the specified recipient or permitted user of the relevant website (**recipients**).

This document is solely for informational purposes and nothing contained within is intended to be an invitation, solicitation or offer by ANZ to sell, or buy, receive or provide any product or service, or to participate in a particular trading strategy.

Distribution of this document to you is only as may be permissible by the laws of your jurisdiction, and is not directed to or intended for distribution or use by recipients resident or located in jurisdictions where its use or distribution would be contrary to those laws or regulations, or in jurisdictions where ANZ would be subject to additional licensing or registration requirements. Further, the products and services mentioned in this document may not be available in all countries.

ANZ in no way provides any financial, legal, taxation or investment advice to you in connection with any product or service discussed in this document. Before making any investment decision, recipients should seek independent financial, legal, tax and other relevant advice having regard to their particular circumstances.

Whilst care has been taken in the preparation of this document and the information contained within is believed to be accurate, ANZ does not represent or warrant the accuracy or completeness of the information Further, ANZ does not accept any responsibility to inform you of any matter that subsequently comes to its notice, which may affect the accuracy of the information in this document.

Preparation of this document and the opinions expressed in it may involve material elements of subjective judgement and analysis. Unless specifically stated otherwise: they are current on the date of this document and are subject to change without notice; and, all price information is indicative only. Any opinions expressed in this document are subject to change at any time without notice.

ANZ does not guarantee the performance of any product mentioned in this document. All investments entail a risk and may result in both profits and losses. Past performance is not necessarily an indicator of future performance. The products and services described in this document may not be suitable for all investors, and transacting in these products or services may be considered risky.

ANZ expressly disclaims any responsibility and shall not be liable for any loss, damage, claim, liability, proceedings, cost or expense (Liability) arising directly or indirectly and whether in tort (including negligence), contract, equity or otherwise out of or in connection with this document to the extent permissible under relevant law. Please note, the contents of this document have not been reviewed by any regulatory body or authority in any jurisdiction.

ANZ and its Affiliates may have an interest in the subject matter of this document. They may receive fees from customers for dealing in the products or services described in this document, and their staff and introducers of business may share in such fees or remuneration that may be influenced by total sales, at all times received and/or apportioned in accordance with local regulatory requirements. Further, they or their customers may have or have had interests or long or short positions in the products or services described in this document, and may at any time make purchases and/or sales in them as principal or agent, as well as act (or have acted) as a market maker in such products. This document is published in accordance with ANZ's policies on conflicts of interest and ANZ maintains appropriate information barriers to control the flow of information between businesses within it and its Affiliates.

Your ANZ point of contact can assist with any questions about this document including for further information on these disclosures of interest.

Country/region specific information: Unless stated otherwise, this document is distributed by Australia and New Zealand Banking Group Limited (ANZ).

Australia. ANZ holds an Australian Financial Services licence no. 234527. For a copy of ANZ's Financial Services Guide please click here or request from your ANZ point of contact.

Brazil. This document is distributed on a cross border basis and only following request by the recipient.

Brunei, India, Japan, Kuwait, Malaysia, Switzerland, Taiwan. This document is distributed in each of these jurisdictions by ANZ on a cross-border basis.

Cambodia. The information contained in this document is confidential and is provided solely for your use upon your request. This does not constitute or form part of an offer or solicitation of any offer to engage services, nor should it or any part of it form the basis of, or be relied in any connection with, any contract or commitment whatsoever. ANZ does not have a licence to undertake banking operations or securities business or similar business, in Cambodia. By requesting financial services from ANZ, you agree, represent and warrant that you are engaging our services wholly outside of Cambodia and subject to the laws of the contract governing the terms of our engagement.

Chile. You understand and agree that ANZ Banking Group Limited is not regulated by Chilean Authorities and that the provision of this document is not subject to any Chilean supervision and is not guaranteed by any regulatory or governmental agency in Chile.

Fiji. For Fiji regulatory purposes, this document and any views and recommendations are not to be deemed as investment advice. Fiji investors must seek licensed professional advice should they wish to make any investment in relation to this document.

Hong Kong. This document is issued or distributed in Hong Kong by the Hong Kong branch of ANZ, which is registered at the Hong Kong Monetary Authority to conduct Type 1 (dealing in securities), Type 4 (advising on securities) and Type 6 (advising on corporate finance) regulated activities. The contents of this document have not been reviewed by any regulatory authority in Hong Kong.

India. If this document is received in India, only you (the specified recipient) may print it provided that before doing so, you specify on it your name and place of printing.

Macau. Click here to read the disclaimer for all jurisdictions in Mandarin. 澳门. 点击此处阅读所有司法管辖区的免责声明的中文版。

Myanmar. This document is intended to be general and part of ANZ's customer service and marketing activities when implementing its functions as a licensed bank. This document is not Securities Investment Advice (as that term is defined in the Myanmar Securities Transaction Law 2013).

New Zealand. This material is for information purposes only and is not financial advice about any product or service. We recommend seeking financial advice about your financial situation and goals before acquiring or disposing of (or not acquiring or disposing of) a financial product.

Important notice

Oman. ANZ neither has a registered business presence nor a representative office in Oman and does not undertake banking business or provide financial services in Oman. Consequently ANZ is not regulated by either the Central Bank of Oman or Oman's Capital Market Authority. The information contained in this document is for discussion purposes only and neither constitutes an offer of securities in Oman as contemplated by the Commercial Companies Law of Oman (Royal Decree 4/74) or the Capital Market Law of Oman (Royal Decree 80/98), nor does it constitute an offer to sell, or the solicitation of any offer to buy non-Omani securities in Oman as contemplated by Article 139 of the Executive Regulations to the Capital Market Law (issued vide CMA Decision 1/2009). ANZ does not solicit business in Oman and the only circumstances in which ANZ sends information or material describing financial products or financial services to oman, is where such information or material has been requested from ANZ and the recipient understands, acknowledges and agrees that this document has not been approved by the CBO, the CMA or any other regulatory body or authority in Oman. ANZ does not market, offer, sell or distribute any financial or investment products or services in Oman and no subscription to any securities, products or financial services may or will be consummated within Oman. Nothing contained in this document is intended to constitute Omani investment, legal, tax, accounting or other professional advice.

People's Republic of China (PRC). This document may be distributed by either ANZ or Australia and New Zealand Bank (China) Company Limited (ANZ China). Recipients must comply with all applicable laws and regulations of PRC, including any prohibitions on speculative transactions and CNY/CNH arbitrage trading. If this document is distributed by ANZ or an Affiliate (other than ANZ China), the following statement and the text below is applicable: No action has been taken by ANZ or any affiliate which would permit a public offering of any products or services of such an entity or distribution or re-distribution of this document in the PRC. Accordingly, the products and services of such entities are not being offered or sold within the PRC by means of this document or any other document. This document may not be distributed, re-distributed or published in the PRC, except under circumstances that will result in compliance with any applicable laws and regulations. If and when the material accompanying this document relates to the products and/or services of ANZ China, the following statement and the text below is applicable: This document is distributed by ANZ China in the Mainland of the PRC. Peru. The information contained in this document has not been, and will not be, registered with or approved by the Peruvian Superintendency of the Securities Market (Superintendencia del Mercado de Valores, SMV) or the Lima Stock Exchange (Bolsa de Valores de Lima, BVL) or under the Peruvian Securities Market Law (Legislative Decree 6 861), and will not be subject to Peruvian laws applicable to public offerings in Peru. To the extent this information refers to any securities or interests, it should be noted the securities or interests may not be offered or sold in Peru, except if (i) such securities or interests were previously registered with the Peruvian Superintendency of the Securities Market, or (ii) such offering is considered a private offering in Peru under the securities laws and regulation of Peru. Qatar. This document has not been, and will not be:

- lodged or registered with, or reviewed or approved by, the Qatar Central Bank (QCB), the Qatar Financial Centre (QFC) Authority, QFC Regulatory Authority or any other authority in the State of Qatar (Qatar); or
- authorised or licensed for distribution in Qatar, and the information contained in this document does not, and is not intended to, constitute a public offer or other invitation in respect of securities in Qatar or the QFC.

The financial products or services described in this document have not been, and will not be:

- · registered with the QCB, QFC Authority, QFC Regulatory Authority or any other governmental authority in Qatar; or
- authorised or licensed for offering, marketing, issue or sale, directly or indirectly, in Qatar.

Accordingly, the financial products or services described in this document are not being, and will not be, offered, issued or sold in Qatar, and this document is not being, and will not be, distributed in Qatar. The offering, marketing, issue and sale of the financial products or services described in this document and distribution of this document is being made in, and is subject to the laws, regulations and rules of, jurisdictions outside of Qatar and the QFC. Recipients of this document must abide by this restriction and not distribute this document in breach of this restriction. This document is being sent/issued to a limited number of institutional and/or sophisticated investors (i) upon their request and confirmation that they understand the statements above; and (ii) on the condition that it will not be provided to any person other than the original recipient, and is not for general circulation and may not be reproduced or used for any other purpose.

Singapore. This document is distributed in Singapore by ANZ solely for the information of "accredited investors", "expert investors" or (as the case may be) "institutional investors" (each term as defined in the Securities and Futures Act Cap. 289 of Singapore). ANZ is licensed in Singapore under the Banking Act Cap. 19 of Singapore and is exempted from holding a financial adviser's licence under Section 23(1)(a) of the Financial Advisers Act Cap. 100 of Singapore. In respect of any matters arising from, or in connection with, the distribution of this document in Singapore, please speak to your usual ANZ contact in Singapore.

United Arab Emirates (UAE). This document is distributed in the UAE or the Dubai International Financial Centre (DIFC) (as applicable) by ANZ. This document does not, and is not intended to constitute: (a) an offer of securities anywhere in the UAE; (b) the carrying on or engagement in banking, financial and/or investment consultation business in the UAE under the rules and regulations made by the Central Bank of the UAE, the Emirates Securities and Commodities Authority or the UAE Ministry of Economy; (c) an offer of securities within the meaning of the Dubai International Financial Centre Markets Law (DIFCML) No. 12 of 2004; and (d) a financial promotion, as defined under the DIFCML No. 1 of 200. ANZ DIFC Branch is regulated by the Dubai Financial Services Authority (DFSA). The financial products or services described in this document are only available to persons who qualify as "Professional Clients" or "Market Counterparty" in accordance with the provisions of the DFSA rules.

United Kingdom. This document is distributed in the United Kingdom by Australia and New Zealand Banking Group Limited (ANZ) solely for the information of persons who would come within the Financial Conduct Authority (FCA) definition of "eligible counterparty" or "professional client". It is not intended for and must not be distributed to any person who would come within the FCA definition of "retail client". Nothing here excludes or restricts any duty or liability to a customer which ANZ may have under the UK Financial Services and Markets Act 2000 or under the regulatory system as defined in the Rules of the Prudential Regulation Authority (PRA) and the FCA. ANZ considers this document to constitute an Acceptable Minor Non-Monetary Benefits (AMNMB) under the relevant inducement rules of the FCA. ANZ is authorised in the United Kingdom by the PRA are available from us on request.

United States. Except where this is a FX-related document, this document is distributed in the United States by ANZ Securities, Inc. (**ANZ SI**) which is a member of the Financial Regulatory Authority (**FINRA**) (www.finra.org) and registered with the SEC. ANZSI's address is 277 Park Avenue, 31st Floor, New York, NY 10172, USA (Tel: +1 212 801 9160 Fax: +1 212 801 9163). ANZSI accepts responsibility for its content. Information on any securities referred to in this document may be obtained from ANZSI upon request. This document or material is intended for institutional use only – not retail. If you are an institutional customer wishing to effect transactions in any securities referred to in this document you must contact ANZSI, not its affiliates. ANZSI is authorised as a broker-dealer only for institutional customers, not for US Persons (as "US person" is defined in Regulation S under the US Securities Act of 1933, as amended) who are individuals. If you have registered to use our website or have otherwise received this document and are a US Person who is an individual: to avoid loss, you should cease to use our website by unsubscribing or should notify the sender and you should not act on the contents of this document in any way. Non-U.S. analysts may not be associated persons of ANZSI and therefore may not be subject to FINRA Rule 2242 restrictions on communications with the subject company, public appearances and trading securities held by the analysts. Where this is a FX-related document, it is distributed in the United States by ANZ's New York Branch, which is also located at 277 Park Avenue, 31st Floor, New York, NY 10172, USA (Tel: +1 212 801 916 0 Fax: +1 212 801 9163).

Vietnam. This document is distributed in Vietnam by ANZ or ANZ Bank (Vietnam) Limited, a subsidiary of ANZ.

This document has been prepared by ANZ Bank New Zealand Limited, Level 26, 23-29 Albert Street, Auckland 1010, New Zealand, Ph 64-9-357 4094, e-mail nzeconomics@anz.com, http://www.anz.co.nz