New Zealand's 2020 Emissions Target

New Zealand Government

The Government is working actively to secure an effective global agreement on climate change to succeed the Kyoto Protocol after 2012. An important issue in these international negotiations is the commitment New Zealand makes on a greenhouse gas emissions target for 2020.

This decision has significant ramifications for New Zealand households and businesses. We need to balance the need to make progress in reducing emissions to protect the environment with the impacts on jobs, investments and costs to consumers.

New Zealand intends to announce its policy target for 2020 at the next stage of international negotiations in Bonn in August. This document and a series of meetings being held around New Zealand are to enable public input into this process.

Globe photograph: © NASA

Climate change challenge ▷▷▷

Scientists have become increasingly concerned since the 1970s that increased concentrations of greenhouse gases in the atmosphere from human activities are raising temperatures and destabilising the Earth's climate systems. These activities include burning fossil fuels like coal and oil, deforestation and farming. Atmospheric concentrations of greenhouse gases in carbon dioxide equivalent (CO_2-e) have increased from pre-industrial levels of 280 parts per million (ppm) to 380ppm and there is strong evidence that this has caused an increase in average global temperature of 0.7°C. Global emissions continue to increase. By 2100, average global temperatures are projected to increase by between 1.8°C and 4.0°C.

> "Climate change is a diabolical policy problem. It is harder than any other issue of high importance that has come before our polity in living memory."
>
> – PROFESSOR ROSS GARNAUT, *Author of the Garnaut Climate Change Review*

Other consequences include more extreme weather events, like floods, storms, cyclones and droughts, and estimated global sea-level rises of at least 18 to 59cm (refer IPCC Fourth Assessment Report). Specific impacts on New Zealand include increased rainfall in the west and more frequent droughts in the east.

International context ▷▷▷

In 1992, New Zealand became a party to the United Nations Framework Convention on Climate Change (UNFCCC), which seeks to limit greenhouse gas emissions to avoid dangerous climate change. The Intergovernmental Panel on Climate Change has advised that stabilising atmospheric concentrations of greenhouse gases at less than 450ppm CO_2-e is required to limit global average temperature increases to about 2°C.

The Kyoto Protocol, agreed in 1997, set varying limits on emissions from an agreed group of 37 developed countries between 2008 and 2012, equal in aggregate to 5.2% below 1990 levels. The European Union countries agreed to reduce emissions by 8%, Japan to reduce by 6%, and Australia to limit its increase in emissions to 8%. The United States did not ratify its Kyoto commitment to reduce emissions by 7%. New Zealand agreed to limit its emissions to 1990 levels (0%). Negotiations have been proceeding under the 'Bali Roadmap' to conclude a successor agreement to cover a subsequent period after 2012.

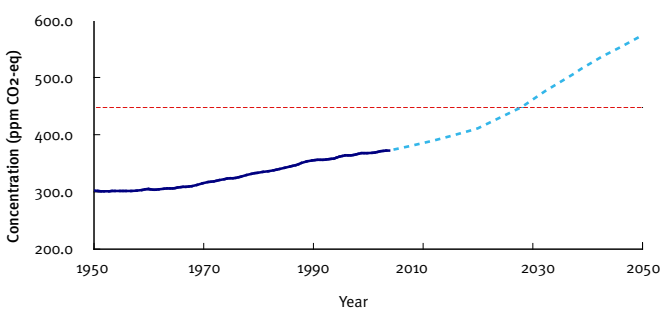

Figure 1: Global atmospheric concentrations of greenhouse gases

FOR MORE INFORMATION SEE: ***New Zealand's Climate Change Solutions***: www.climatechange.govt.nz; **IPCC**: www.ipcc.ch; **UNFCCC**: www.unfccc.int; **Climate Change Effects and Impacts Assessment**: http://www.mfe.govt.nz/publications/climate/climate-change-effect-impacts-assessments-may08/climate-change-effect-impacts-assessment-may08.pdf

"We need an ambitious but achievable goal for 2020 that balances the environmental risks of climate change with the economic impacts on New Zealand of reducing emissions."

– Hon Dr Nick Smith, Minister for Climate Change Issues

New Zealand's emissions

We have a unique emissions profile relative to other developed countries. A far larger than normal proportion of New Zealand's emissions are methane and nitrous oxide from agriculture. We also have lower than normal carbon dioxide emissions from electricity generation because of extensive hydro-generated electricity.

Forestry has a significant impact on New Zealand's greenhouse gas emissions profile. The international rules credit growth in forests planted after 1990, but debits apply upon harvest. There are also debits when pre-1990 forests are cleared and not replanted.

New Zealand's gross emissions have increased significantly since 1990, despite promises to stabilise and reduce them. The largest percentage increases have been in the electricity (91%), transport (70%), and agricultural (12%) sectors. Net emissions rose sharply in 2005 due to increased rates of deforestation but have since stabilised.

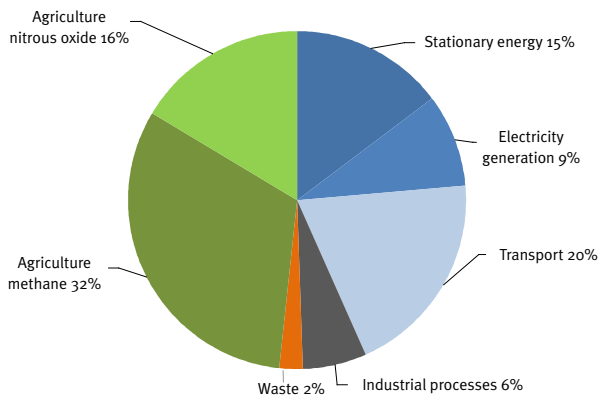

Figure 2: New Zealand's greenhouse gas emissions by sector: 2007

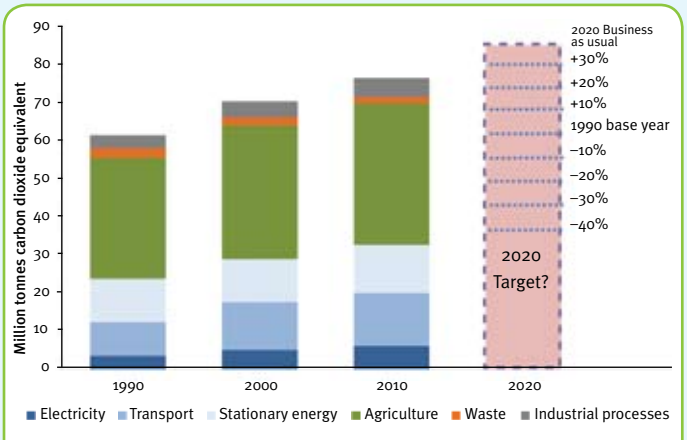

Figure 3: New Zealand's emissions

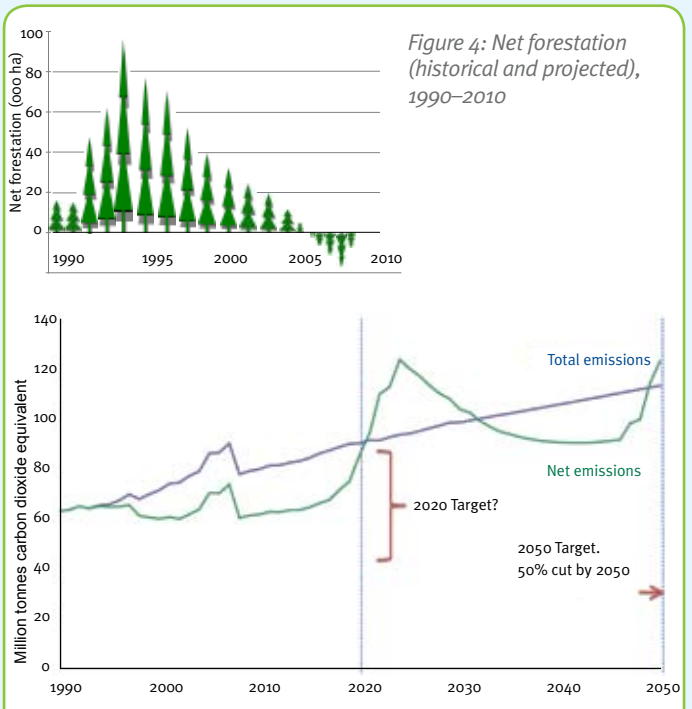

Figure 4: Net forestation (historical and projected), 1990–2010

Figure 5: New Zealand's total and net greenhouse gas emissions and removals (historical and projected), 1990–2050

Despite this growth in emissions, New Zealand will meet its Kyoto obligations, because of the 600,000 hectares of forests planted in the 1990s. However, these forests are due for harvest in the 2020s, which will make it more difficult for New Zealand to meet its emissions target at that time. Forest harvest and growth are projected to be in balance in 2020 and this needs to be considered in determining New Zealand's 2020 emissions target.

The Government's main policy tool to reduce emissions is an Emissions Trading Scheme that puts a price on greenhouse gas emissions. Changes to the scheme are being considered as part of a Select Committee Review and discussions with Australia on harmonisation with their similar Carbon Pollution Reduction Scheme.

Other complementary policies include:

- a $323 million home insulation and clean heating fund to insulate 180,000 homes over four years
- a new Centre for Agricultural Greenhouse Gas Research
- incentives for new energy technologies like sustainable biofuels, electric cars and solar water systems
- Resource Management Act reforms and a National Policy Statement to support renewable electricity generation.

" We are working hard in international negotiations to achieve a post-2012 pact where New Zealand does its fair share as a developed country in addressing this global problem."

– Hon Tim Groser, Associate Minister for Climate Change Issues (International Negotiations)

International negotiations ▷▷▷

Progress on climate change globally depends on the successful conclusion of the United Nations negotiations on an agreement for the period beyond 2012.

The global recession has made this task more difficult. The international dynamics have been helped by the election of the Obama administration in the United States. Engagement with rapidly developing countries like China, India and Brazil is also critical to success. New Zealand can constructively contribute to finding a solution with developing countries by assisting in areas like technology transfer with our agricultural expertise and on the challenging issue of deforestation.

New Zealand has committed to a global goal of stabilising atmospheric concentrations of greenhouse gases at not more than 450ppm CO_2-e. A long-term goal has been set of 50 by 50 – reducing New Zealand's net emissions to 50 per cent of 1990 levels by 2050.

The issue of New Zealand's 2020 target needs careful consideration. Detailed economic analysis shows the costs to the New Zealand economy increase significantly if our policy response is out of step with our trading partners (NZIER and Infometrics Report, 2009). It may be appropriate for New Zealand's target to be conditional on other countries' commitments or be a target range comparable to ranges indicated by other countries. Emissions levels and targets from a selection of key countries are set out in the chart below.

A complicating factor in negotiating for New Zealand is that our emissions are quite sensitive to the measurement and rules associated with forestry and land-use change. The Government has invested heavily in LUCAS (Land Use Carbon Accounting System) to get better information and is seeking changes in international rules to accommodate forestry offsetting for New Zealand landowners.

New Zealand's intention is to table its policy on a 2020 target at the Bonn negotiations this August to help achieve agreement at the Copenhagen conference in December.

Country		Percentage of world emissions: 2007	Emissions change: 1990–2007	2020 target (adjusted to 1990 base year for ease of comparison, approximate only)	2050 target (adjusted to 1990 base year for ease of comparison, approximate only)
DEVELOPED COUNTRIES					
	New Zealand	0.2%	22.1%		Reduce emissions by 50% below 1990 levels.
	Australia	1.4%	30.0%	4% reduction unilaterally; 14% reduction conditional on efforts by major economies; about 24% reduction conditional on adequate global agreement.	Reduce emissions to 50% below 1990 levels.
	Canada	1.9%	26.2%	About a 3% reduction.	A reduction of about 50–65% on 1990 levels.
	EU-27	13%	–9.3%	20% reduction unilaterally; 30% reduction conditional on other countries' efforts.	
	Japan	3.5%	8.2%	8% reduction (domestic reductions only).	Reduce emissions to 55–80% below 1990 levels.
	USA	18.3%	16.8%	Return to 1990 levels (US Administration target).	Reduce emissions to about 80% below 1990 levels.
DEVELOPING COUNTRIES					
	China	20.3%	120.5%	Countries have agreed to protect the climate system on the basis of equity and according to their differing responsibilities and capabilities. Developed countries have agreed to take the lead. As developing countries' emissions and wealth grow, they will need to increasingly take on a share of the global effort.	
	India	5.1%	79.9%		
	Brazil	2.7%	54.7%		

All emissions data is exclusive of land use, land-use change and forestry. Sources: 2009 National Greenhouse Gas Inventory Submissions, UNFCCC (developed countries), Climate Analysis Indicators Tool, World Resources Institute (developing countries and world).

Setting a 2020 target ▷▷▷

Scientific, economic, environmental and foreign affairs advice needs to be considered in setting New Zealand's 2020 emissions target. The views of the public and businesses are also important to the Government.

An emissions target is a stated intention to meet a particular emissions level by 2020. It can be met by reducing emissions to that level but can also be met by storing carbon in forests or by purchasing emission units offshore. These units can be obtained from other developed countries which reduce emissions below their target levels or from projects in developing countries that reduce emissions.

It is recognised in the international negotiations that different countries have different national circumstances. Some countries are wealthier than others. Some have greater opportunities to reduce emissions than others. New Zealand needs to carefully consider what is our fair share.

Our target needs to be realistic so we do not put our economy at risk or damage our good international reputation by failing to deliver. It must also be sufficient to protect the environment and associated economic and social benefits into the future.

Reasons for a modest NZ 2020 target	Reasons for an ambitious NZ 2020 target
• 3rd lowest GDP per capita amongst Annex I (developed) Parties • High cost of reducing emissions due to unique emissions profile • 2nd highest population growth since 1990 amongst Annex I Parties.	• 11th highest emissions per capita globally • Importance of New Zealand's "clean and green" brand • Vulnerability of the New Zealand economy to impacts of climate change.

Have your say ▷▷▷

You can have your say on New Zealand's 2020 target by:

- attending one of the meetings being held around the country (see below)
- emailing or writing to the Minister with your views at **n.smith@ministers.govt.nz** or Hon Dr Nick Smith, Minister for Climate Change Issues, PO Box 10362, Wellington 6143
- participating with the Minister for Climate Change Issues in a panel discussion to be shown live online from 7.30pm on Monday 20 July at **www.r2.co.nz/20090720**. Questions can be submitted in advance to **2020target@mfe.govt.nz**.

PUBLIC MEETINGS

LOCATION	DATE	TIME	VENUE	ADDRESS
Wellington	6 July	7.30–9pm	Oceania Room, Te Papa	Cable Street, Wellington
Auckland	7 July	7.30–9pm	Princes Ballroom, B and C, Hotel Hyatt Regency Auckland	Corner of Princes St and Waterloo Quadrant Auckland Central
Christchurch	8 July	7.30–9pm	Christchurch Convention Centre, Hall C	Kilmore Street, Christchurch
Dunedin	9 July	7.30–9pm	Dunedin Centre, Clifford Skeggs Gallery	1 Harrop Street, Dunedin
Queenstown	10 July	7.30–9pm	Icon Room, Heritage Hotel	91 Fernhill Drive, Queenstown
Hamilton	13 July	7.30–9pm	Waikato Room, SkyCity Hamilton	346 Victoria Street, Hamilton
New Plymouth	14 July	7.30–9pm	Conference Room, Plymouth International	Corner Courtenay & Leach Streets, New Plymouth
Napier	15 July	7.30–9pm	Ocean Suite, East Pier	Hardinge Road, Ahuriri, Napier
Nelson	17 July	7.30–9pm	Waimea Room, Rutherford Hotel	Trafalgar Square, Nelson

MEETINGS/HUI (BY INVITATION)

MEETING	LOCATION	DATE	TIME	VENUE	ADDRESS
Business New Zealand	Wellington	7 July	10–11am	Level 6, Lumley House	3–11 Hunter Street, Wellington
EMA Northern	Auckland	7 July	4–5pm	EMA Northern Offices	159 Khyber Pass Road, Grafton, Auckland
Canterbury Employers' Chamber of Commerce	Christchurch	8 July	3–4pm	Canterbury Employers' Chamber of Commerce	57 Kilmore Street, Christchurch
Iwi Leadership Group	Hamilton	14 July	10am–12.30pm	Tainui Endowed College	451 Old Taupiri Road, Hopuhopu, Ngaruawahia
Institute of Policy Studies, Victoria University	Wellington	15 July	9.30am–12pm	Ballroom, Level 6 Duxton Hotel	170 Wakefield Street, Wellington

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