



In reporting our greenhouse gas (GHG) emissions we look backwards at what New Zealand actually emitted and whether we met targets, and make projections about how we think we'll do against future targets.

The Ministry for the Environment produces a variety of reports to do this. Some are produced as part of our obligations to the international agreements we have signed up to; others are produced to provide information to domestic audiences like policy makers, or businesses and sectors who are covered by the rules and obligations of the New Zealand Emissions Trading Scheme (NZ ETS).

The *Second Biennial Report* and *2020 Net Position Report* were both published at the end of 2015. This snapshot describes the differences between them and the key findings of each.

The *Biennial Report* summarises New Zealand's domestic GHG emissions, climate change policy measures, and progress on implementing our obligations under the United Nations Framework Convention on Climate Change (UNFCCC). This is submitted to the UNFCCC every two years. To view our *Second Biennial Report* visit www.mfe.govt.nz/publications/climate-change/nz-second-biennial-report-under-unfccc.

The *2020 Net Position Report* tracks New Zealand's progress towards its 2020 target, taken under the UNFCCC, to reduce emissions to 5 per cent below 1990 levels. To view the *2020 Net Position Report* visit www.mfe.govt.nz/publications/climate-change/reporting-greenhouse-gas-emissions/nzs-net-position-under-kyoto-protocol/latest.

Both reports include projections to 2020, but the rules used to produce these projections are not the same because the reports have different purposes. These differences are explained below.

The Ministry publishes all climate change reports on our website at www.mfe.govt.nz/climate-change.

Key points:

The Second Biennial Report shows that New Zealand:

- > met its Kyoto Protocol First Commitment Period (2008-2012) emissions reduction target
- > projects its land-use change and forestry sector to be a net sink of carbon dioxide to 2030
- > continues to put in place measures to reduce emissions
- > supports developing countries to mitigate or adapt to climate change.

The 2020 Net Position Report shows that New Zealand:

- > is projected to meet its 2020 target
- > will have a projected surplus of 93.6 million units once it has met this target.

Second Biennial Report

The *Biennial Report* is one of several¹ reporting requirements under the United Nations Framework Convention on Climate Change (UNFCCC).

New Zealand has met its 2008 to 2012 emissions reduction target

New Zealand has met its target to reduce GHG emissions to 1990 levels over the first commitment period (CP1) of the Kyoto Protocol (2008-2012). This was met through a combination of domestic emissions reductions, carbon removal by forests, and participation in international emissions trading. New Zealand has a surplus of 123.7 million Kyoto Protocol units (see definitions) from this period, and is projecting to use 30.2 of these units to meet its 2020 target (see the *2020 Net Position Report*).

New Zealand also submitted the True-Up Report to the UNFCCC in December 2015 showing how we met the target. This report will be reviewed by an international team of experts in February 2016, and is expected to confirm New Zealand's compliance.

¹ New Zealand also publishes an annual Greenhouse Gas Inventory (see www.mfe.govt.nz/climate-change/reporting-greenhouse-gas-emissions/nzs-greenhouse-gas-inventory) and a four-yearly National Communication (see www.mfe.govt.nz/climate-change/reporting-greenhouse-gas-emissions/nzs-national-communication-and-biennial-report).



New Zealand's land-use change and forestry sector is projected to be a net sink of carbon dioxide to 2030

Projections of GHG emissions and removals from the land-use change and forestry sector show that it is expected to be a net sink (remover) of carbon dioxide to 2030. This differs from projections in the *First Biennial Report* that predicted forestry would be a net source of emissions before 2030. The main reasons for this change are improved methodologies to estimate future emissions and removals, better information, and updated UNFCCC reporting guidelines since the *First Biennial Report* was published (see chapter four of the *Second Biennial Report* www.mfe.govt.nz/publications/climate-change/nz-second-biennial-report-under-unfccc).

New Zealand continues to put in place measures to reduce emissions

The New Zealand Government is supporting New Zealanders to reduce emissions through a number of household and business initiatives. For example:

- > the NZ ETS provides an incentive to reduce emissions by placing a price on carbon
- > improving energy and fuel efficiency and increasing the use of renewable energy through the work of the Energy Efficiency and Conservation Authority
- > reducing the use of carbon-intensive fuels in New Zealand's meat and dairy sectors, through the Energy Efficient Meat and Dairy Plant programme
- > reducing emissions through investment in public transport and cycling and walking infrastructure
- > encouraging and supporting the planting of new forests, through programmes such as the Afforestation Grant Scheme.

Without these and other current policies and measures, it is estimated New Zealand's net GHG emissions would be 8 per cent higher in 2020 and 7 per cent higher in 2030.

New Zealand is supporting developing countries

New Zealand provided NZ\$85.57 million in climate-related assistance to developing countries over 2013-2014. In addition, New Zealand provided funding totalling NZ\$106.42 million to regional and multilateral agencies with a strategic focus on climate change.

Definitions:

Gross emissions

The total emissions from agriculture, energy, industrial processes and product use, and waste.

Net emissions under the UNFCCC

These are gross emissions plus emissions and removals from the land use, land-use change and forestry (LULUCF) sector. These are less than net emissions under the Kyoto Protocol.

Net emissions under the Kyoto Protocol

These are gross emissions plus emissions and removals from forestry and land-use activities included in the Kyoto Protocol (see the section on differences between the two reports). These are more than net emissions under the UNFCCC because they do not include emissions and removals from our indigenous forest or harvesting of pre-1990 forest. The rules to account for Kyoto Protocol emissions and removals from CP1 differ slightly to those used for New Zealand's 2020 target. This is due to changes in reporting the inclusion of harvested wood products after CP1.

CO₂ eq (equivalent)

The measure used to account for the different global warming potency of the different greenhouse gases, and allows them to be reported consistently. Gases are converted to CO₂ eq by calculating the amount of warming they would cause in the 100 years following emission, compared to the effect of CO₂ itself.

One (emissions) unit

The amount of GHG that is equivalent to 1 tonne of CO₂.



New Zealand's 2020 Net Position Report

New Zealand is projected to meet its 2020 target of reducing emissions to 5 per cent below 1990 levels, with a surplus of 93.6 million units.

A country must hold units that are at *least equivalent* to its gross emissions from 2013-2020 at the end of the period, according to the Kyoto Protocol rules that we operate under.

2020 net position projections:

- > New Zealand's gross emissions from 2013 to 2020 will be 656.3 million tonnes CO₂ eq
- > New Zealand will hold 749.9 million units at the end of the period. This consists of:
 - a carbon budget of 516.7 million units
 - carbon dioxide removals from forestry and land-use activities included in the Kyoto Protocol corresponding to 109.5 million units
 - a surplus of 123.7 million units from the first commitment period (2008-2012).

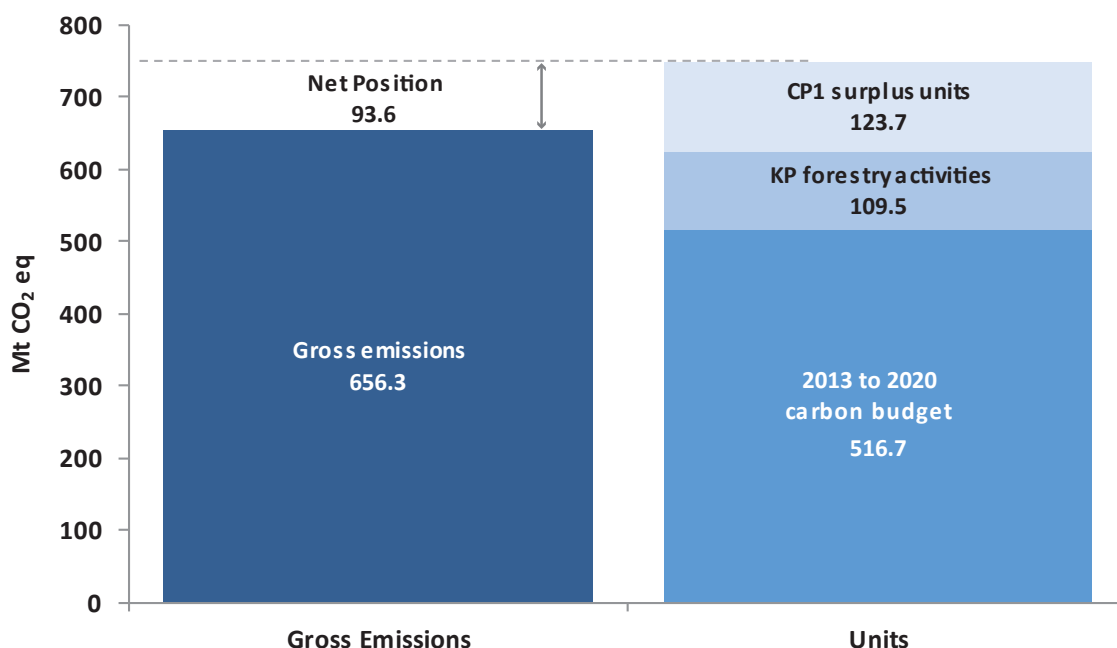
New Zealand's post-2020 target

On 7 July 2015 New Zealand announced its Intended Nationally Determined Contribution: an emissions reduction target of 30 per cent below 2005 levels by 2030.

Figure 2 shows land-use change and forestry rules will play a big part in how we meet our post-2020 target. Changes in domestic policy tools such as the NZ ETS will help drive New Zealand towards our post-2020 target.

New Zealand's post-2020 target will remain provisional until there is international agreement on the rules to account for land-use change and forestry emissions and removals, and access to carbon markets.

Figure 1: New Zealand's projected gross emissions and units over 2013-2020 period*



*Rounded to one decimal place.



Definitions

Carbon budget

The quantity of emissions we are allowed to emit if we are to reduce our emissions to meet a target.

Afforestation

The planting of a forest in an area where there was no forest for at least 50 years.

Reforestation

The re-planting of a forest in an area where forest was converted to other land uses during the past 50 years. Using Kyoto Protocol rules, reforestation is limited to areas that were not forested on 31 December 1989.

Deforestation

The removal of a forest from an area, which is then converted to a non-forest land use.

Forest management

Forest area which is managed sustainably for ecological, economic and social purposes. This only includes land that does not meet the criteria to be considered afforestation, reforestation or deforestation.

Kyoto Protocol units

One Kyoto Unit is equivalent to 1 tonne of CO₂, and is recognised for compliance under the Kyoto Protocol.

Differences between the two reports

The *Biennial Report* is an international reporting requirement under the UNFCCC following a specific set of guidelines. The *2020 Net Position* is not an international reporting requirement; it is published to track progress towards our 2020 target for a domestic audience.

We use the internationally-agreed Kyoto Protocol accounting rules for the *2020 Net Position* so New Zealand's actions are transparent and can be compared to those of other countries.

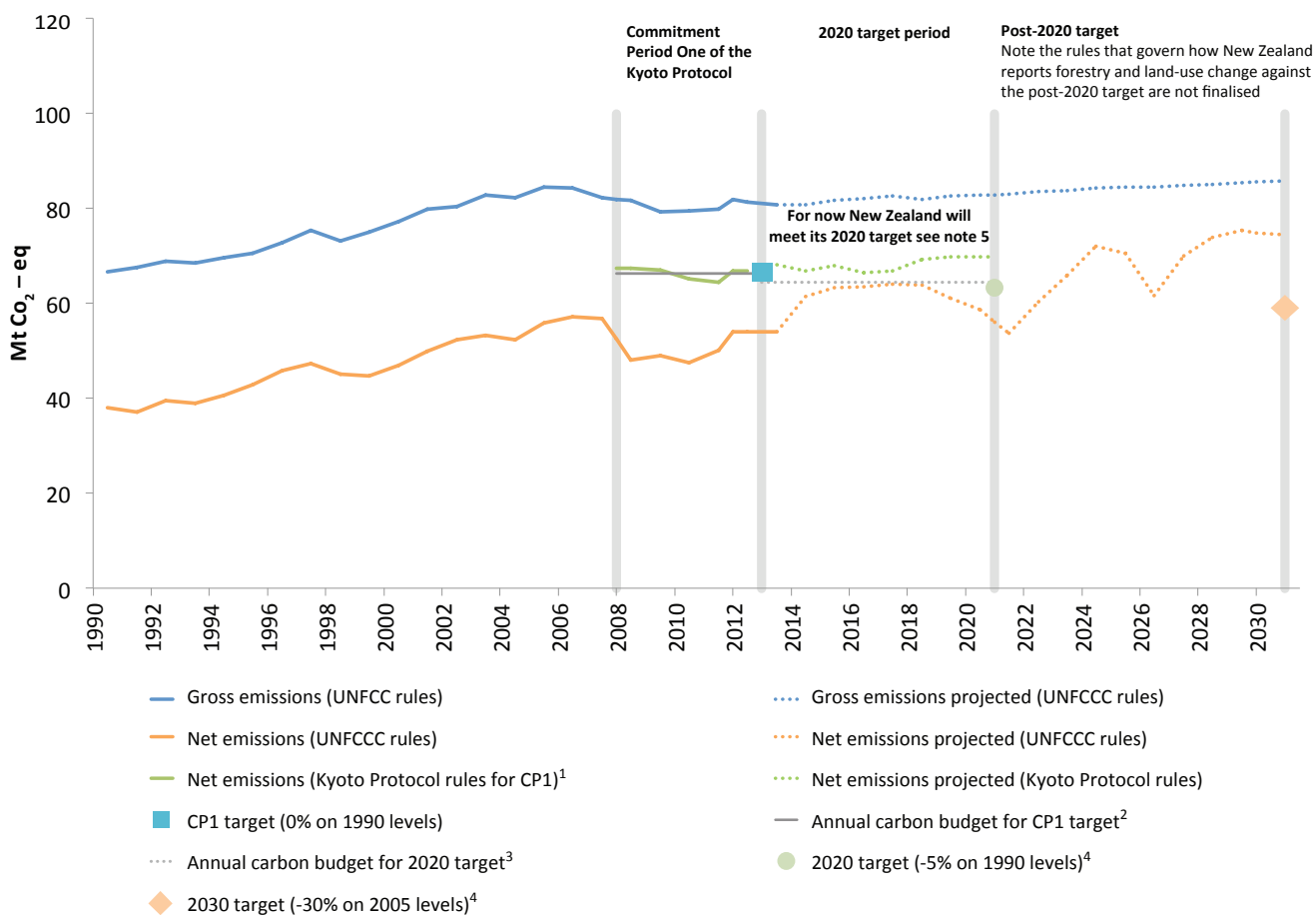
The main difference between the *Second Biennial Report* and the *2020 Net Position* projections is the land and forestry activities able to be included in emissions calculations.

The *Biennial Report* uses UNFCCC rules to report emissions and removals from all land and forestry activities and includes carbon remaining in harvested wood products.

The *2020 Net Position* is calculated under Kyoto Protocol rules. It accounts for a subset of emissions and removals from land and forestry activities.

The differences in land-use change and forestry rules mean that net emissions under the UNFCCC are less than net emissions under the Kyoto Protocol. Figure 2 illustrates this difference over 2013-2020.

Figure 2: December 2015 update of New Zealand's gross and net emissions projected to 2030 (in million tonnes CO₂ equivalent)*



Notes

1. Kyoto Protocol Commitment Period 1 (CP1) net emissions have been recalculated using Assessment Report Four (AR4) global warming potentials for consistency of presentation. The rules to account for Kyoto Protocol emissions and removals from forestry and land-use activities differ slightly between the 2008–2012 and 2013–2020 commitment periods.
2. Based on *New Zealand's Greenhouse Inventory 1990-2004* and reviewed by the Expert Review Team under the UNFCCC, see: <http://unfccc.int/resource/docs/2007/irr/nzl.pdf>.
3. New Zealand's 2020 target equals 96.8% of 1990 gross emissions. This is the average level of emissions New Zealand can emit each year to reach its target of 5 per cent below 1990 levels (using UNFCCC methodology). Note the level displayed on the graph is based on *New Zealand's Greenhouse Gas Inventory 1990-2013*. This will be updated as National Greenhouse Gas Inventory data becomes available.
4. New Zealand's 2020 and 2030 targets are based on the latest available emissions data which are subject to change. New Zealand will update its targets as National Greenhouse Gas Inventory data and projections become available.
5. New Zealand is projected to meet its 2020 target through a combination of domestic emissions reductions, removal of carbon from forests, participation in international carbon markets and recognition of its surplus achieved during CP1 of the Kyoto Protocol (for more information see *New Zealand's 2020 Net Position Report*).

* Projections are based on current guidance and are subject to change as updates to assumptions, improved data and research become available.

