



New Zealand Emissions Trading Scheme Facts and Figures 2017

About this factsheet

This factsheet presents information about emissions reported, the surrender of units, unit allocations, entitlement transfers, and forestry in the NZ ETS.

This factsheet is published annually and provides a simple and informative overview of the NZ ETS. The NZ ETS is New Zealand's principal policy response to climate change.

Five sectors have obligations to report and surrender units in the NZ ETS for their emissions: Forestry, Stationary Energy, Industrial Processes, Liquid Fossil Fuels and Waste. An additional sector, Agriculture, is only required to report emissions.

This factsheet presents information about emissions reported, the surrender of units, unit allocations, entitlement transfers, and forestry in the NZ ETS.

Much of the information contained in this factsheet was drawn from the Environmental Protection Authority's (EPA) Annual NZ ETS Report which is available on the EPA website (www.epa.govt.nz). This factsheet provides information on the 2017 calendar year, whereas the 2017 Annual NZ ETS Report relates to activities in the 2017 financial year (July 2017 to June 2018).

Units surrendered

In the past, participants in the NZ ETS have surrendered either New Zealand Units (NZUs) or international units.¹

Figure 1 shows the breakdown of the types of units that have been surrendered for emissions that occurred between 1 January and 31 December 2017. It includes surrenders by post-1989 forestry participants relating to emissions returns received during this period. Note: post 1989 forestry participants are only required to report at the end of the current five year reporting period. Reporting in other years is voluntary. Data for this report was collated prior to the end of the

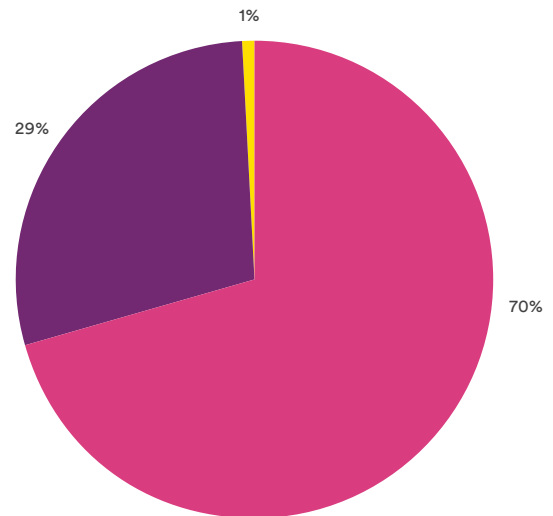
mandatory emission return reporting period. It will not represent the total post-1989 forestry removal activity undertaken during the 2017 calendar year.

The table below Figure 1 displays the total number of units surrendered for each year's emissions. The breakdown of unit types contributing to these totals is presented in Table 1.

FIGURE 1

Types of units surrendered

● Forestry NZUs ● Other NZUs ● NZ AAUs



Total units surrendered

2010:	2011:	2012:	2013:	2014:	2015:	2016:	2017:
8,302,572	16,414,431	35,314,982	46,597,674	30,343,730	20,428,114	22,452,417	28,601,659

The 2010 surrender period relates to emissions over a six-month period for non-forestry sectors, whereas the 2011–2017 surrender periods relate to emissions over a full year. The total numbers of units surrendered for the 2010–2016 years may have changed from the previous factsheet due to the late surrender of units or amendments to emissions returns. For reported activity prior to 2017, non-forestry participants with surrender obligations were required to surrender one unit for each 2 whole tonnes of reported emissions. For reported 2017 activity, non-forestry participants with surrender obligations were required to surrender one unit for each 1.5 whole tonnes of reported emissions. Forestry participants continue to surrender one unit for each one tonne of emissions.

¹ Since 31 May 2015, participants have not been able to surrender internationally originated units to meet ETS obligations, however they are still able to use New Zealand originated Assigned Amount Units (NZ AAUs). At some point the NZ AAU's in privately held accounts will be cancelled and replaced with NZU's.

Industrial allocations

The Government provides NZUs to companies carrying out activities that are emissions-intensive and trade exposed. This is so NZ ETS costs do not put these companies at a disadvantage compared to international competitors who do not face a price on emissions. The full list of eligible activities is available on the EPA website.

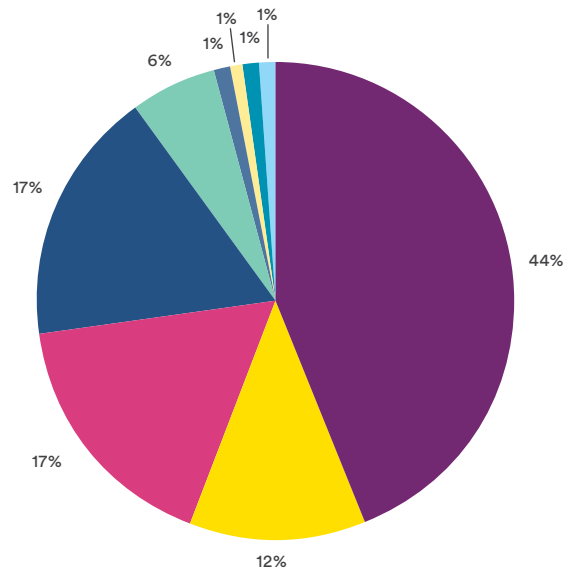
NZUs are allocated annually and can be applied for in advance at the beginning of the calendar year or in arrears after the year is completed. Until 2016, industrial allocations were halved due to the one-for-two transitional measure. One-for-two is being phased out and full allocations will apply from 2019.

Figure 2 shows the proportion of overall allocations received in relation to 2017 production by activity. The total number of units allocated for 2017 activity was 5.6 million.

FIGURE 2

Percentage of NZUs allocated by activity

- Iron, Steel, and Aluminium Manufacturing (4% of applicants)
- Clay Bricks & Field Tiles, Cementitious Products, and Burnt Lime (4% of applicants)
- Market Pulp, Tissue Paper, Packaging & Industrial Paper, Newsprint, and Cartonboard Manufacturing (7% of applicants)
- Methanol, Ethanol, and Hydrogen Peroxide (4% of applicants)
- Production of Ammonia-urea, Caustic Soda, Glass Containers, and Gelatine (5% of applicants)
- Production of Fresh Tomatoes, Capsicums, Cucumbers, and Cut Roses (51% of applicants)
- Meat By-product Rendering (20% of applicants)
- Reconstituted Wood Panels (6% of applicants)
- Production of Lactose and Whey Powder (1% of applicants)



Forestry

Pre-1990 forestry

Pre-1990 forest land is land that was forested in any forest species on 31 December 1989 and remained in predominantly exotic forest on 31 December 2007. The Government provided pre-1990 forest landowners with an allocation of NZUs, between 2010 and 2013. Landowners must surrender units for emissions if pre-1990 forest land is deforested.

Post-1989 forestry

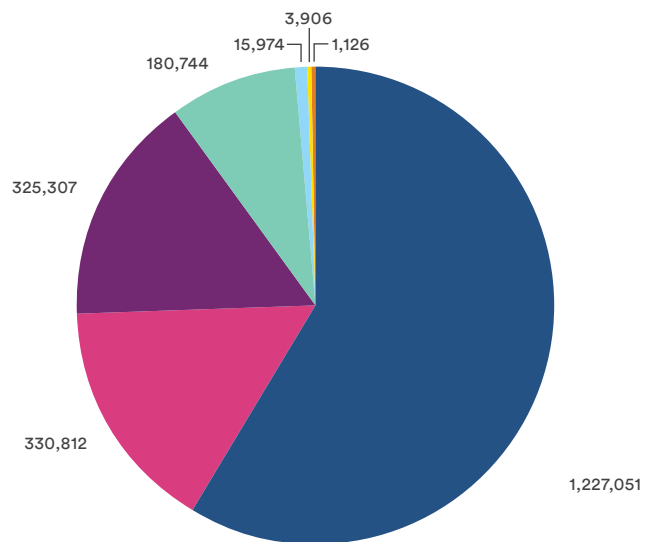
Post-1989 forest land is land that was established in forest species after 31 December 1989. Post-1989 foresters can choose to become voluntary participants in the NZ ETS to earn NZUs for carbon dioxide stored by the forest. However, they must surrender emission units when the trees are harvested or if the land is deregistered from the NZ ETS.

Post-1989 forestry participants are required to account for their emissions and removals over five-year mandatory emission return reporting periods (ending 2012 and 2017). Alternatively, they can choose to report their emissions annually and claim or surrender NZUs.

FIGURE 3

Distribution of forest land (in hectares) under the NZ ETS

- Pre-1990 forest land that received an allocation
- Possible Post-1989 forest land not currently registered in the ETS
- Post-1989 forest land registered in the ETS
- Possible Pre-1990 forest land that did not receive an allocation
- <50 hectare exempt forest land
- Pre-1990 offset area¹
- Area granted a Tree weed exemption



Note: Total forest land area is based on the forest definition used for reporting to the United Nations Framework Convention on Climate Change. Under this definition, some of the area reported as “not currently registered” would not be eligible for registration or an allocation under the NZ ETS. The figure for “estimated pre-1990 forest land that did not receive an allocation” includes pre-1990 forest on Crown land, which was not generally granted an allocation.

¹ Pre-1990 offset area is the amount of 1990 forest land that is to be deforested with the liability being offset through the establishment of an area and carbon equivalent forest elsewhere. This process is undertaken on a by application basis through Te Uru Rākau (Forestry NZ).

Forestry (cont'd)

Figure 4 shows afforestation and deforestation reflected in the NZ ETS for the period 2008-2017.

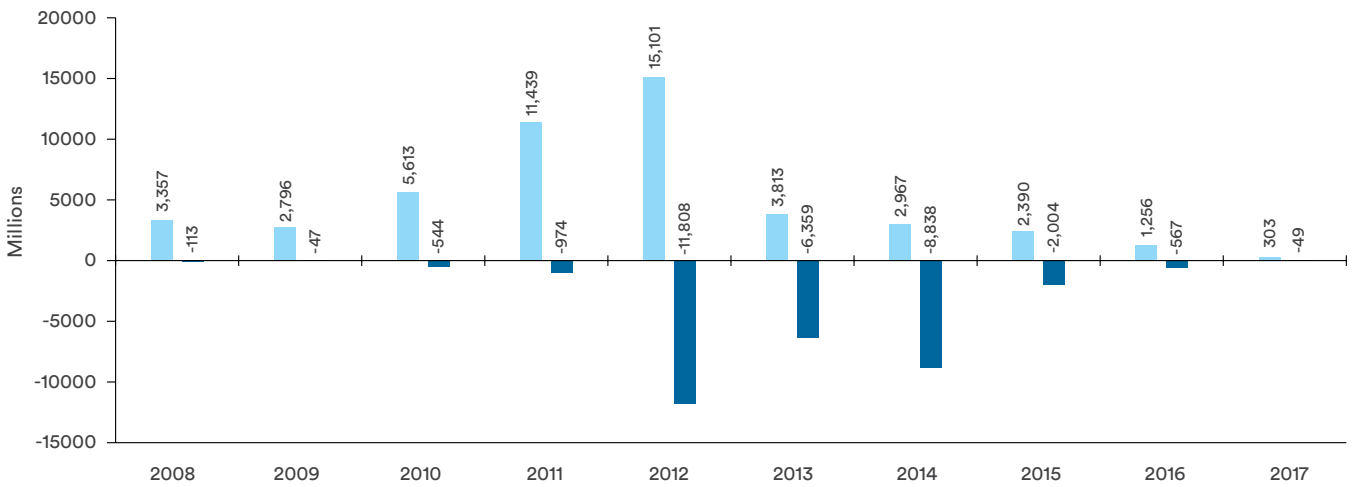
Source: Ministry for Primary Industries

Note: For afforestation and deforestation information further to that reflected in the NZ ETS, refer to the National Inventory Report, Manley Deforestation Survey, or the National Exotic Forest Description.

FIGURE 4

Afforestation and deforestation reflected in the ETS for the period 2008-2017.

- Registered post-1989 forest land by year of establishment (Ha)
- Notified deforestation of pre-1990 forest land by each year (Ha)



Year-on-year comparison of emissions and surrenders

The charts on this page compare year-on-year emissions and surrenders.

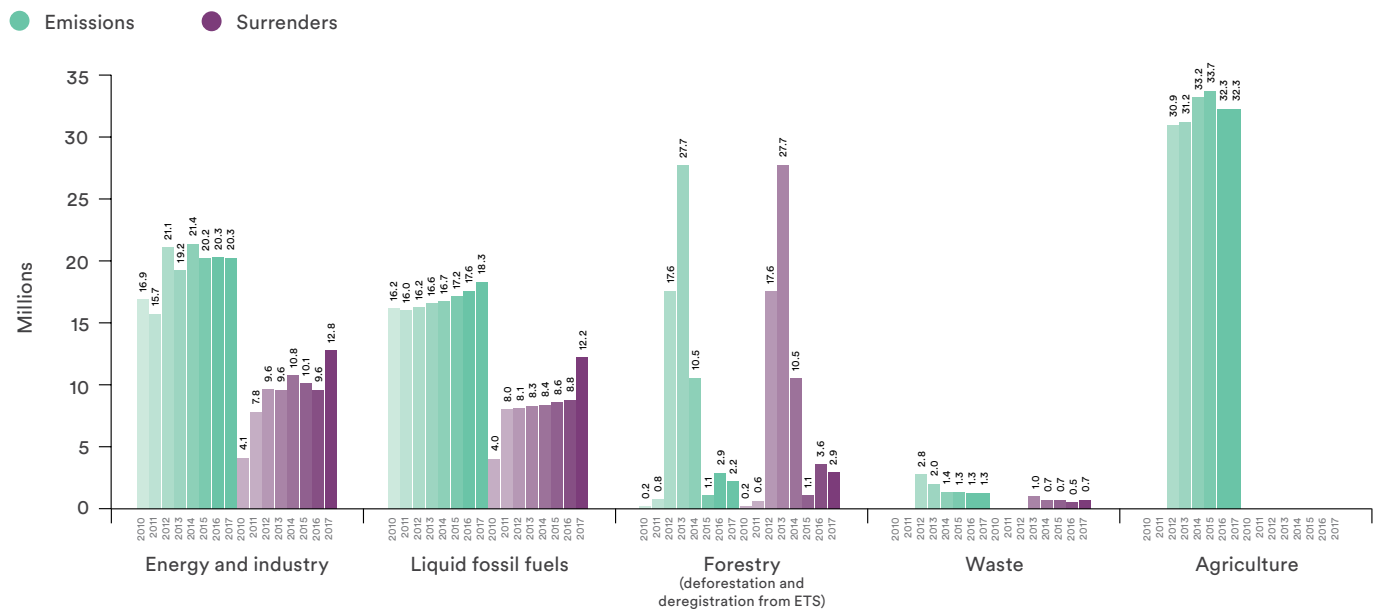
There are a few key points to note when comparing year-on-year emissions and surrenders:

- The phase out of the one-for-two transitional measure has impacted surrenders by the Energy and Industry¹, Liquid Fossil Fuels and Waste participants:
 - For activity prior to 2017 these participants were only required to surrender one emissions unit for every two tonnes of emissions

- For 2017 activity these participants are required to surrender one unit for every 1.5 whole tonnes of emissions produced²
- Forestry participants have always been required to surrender one unit for every whole tonne of emissions produced.
- Agriculture participants have an obligation to report their emissions, but no corresponding obligation to surrender units³.
- Pre-1990 forest land owners must notify that they are undertaking deforestation and pay the emissions for the deforestation in the following year.

FIGURE 5

Year-on-year emissions and surrenders



Note: Emissions and surrenders for each sector may have changed from the previous factsheet due to late surrender of units, amendments to emission returns, or adjustments to the year the surrender relates to.

1 Made up of the Stationary Energy and Industrial Processes sectors
 2 From 1 January 2017, the one-for-two transitional measure is being phased out incrementally over three years.

3 There are potentially large differences between NZ ETS reported agricultural emissions and those reported in the national greenhouse gas inventory due to methodological differences. For further information refer to the National Inventory Report.

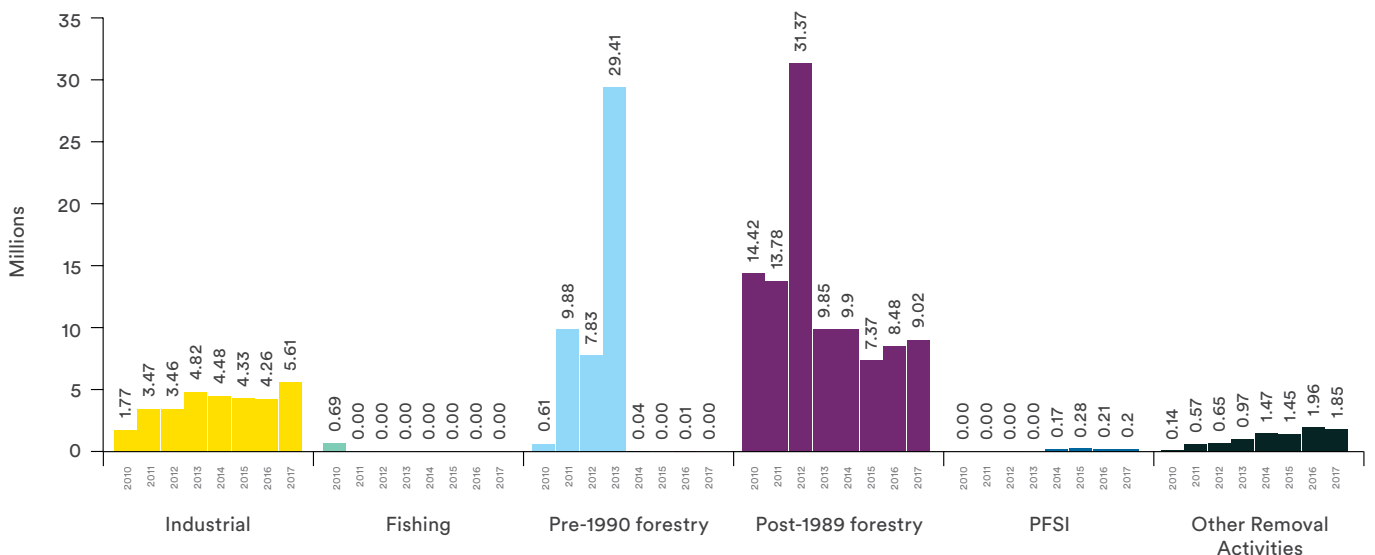
Year-on-year comparison of units earned and allocated

There are a few points to note when comparing units earned and allocated:

- Industrial allocations represent the number of NZUs allocated for the year’s activities. However, the 2010 figure relates to only six months, whereas the subsequent years’ figures relate to a whole year.
- Due to the one-for-two transitional measure, final allocations for activity up to and including 2016 received one-half of the allocation entitlement.
- Final allocations for 2017 activity received two-thirds of the allocation entitlement.
- The one-off fishing quota allocations were mostly completed in 2011 with one allocation occurring in 2016.
- The figures for pre-1990 forestry reflect two tranches of allocations. The 2012 and earlier figures relate to the first tranche, while the 2013 figure primarily reflects the second tranche of pre-1990 allocations.
- The 2012 figure for post-1989 forestry relates to the first year of the second mandatory emissions reporting period.
- The Permanent Forest Sink Initiative (PFSI) issues units for removals on registered post-1989 forest sink land in a similar manner to the NZ ETS. From 2008 to 2012, AAUs were issued to PFSI participants. From 2013 onwards, NZUs have been issued.
- Emissions returns accounting for forestry removals can be submitted annually, and must be submitted for each mandatory emissions reporting period. The figure below for 2017 is based on emission units transferred for post-1989 forestry in 2018 as at the date of collection for this report. As the mandatory emission return reporting period is still ongoing there will be a significant increase in the 2017 figure as the additional returns are received and processed.
- Other Removal Activities refers to activities other than forestry that remove or capture emissions. This includes the export of Synthetic Greenhouse Gases and the production of products which embed carbon.

FIGURE 6

NZUs earned and allocated



The Environmental Protection Authority would like to acknowledge the help of the Ministry for the Environment and the Ministry for Primary Industries in compiling this factsheet.