



New Zealand Emissions Trading Scheme Facts and Figures 2018

About this factsheet

This factsheet presents information about emissions reported, the surrender of units, unit allocations, and entitlement transfers 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 to the government for their emissions: forestry, stationary energy, industrial processes, liquid fossil fuels and waste. The agriculture sector is required to report emissions only.

Much of the information in this factsheet was drawn from the Environmental Protection Authority's (EPA) Annual NZ ETS Report which is available on the [EPA website](#). This factsheet provides information on the 2018 calendar year, whereas the 2018 Annual NZ ETS Report relates to activities in the 2018 financial year (July 2018 to June 2019).

Units surrendered

In the past, participants in the NZ ETS have surrendered either New Zealand Units (NZUs) or international units¹.

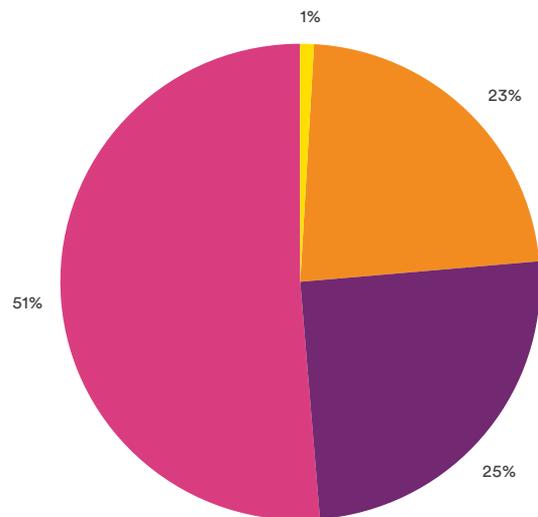
Figure 1 shows the breakdown of the types of units that have been surrendered for emissions that occurred between 1 January and 31 December 2018. Where relevant, it includes surrenders by post-1989 forestry participants relating to emissions returns received during this period. Note: Post-1989 forestry participants are required to report only at the end of each five-year reporting period. Reporting in other years is voluntary and does not necessarily reflect the level of activity undertaken by this sector.

The table on the following page 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

- NZ AAUs
- Forestry NZUs
- Other NZUs
- NZ \$25 Fixed Price Option



Total units surrendered

| 2012: | 2013: | 2014: | 2015: | 2016: | 2017: | 2018: |
|------------|------------|------------|------------|------------|------------|------------|
| 35,313,916 | 46,597,067 | 30,431,309 | 20,391,940 | 22,402,683 | 29,083,623 | 32,828,820 |

Data for units surrendered in 2010 and 2011 can be found in the Facts and Figures 2017 report. The total numbers of units surrendered for the 2012–2018 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 2018, non-forestry participants with surrender obligations were required to surrender one unit for each 2 whole tonnes of reported emissions. Known as one-for-two. 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. For reported 2018 activity, non-forestry participants with surrender obligations were required to surrender one unit for each 1.2 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 NZ ETS obligations, however they are still able to use New Zealand originated Assigned Amount Units (NZ AAUs). At some point the NZ AAUs in privately held accounts will be cancelled and replaced with NZU's.

How NZ ETS participants have met their surrender obligations

The numbers of units surrendered for activity related to each of the 2012–2018 years have been updated to reflect amended or late emissions returns and the resulting surrender obligations, late surrenders, and adjustments to the year surrenders relate to. Data for how NZ ETS participants met their surrenders in 2010 and 2011 can be found in the Facts and Figures 2017 report.

TABLE 1

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|------------|------------|------------|-----------|------------|------------|------------|
| Forestry NZUs (New Zealand Units) | 548,360 | 170,417 | 874,497 | 9,981,851 | 15,780,496 | 20,708,505 | 7,500,112 |
| These are NZUs given to foresters for removal activities or through the Forestry Allocation Plan. They may be converted to NZ AAUs for voluntary cancellation. | | | | | | | |
| Other NZUs | 449,936 | 77,513 | 245,852 | 9,866,634 | 6,469,274 | 8,142,984 | 8,222,320 |
| These are all other NZUs, including those given to industrial allocation recipients. They may be converted to NZ AAUs for voluntary cancellation. | | | | | | | |
| NZ AAUs (Assigned Amount Units) | 166,854 | 0 | 772 | 543,439 | 149,271 | 209,960 | 285,174 |
| New Zealand originated AAUs. NZ AAUs were granted to entities in New Zealand that participated in Projects to Reduce Emissions (PRE) or the Permanent Forest Sinks Initiative (PFSI) prior to 2013. | | | | | | | |
| CERs (Certified Emission Reduction units) | 3,333,462 | 2,064,175 | 6,513,702 | 0 | 0 | 0 | 0 |
| CERs are units generated by Clean Development Mechanism (CDM) projects offshore. Participants in the NZ ETS could buy these units to meet their surrender obligations until 31 May 2015. | | | | | | | |
| ERUs (Emission Reduction Units) | 27,295,110 | 42,309,346 | 22,422,982 | 0 | 0 | 0 | 0 |
| ERUs are units generated by Joint Implementation (JI) projects offshore. Participants in the NZ ETS could buy these units to meet their surrender obligations until 31 May 2015. | | | | | | | |
| RMUs (Removal Units) | 3,520,192 | 1,975,595 | 373,486 | 0 | 0 | 0 | 0 |
| RMUs are Kyoto Protocol units generated through storing carbon in trees. Participants in the NZ ETS could buy these units to meet their surrender obligations until 31 May 2015. | | | | | | | |
| NZ \$25 Fixed Price Option | 2 | 21 | 18 | 16 | 3,642 | 22,174 | 16,821,214 |
| Entities have the option to pay the Government a fixed price per unit to be surrendered, currently \$25. | | | | | | | |

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.

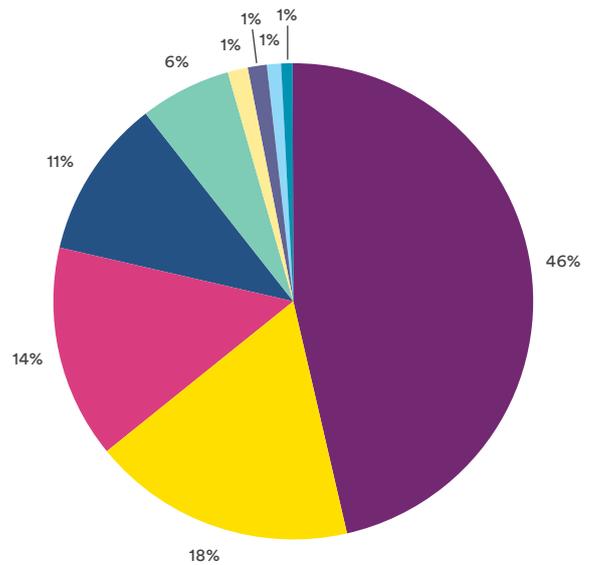
NZUs are allocated annually and can be applied for in advance at the beginning of the calendar year or in arrears after the year is completed.

Figure 2 shows the proportion of overall allocations received in relation to 2018 production by activity. The total number of units allocated for 2018 activity was 6,743,573 million.

FIGURE 2

Percentage of NZUs allocated by activity

- Iron, Steel, and Aluminium Manufacturing (4% of applicants)
- Market Pulp, Tissue Paper, Packaging & Industrial Paper, Newsprint, and Cartonboard Manufacturing (8% of applicants)
- Methanol, Ethanol, and Hydrogen Peroxide (4% of applicants)
- Clay Bricks & Field Tiles, Cementitious Products, and Burnt Lime (4% of applicants)
- Production of Ammonia-urea, Caustic Soda, Glass Containers, and Gelatine (5% of applicants)
- Meat By-product Rendering (19% of applicants)
- Production of Fresh Tomatoes, Capsicums, Cucumbers, and Cut Roses (48% of applicants)
- Reconstituted Wood Panels (6% of applicants)
- Production of Lactose and Whey Powder (1% of applicants)



Note: Until 2016, industrial allocations were halved due to the one-for-two transitional measure. Since 2017 the one-for-two has been being phased out. Those who applied for a final allocation for 2018 activity received five-sixths of the allocation entitlement and those who applied for a provisional allocation for 2019 received a full allocation. Rounding has been applied to the nearest percent. This means the rounded figures may not add up to 100%.

Forestry

There are two types of forest land in the NZ ETS, based on when it was established.

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

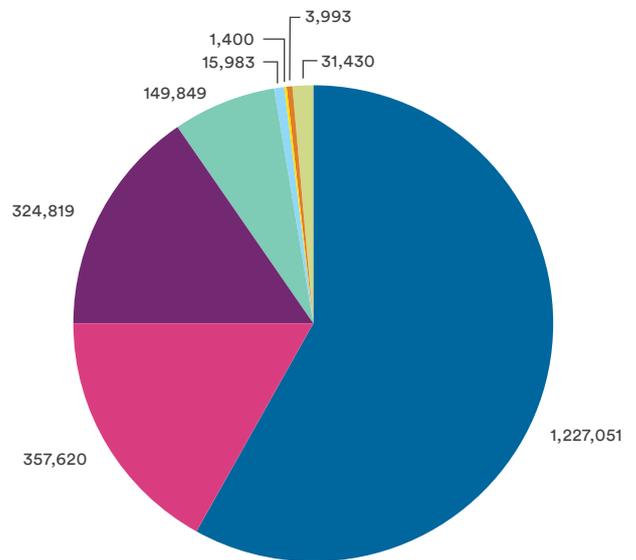
Post-1989 forest land is land that was established in forest species after 31 December 1989. Post-1989 foresters can choose to become voluntary participants in the NZ ETS to earn NZUs for carbon dioxide stored by the forest. However, they must surrender NZUs when the trees are harvested or if the land 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, 2017 and 2022). They can also choose to report their emissions annually.

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
- Pre-1990 Deforestation returns



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 2012-2018. Data for afforestation and deforestation for 2008-2011 can be found in the Facts and Figures 2017 report.

FIGURE 4

Afforestation and deforestation reflected in the ETS for the period 2012-2018.

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



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.

Year-on-year comparison of emissions and surrenders

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

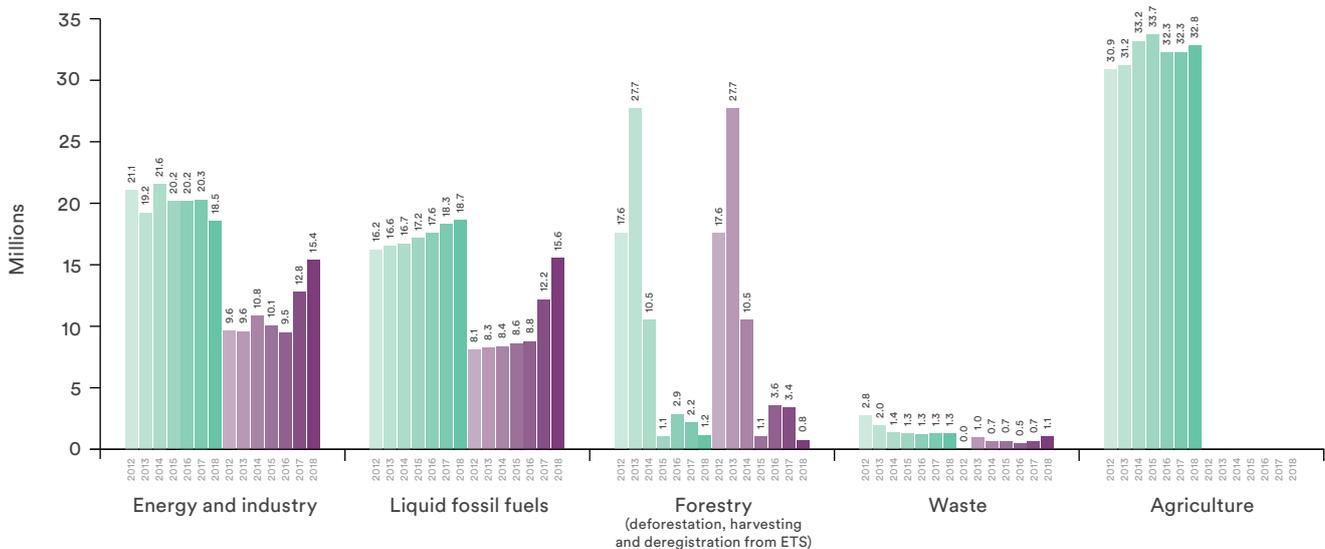
There are a few key points to note when comparing year-on-year emissions and surrenders:

- 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.
- For 2018 activity these participants were required to surrender one unit for every 1.2 whole tonnes of emissions produced.
- From 2019, participants are required to surrender one unit for every one whole tonne of emissions produced.
- 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

● Emissions ● 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. Data for year-on-year emissions and surrenders for 2010 and 2011 can be found in the Facts and Figures 2017 report.

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.

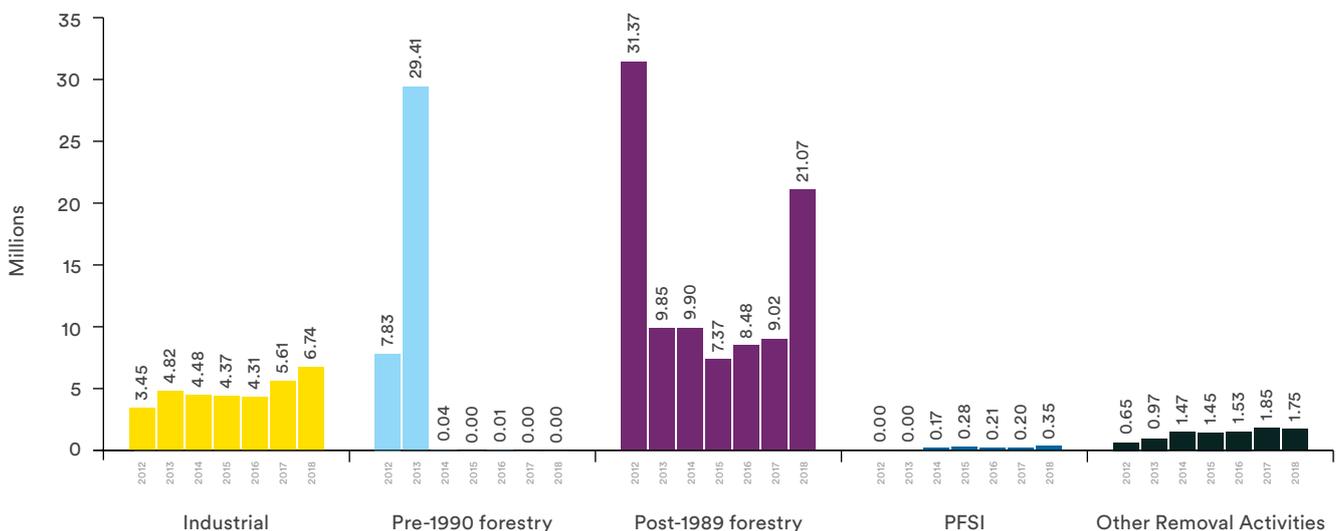
Year-on-year comparison of units earned and allocated

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. Data for industrial allocations for 2010 and 2011 can be found in the Facts and Figures 2017 report.
- 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 and five-sixths of the allocation entitlement for 2018.
- 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, NZ AAUs were issued to PFSI participants. From 2013 onwards, NZUs have been issued.
- Emissions returns accounting for post-1989 and PFSI forestry removals can be submitted annually, and must be submitted for each mandatory emissions reporting period. The figure below for 2018 is based on emission units transferred for post-1989 forestry in 2019 as at the date of collection for this report.
- 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.