

A GUIDE TO THE NEW ZEALAND EMISSIONS TRADING SCHEME



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Catherine Leining and Suzi Kerr

Motu Economic and Public Policy Research

catherine.leining@motu.org.nz & suzi.kerr@motu.org.nz

SUMMARY HAIKU

Emissions trading
creates a price signal that
transforms behaviour

INTRODUCTION

Emissions trading is a tool for sending price signals to producers, consumers and investors that encourage and enable them to reduce the greenhouse gas (GHG) emissions that contribute to climate change. Globally, 25 emissions trading systems have been implemented or scheduled as of 2018.^[1]

The New Zealand Emissions Trading Scheme (NZ ETS) began operation in 2008 and continues to serve as a principal element of New Zealand's policy response to climate change. This guide explains how the NZ ETS works, describes the core design features of the system, and examines how and why they have evolved over time. As national circumstances change, so too will the NZ ETS. This guide offers a snapshot of how the system operates today. It does not address potential changes signalled following the change in government in October 2017.

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HOW EMISSIONS TRADING WORKS

An ETS sets a regulatory limit on emissions by covered sectors and translates that limit into a market price which changes behaviour to reduce emissions. Obligated parties are required to surrender to the government a tradable emission unit for each tonne of emissions for which they are liable. The government limits the supply of emission units into a trading market which then sets the emission price based on unit supply and demand. The cost to obligated parties of surrendering emission units gets passed on across the supply chain, raising the relative cost of higher-emission goods and services, making lower-emission behaviour more competitive, and creating an incentive for businesses and consumers to reduce or avoid emissions.

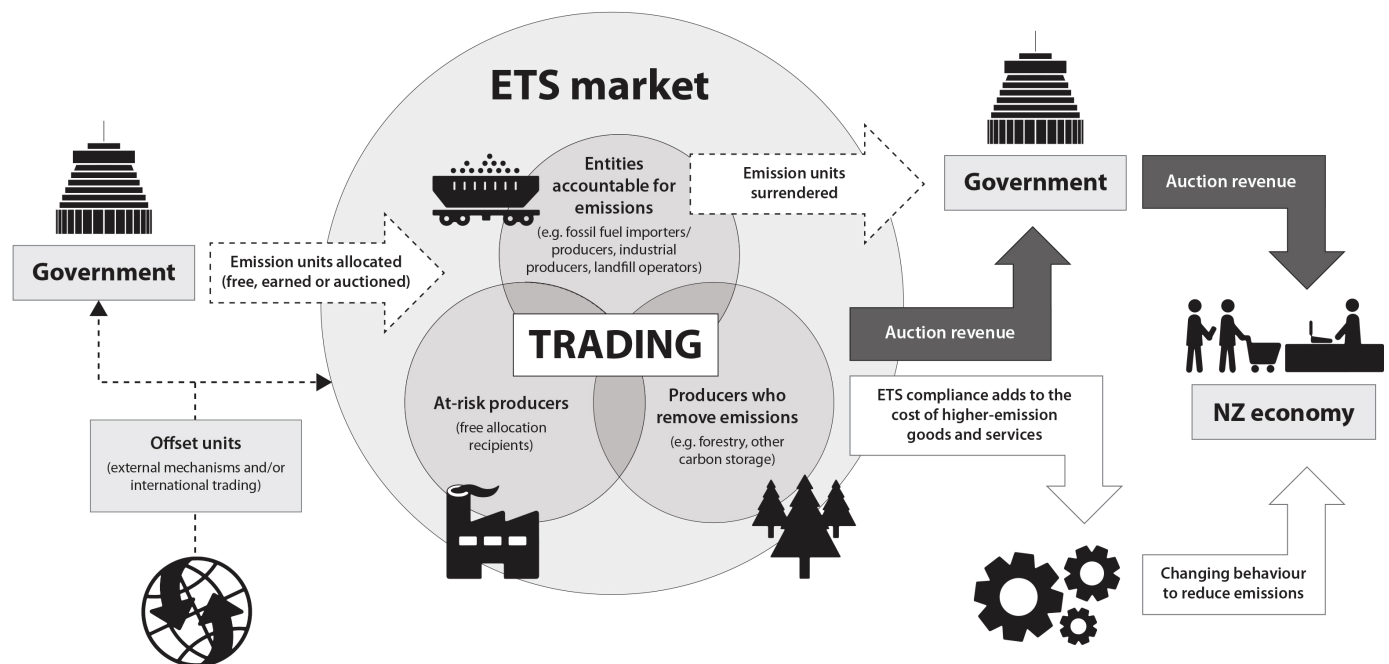
In any ETS in general (see Figure 1), participants can potentially acquire emission units by:

- Receiving them for free
- Buying them from other participants (incentivising others to reduce their emissions and sell surplus units)
- Buying them at auction (generating government revenue that can be returned to the economy)
- Earning them by ETS removal activities (such as carbon storage in forests or industrial products)
- Buying them from external offset mechanisms (domestic or international) or through international trading.

Unlike directive regulations, an ETS allows people in businesses and households to apply their own information about costs and preferences and decide where and how to reduce emissions. This enables them to seek out least-cost emission reduction opportunities across the participating sectors. Reducing the number of units available to the market provides for a gradual transition to a low-emission economy.

Emissions trading can be an important part, but never the only part, of an effective strategy for reducing emissions. Companion policies can enable the market to respond more effectively to price signals, fund research and development, facilitate adoption of low-emission infrastructure and technology, assist those disproportionately impacted by emission pricing, and address emission reductions by sectors outside of the ETS.^[2]

Figure 1: How emissions trading works



An ETS translates a regulatory limit on emissions into an emission price set by the market which changes behaviour to reduce emissions. The limit on emissions is defined by the number of tradable emission units (i.e. allowances to emit) in the market, which reduces over time. The key players are the **government** which allocates emission units into the market, **ETS market participants** who trade emission units and/or surrender emission units for compliance, and **businesses and households** who receive an emission price incentive to choose lower-emission goods, services and activities. External offset mechanisms and/or international trading may also supply emission units. Design details vary by system. As of 2018 in the NZ ETS, emission units are supplied only by government for industrial free allocation and removals by forestry and industrial activities, and no emission units are supplied through international offset mechanisms or international trading. Legislation permits future sale of emission units by auction, which would generate government revenue to be returned to the economy.

A BRIEF HISTORY OF THE NZ ETS

The NZ ETS was enacted in September 2008 after more than a decade of consideration of emission pricing by successive governments. It has the dual purpose of helping New Zealand to meet its international obligations under the United Nations Framework Convention on Climate Change and the Kyoto Protocol, and reducing New Zealand's net emissions to below business-as-usual levels.

The system was the first ETS in the world intended to cover all economic sectors and major GHGs over time. It took effect retrospectively from 1 January 2008, with sectors assuming emission reporting and unit obligations in stages. As of 2018, the system applies unit obligations to about 51% of New Zealand's gross emissions.^[3] It covers almost all emissions from fossil fuels, industrial processes and waste. It applies both unit obligations for deforestation and credits for eligible afforestation. Unit obligations for biological emissions from agriculture, which account for about 49% of New Zealand's gross emissions,^[4] were deferred indefinitely in 2012.

The NZ ETS allowed trading of units to and from the international Kyoto market from 2008 to mid-2015, at which point it de-linked. It currently operates as a domestic-only system.

The NZ ETS has undergone a series of reviews and amendments. The first review followed a change in government in November 2008, and led to amendments which moderated the price impact of the system. The second review was undertaken by statutory requirement in 2011, and led to amendments which indefinitely extended the price moderation measures. The third review was conducted in two stages starting in 2015. The first stage resulted in an amendment to restore a full one-for-one unit obligation in non-forestry sectors over 2017-2019. In mid-2017, the government announced in-principle policy decisions to change post-2020 NZ ETS settings for unit supply, price management and linking. These were not legislated before the election in September 2017.

Figure 2: Major milestones for the NZ ETS

2007	Apr	Government's Emissions Trading Group began NZ ETS design
2008	Jan	Forestry sector assumed unit obligations (retrospectively)
	Sep	Passage of the Climate Change Response (Emissions Trading) Amendment Act 2008
	Nov	New government began the first NZ ETS review
2009	Jan	Transport sector began voluntary reporting
	Nov	Passage of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009
2010	Jan	Stationary energy, industrial process and transport sectors began mandatory reporting
	Jul	Stationary energy, industrial process and transport sectors assumed unit obligations
	Dec	Government began the second NZ ETS review
2011	Jan	Waste, synthetic gas and agriculture sectors began voluntary reporting
	Dec	Ban on surrendering industrial-gas CERs* took effect
2012	Jan	Waste, synthetic gas and agriculture sectors began mandatory reporting
	Nov	Passage of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012
	Dec	Ban on surrendering industrial-gas ERUs* and large-scale-hydro ERUs/CERs took effect
2013	Jan	Waste and synthetic gas sectors assumed unit obligations
	Dec	Government announced future delinking of the NZ ETS from the Kyoto market
2014	May	Climate Change Response (Unit Restriction) Amendment Act 2014
2015	Jun	NZ ETS de-linked from the Kyoto market
	Nov	Government began the third NZ ETS review
2016	May	Passage of the Climate Change Response (Removal of Transitional Measure) Amendment Act 2016
2017	Jul	Government announced in-principle post-2020 changes to NZ ETS unit supply, price management and international linking
	Oct	New government signalled future changes to the NZ ETS

* See the Annex for an emission unit typology

CORE DESIGN FEATURES

SECTORAL COVERAGE AND POINT OF OBLIGATION

Features as at 2018

Obligations to both report emissions and surrender emission units apply to the following sectors: forestry, stationary energy (electricity and heat), transport, industrial processes, synthetic GHGs^[5] and waste. Biological emissions from agriculture (animal production and nitrogen fertilisers) carry reporting obligations only. The system covers carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆).

Deforestation of pre-1990 forest land carries unit liabilities and entities can opt to receive emission units – with liabilities for future reversals – for post-1989 afforestation. Old-growth indigenous forest remaining in forest is excluded and exemptions apply to deforestation of tree weeds.^[6]

The NZ ETS excludes synthetic GHGs (HFCs and PFCs) in imported products, which are subject instead to a comparable levy. Entities can opt to receive units for embedding emissions in products or for destroying or exporting synthetic GHGs.

Points of obligation are defined by activity and subject to minimum thresholds. Energy-sector obligations generally apply upstream of emissions at the point of fuel production or import, but major fuel users can opt in as points of obligation with a corresponding carve-out of the upstream obligation. Agriculture-sector obligations (currently only to report emissions) apply at the processor level^[7] by default but can change to the farmer level by regulation. In other sectors, obligations generally apply at the point of emission (see Table 1).

Changes over time

In the 2008 design, all economic sectors were to assume unit obligations in stages from 2008 to 2013. Some sector entry dates were adjusted in 2009. Unit obligations for biological emissions from agriculture were initially deferred to 2015 (subject to review) in 2009 and then deferred indefinitely in 2012. The synthetic GHG levy was established in the 2012 amendments.

Rationale and practical outcomes

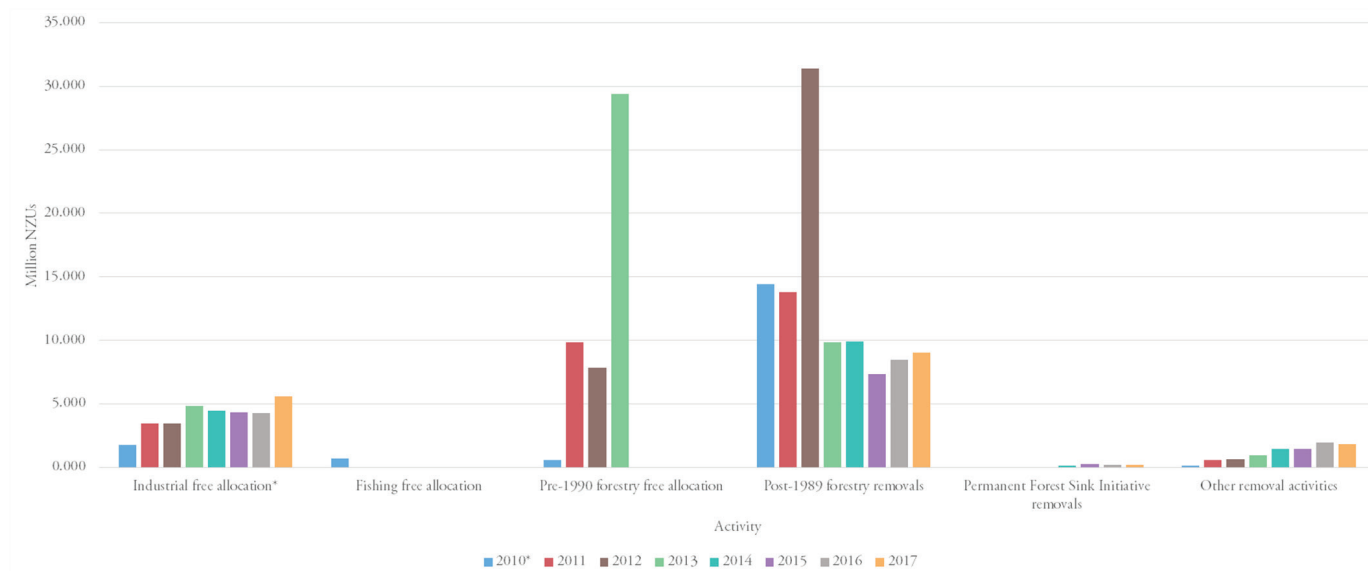
Broad coverage of sectors and GHGs was intended to support least-cost mitigation, equity, and environmental integrity and help achieve economy-wide targets. New Zealand's emission profile is dominated by biological emissions from agriculture (49% of gross emissions in 2016) and energy (40%) while net forest sequestration offsets about 29% of gross emissions. Inclusion of the forestry sector with emission liabilities as well as credits, an ETS world first, was intended to both discourage deforestation and incentivise afforestation. Deforestation had accelerated in New Zealand in the lead-up to the first Kyoto commitment period (2008-2012). To date, NZ ETS forestry definitions have generally mirrored international rules to assist in meeting New Zealand's emission reduction targets. The government's rationale for deferring unit obligations for agriculture in 2009 and 2012 included a lack of cost-effective mitigation options and competitiveness considerations.

Points of obligation were selected to keep compliance and administrative costs low, cover as many emissions as practicable, enable effective monitoring and verification, and provide appropriate emission-reduction incentives. The system pioneered upstream points of obligation in the stationary energy and transport sectors. The system covers almost all of the fossil fuel, industrial process and waste sectors with only 176 mandatory points of obligation as of June 2018.



Table 1: Sector coverage and points of obligation in the NZ ETS

Sector (start of unit obligations)	Points of obligation in the NZ ETS
Forestry (1 Jan 2008)	<ul style="list-style-type: none"> Owner of forest land or forest owner with the agreement of the landowner
Liquid fossil fuels (1 Jul 2010)	<ul style="list-style-type: none"> Owner of obligation fuel at the point where fuel goes through Customs and enters the market; large users can opt in with upstream carve-out
Stationary energy (1 Jul 2010)	<ul style="list-style-type: none"> Point of fuel production or import for coal and natural gas; large users can opt in with upstream carve-out Point of use for geothermal fluid Point of emission for waste combustion Point of petroleum refining involving the use of intermediate crude oil products for energy or feedstock purposes Point of use of crude oil or other liquid hydrocarbons
Industrial processes (1 Jul 2010)	<ul style="list-style-type: none"> Point of production; producers of products with embedded substances can opt in
Synthetic gases (1 Jan 2013)	<ul style="list-style-type: none"> Point of import, manufacture, or equipment operation
Waste (1 Jan 2013)	<ul style="list-style-type: none"> Landfill operator
Agriculture (deferred indefinitely)	<ul style="list-style-type: none"> Default: Processor^[7] Alternative by Order in Council: Farmer

Figure 3: NZUs issued by sector for free allocation and removals 2010-2017


* The 2010 compliance year covered July through December. From 2010-2016, industrial free allocation was provided at 50% of the full entitlement while the one-for-two unit obligation was in place. This increased to 67% in 2017 as the partial unit obligation was being phased out.

Source: Data from Environmental Protection Authority (2018a)



UNIT SUPPLY AND UNIT OBLIGATION

Features as at 2018

New Zealand Units (NZUs) are the primary domestic unit of trade. An NZU represents one metric tonne of carbon dioxide equivalent and can cover both emissions and removals. NZUs have no vintage date and do not expire. When issuing NZUs, the government must have regard to matters including New Zealand's international climate change obligations and effective operation of the system.

The NZ ETS currently does not have an absolute cap on units. NZUs are issued for free allocation in the industrial sector and eligible forestry and industrial removals. In the past, they were also issued for free allocation in the forestry and fishing sectors (see Figure 3 and the section on free allocation). Participants can purchase NZUs at fixed price for immediate surrender (see the section on price management). NZUs are also issued under the Permanent Forest Sink Initiative.^[8] Government auctioning of NZUs under a cap is enabled by legislation but has not been implemented to date.

In 2018, forestry participants must surrender one unit per tonne of deforestation emissions and can earn one unit per tonne of removals from eligible afforestation. Non-forestry participants must surrender one unit per 1.2 tonnes of emissions (83% of a full obligation) as they transition to a one-for-one unit obligation by 2019, and they are credited on the same basis for industrial free allocation and industrial removals.

Changes over time

In the 2008 design, all emissions and removals were assessed at one unit per tonne. In 2009, the unit obligation for non-forestry sectors was reduced to one unit per two tonnes of emissions. This was extended indefinitely in 2012. Following the 2016 amendments, a one-for-one unit obligation is being phased in for non-forestry sectors over 2017-2019.

In the 2008 design, each NZU had to be backed by a Kyoto unit held by the Crown by the end of the first Kyoto true-up period. This requirement was removed (with retrospective application) in the 2012 amendments.

International Kyoto units^[9] were eligible for compliance in the NZ ETS from 2008 to mid-2015 (see the section on linking). As a domestic-only system for the foreseeable future, the NZ ETS will require auctioning to allow emissions up to a desired cap. In July 2017, the government made an in-principle policy decision to establish an auction mechanism by 2020 and to apply a quantity limit to participants' use of international units should the market re-open to such units in the future.

Rationale and practical outcomes

From 2008 to mid-2015, the NZ ETS intentionally used the international Kyoto market – rather than government auctioning – to help supply units and set the domestic price (see the section on linking). Since de-linking in mid-2015, only NZUs have been eligible for surrender. Participants have used banked NZUs to help meet surrender obligations alongside units freely allocated or earned through forestry or industrial removals.

Reducing the unit obligation for non-forestry sectors was intended to moderate the system's cost during a time of recession. The government's 2016 decision to restore a one-for-one unit obligation in non-forestry sectors over 2017-2019 was intended to manage fiscal risks, transfer more mitigation responsibility to emitters, moderate the cost adjustment for households and firms and maintain market stability.

FREE ALLOCATION

Features as at 2018

Legislation provides for free allocation of NZUs for forestry, fishing and some industrial activities. Under current legislation, the agriculture sector will also be eligible if it assumes unit obligations.

The owners of pre-1990 forest and the fishing sector each received a fixed amount of free allocation. For pre-1990 forest owners, this occurred in two stages: at the time of registration and in 2013. The amount varied according to features of forest ownership defined in legislation. Commercial fishers received free allocation on a one-off basis in September 2010. These sectors no longer receive free allocation.

Output-based free allocation is provided annually to eligible emissions-intensive and trade-exposed industrial producers. Free allocation covers both direct emissions from stationary energy and industrial processes and indirect emissions from purchased electricity. Producers can be eligible to receive free allocation regardless of whether they are also points of obligation. Highly emissions-intensive producers^[10] receive 90% of an allocative baseline^[11] as the starting point. Moderately emissions-intensive producers receive 60%. For a given year, free allocation is awarded provisionally based on production in the previous year, and adjusted once actual production has been reported for that year. Under current legislation, the agriculture sector would also receive output-based free allocation starting at 90% of an allocative baseline defined in regulation.

When a partial unit obligation applies (e.g. one unit for every 1.2 tonnes of emissions in 2018), free allocation is credited on the same partial basis. Once a full unit obligation applies, the phase-out of industrial free allocation could be triggered by regulation at a rate of one percentage point per year on a straight-line basis.

Changes over time

In the 2008 design, the total amount of industrial free allocation was fixed at 90% of 2005 levels with no expansion for new entrants. The allocation methodology within the fixed amount was not specified in legislation. Industrial free allocation was to be phased out over 2019 to 2029. In 2009, industrial free allocation changed to an output basis without an overall quantity limit and the phase-out rate was slowed. The level of free allocation to the fishing sector was also modified then. The 2012 amendments deferred the phase-out of industrial free allocation indefinitely.

In July 2017, the government made an in-principle policy decision not to change industrial free allocation through 2020, but signalled further decisions could be taken for the post-2020 period.

Rationale and practical outcomes

Free allocation can help producers adjust more gradually to the cost of emission constraints while they continue to face incentives to reduce emissions. One-off free allocation to the forestry and fishing sectors was intended to help compensate for loss in asset value as a result of the NZ ETS. Ongoing output-based free allocation to emissions-intensive and trade-exposed industrial producers was intended to support their international competitiveness and prevent leakage of production and emissions offshore. Non-trade-exposed producers (such as electricity generators and transport fuel suppliers), which can pass on emission costs to their customers, are not eligible for free allocation. In 2017, 26 industrial activities were eligible for free allocation totalling 5.6 million units (see Figure 3). This compares to a total annual surrender volume of 28.6 million units.

PRICE MANAGEMENT

Features as at 2018

The NZ ETS operates with a price ceiling mechanism. Participants can purchase unlimited NZUs from the government for immediate surrender (not banking or trading) at a fixed price of NZ\$25 per NZU.

The NZ ETS permits unlimited banking of units by participants. Over time, participants have accumulated a substantial bank of units^[12] which can be used for compliance.

The NZ ETS does not allow borrowing of NZUs from future years. However, emissions are reported on a calendar-year basis and compliance units must be surrendered by 31 May in the following year. This enables free allocation recipients to help meet obligations from one year using free allocation received in respect of the following year's emissions.

Changes over time

In the 2008 design, the NZ ETS did not include a price ceiling or price floor. It allowed both banking of all unit types and surrenders of international Kyoto units without quantity limits. The 2009 amendments introduced the price ceiling fixed at NZ\$25 per tonne. This was extended indefinitely in 2012. In 2013, the government announced it would prohibit international Kyoto units from the NZ ETS from mid-2015, so no such units are currently banked for NZ ETS compliance.

In July 2017, the government made an in-principle policy decision to develop an alternative price ceiling but not before auctioning or international linking was in place.

Rationale and practical outcomes

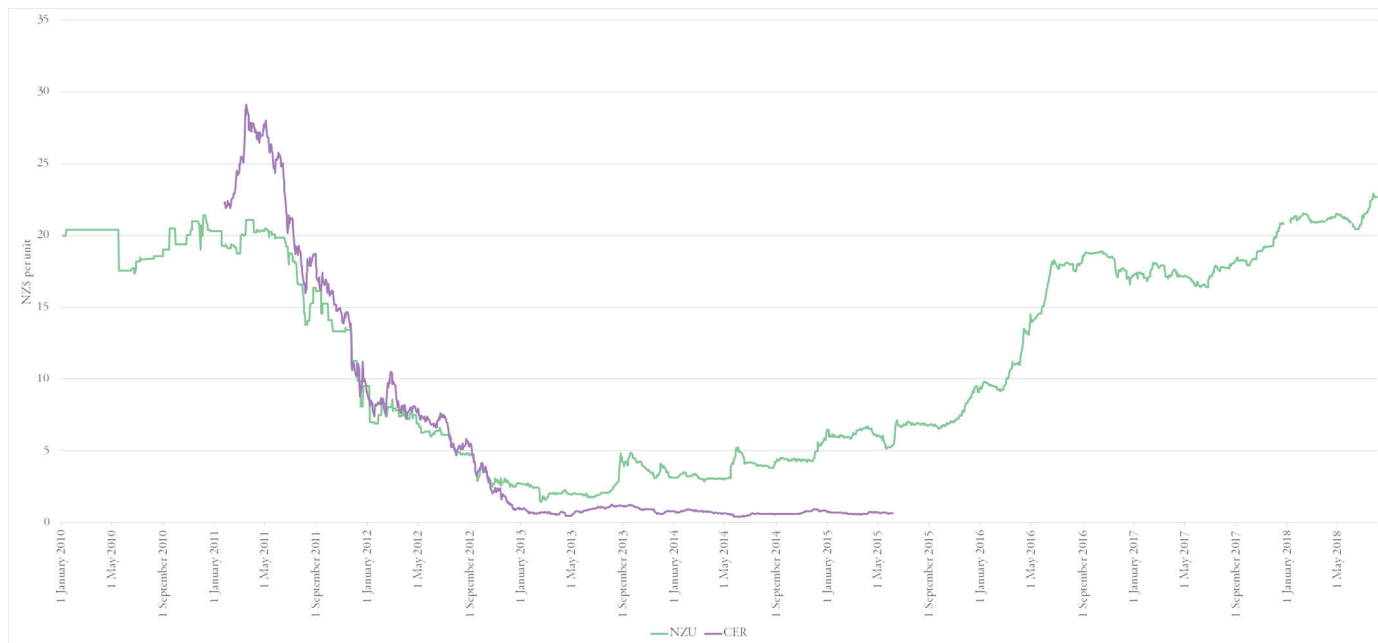
In the 2008 design, the system relied on participants' unlimited use of international Kyoto units and banking to support market liquidity and help guard against price volatility. The introduction of the NZ\$25 fixed-price option in 2009 provided a further safeguard against high emission prices. With the one-for-two unit obligation in place, the system provided an effective emission price ceiling of NZ\$12.50 per tonne for non-forestry sectors. While domestic emission prices ranged below the price ceiling (see Figure 4), few participants used the fixed-price option.

Banking has given participants flexibility to manage their obligations strategically over time. This feature is particularly valuable in a system where annual emissions can be affected significantly by variable levels of renewable generation, operational changes by large producers and forest harvesting/replanting.

Since de-linking from the Kyoto market in mid-2015, the number of units available in the domestic market has far exceeded unit demand for compliance because of the participant-held bank of NZUs. However, domestic emission prices have continued to rise driven by market expectations for long-term unit supply constraints and continuation of banking (see Figure 4).

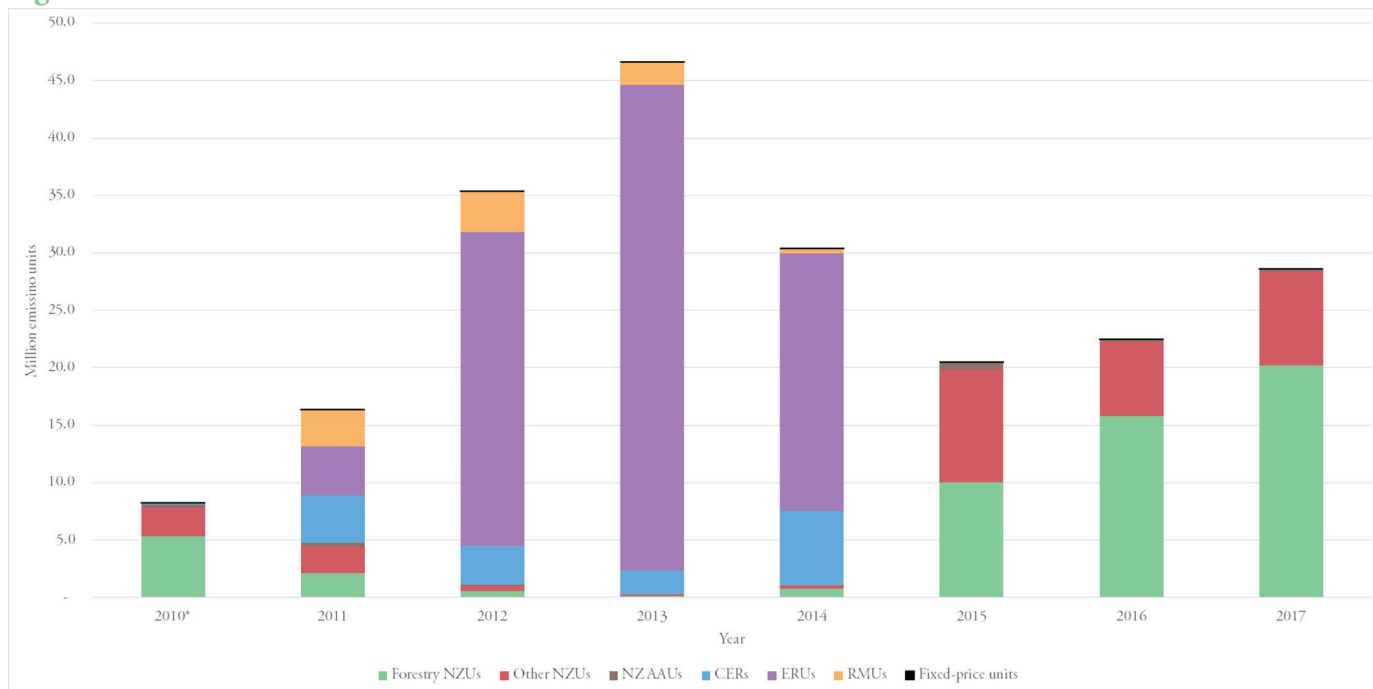
Over 2016-2017, as domestic emission prices rose toward the price ceiling, more participants used the fixed-price mechanism to meet their obligations. If domestic emission prices continue to rise, participants will have an increasing incentive to meet their obligations using the fixed-price mechanism and bank NZUs issued for free allocation or removal activities for use in the future when they are worth more. If the government pays more than the level of the fixed price to purchase compensating mitigation, then the difference will be a cost to taxpayers.

Figure 4: Emission price history in the NZ ETS 2010-2018



Source: Data from OM Financial Ltd and Carbon Match Ltd

Figure 5: Units surrendered in the NZ ETS 2010-2017



* The 2010 compliance year covered July through December. See the Annex for an emission unit typology. From 2010-2016, non-forestry sectors surrendered one unit per two tonnes of emissions. In 2017, this increased to one unit per 1.5 tonnes of emissions as the partial unit obligation was being phased out.

Source: Data from Environmental Protection Authority (2018a)

LINKING

Features as at 2018

Linking refers to recognising units from another ETS or external mechanism for compliance by participants. Although linking was a prominent feature in the past, the NZ ETS currently operates as a domestic-only system. The legislation enables recognition of overseas units by regulation, which leaves open the possibility of future linking.

Changes over time

In the 2008 design, the NZ ETS had both buy-and-sell linkages with the international Kyoto market, with buying primarily through the Clean Development Mechanism and Joint Implementation. Some restrictions applied to the types^[9] but not the quantity of international Kyoto units that could be surrendered. NZUs from all sectors were eligible for conversion to NZ AAUs for sale overseas. When the price ceiling was introduced in 2009, unit exports were permitted only for forestry NZUs after exchange for NZ AAUs. The NZ ETS de-linked from the Kyoto market in mid-2015.

In July 2017, the government made an in-principle policy decision to apply a quantity limit to participants' use of international units should the market re-open to such units in the future.

Rationale and practical outcomes

Given New Zealand's relatively small market, higher-cost domestic mitigation opportunities and interest in international cooperation, the NZ ETS was fundamentally conceived as an internationally linked ETS. It was designed to operate nested within the international Kyoto cap and use the Kyoto market to supply units and set the domestic price. This was to enable NZ ETS participants to access least-cost mitigation options globally in a manner consistent with the Kyoto Protocol, and to make efficient domestic production and investment decisions influenced by the international price of emissions.

As a result of global oversupply of Kyoto units exacerbated by the global financial crisis and withdrawal of the US and Canada from the Kyoto Protocol, the prices of international Kyoto units declined from mid-2011 and NZU prices followed suit. When the prospect of future de-linking from the Kyoto market arose in late 2012 – the result of the government's decision to take its emission reduction target for the 2013–2020 period outside of the Kyoto Protocol – NZUs began to command higher prices than international Kyoto units. Many NZ ETS participants chose to bank NZUs issued for free allocation and removals and meet their obligations using lower-cost international Kyoto units (see Figure 5). This was a key driver of the substantial bank of participant-held NZUs that has accumulated.^[12] Ever since de-linking was signalled in 2012, domestic prices have risen independently of trends in international unit prices (see Figure 4).

Over time, officials have explored bilateral linking options with other ETS. No ETS linking agreements have been reached to date.

New Zealand continues to support the development of global carbon market mechanisms and advancement of longer-term emissions trading opportunities through multilateral, regional and bilateral initiatives.



MONITORING, REPORTING, VERIFICATION AND COMPLIANCE

Features as at 2018

Annual compliance periods for reporting emissions and surrendering units apply to most participants. Post-1989 forest owners that opt into the NZ ETS have a mandatory emissions reporting period of five years. However, they are able to voluntarily report annually to receive units and must report when making changes to their registration in the system.

To calculate emissions, default emission factors are provided for all sectors. Non-forestry participants have the option to apply for unique emission factors in some cases.^[13] When measuring changes in forest carbon stocks in post-1989 forests, participants with less than 100 hectares must use government look-up tables, whereas those with areas of 100 hectares or more must use a Field Measurement Approach involving sample plots. For measuring deforestation emissions, pre-1990 forest participants must use government look-up tables.

Participants follow a “self-assessment” model for emissions monitoring, reporting and verification (MRV). No independent third-party verification is required of emission reports, but the government has the power to conduct audits. Each year, the Environmental Protection Authority selects a sample of NZ ETS participants and free allocation recipients for internal and third-party reviews of compliance.

Failure to surrender emission units results in a requirement to make good those units alongside a financial penalty of NZ\$30 per unit. Interest accrues until the penalty is paid. Failure to comply with data collection, record-keeping, reporting, registration or notification requirements carries a fine. Knowingly providing false information carries a larger fine and/or a prison term.

Changes over time

The NZ ETS settings for MRV and compliance have not changed fundamentally since the system was introduced in 2008.

Rationale and practical outcomes

The calendar-year basis for emissions reporting aligns with the government’s processes for national GHG inventory reporting and target assessment under its international obligations. It does not align with the government’s (or participants’) financial year for budget decisions or organisational accounting.

The provision of default emission factors and forestry look-up tables is intended to reduce administrative complexity and costs and support consistency of emissions reporting. Enabling unique emission factors offers a fair approach – and a further emission-reduction incentive – for those whose emissions may fall below the industry average. The Field Measurement Approach is intended to improve the precision of emissions reporting for those with large areas of post-1989 forest.

The “self-assessment” model for MRV is modelled on the New Zealand tax system. The combined possibility of an audit and substantial fines and civil/criminal penalties acts as a deterrent for non-compliance. The Environmental Protection Authority’s annual compliance programmes have found that the majority of participants and free allocation recipients understand and are willing to comply with their obligations.

Applying a unit make-good requirement in addition to a financial penalty for failing to surrender units is intended to safeguard the environmental integrity of the system.

LEGISLATIVE AND INSTITUTIONAL ARRANGEMENTS

Features as at 2018

The enabling legislation for the NZ ETS is the Climate Change Response Act 2002, which also defines institutional arrangements related to New Zealand's international climate change obligations. Further operational specifications are defined by regulations. Both legislation and regulations can be amended as required to improve operation of the system and adapt it to changes in policy.

The primary ministerial responsibilities for the NZ ETS rest with the Minister for Climate Change or the Minister of Finance. Operational responsibilities for the NZ ETS are defined in legislation and delegated to specific government departments. The Environmental Protection Authority fulfils most general administrative and registry functions. The Ministry for Primary Industries manages operations for forestry and agriculture. The Ministry for the Environment administers the Climate Change Response Act 2002 and leads development of NZ ETS and overarching climate change policy in collaboration with other departments. To ensure smooth functioning of the system, the allocation of responsibilities across government departments has been confirmed in a Memorandum of Understanding and detailed in an ETS Operations Manual.

Unit transactions under the NZ ETS are managed through the New Zealand Emissions Trading Register (NZETR). Selected information on unit holdings and transactions is reported publicly on an annual basis in accordance with legislative requirements. The Environmental Protection Authority issues an annual ETS report as required under Section 89 of the Climate Change Response Act 2002, an annual "facts and figures" report and additional market information.

Changes over time

In the 2008 design, operational responsibilities were delegated to the Ministry of Economic Development,^[14] Ministry of Agriculture and Forestry^[15] and Ministry for the Environment. Delegations were adjusted in 2011 with the establishment of the Environmental Protection Authority.

While New Zealand had an emission reduction target under the Kyoto Protocol, a common registry (then called the New Zealand Emission Unit Register) was used to administer unit transactions relating to both New Zealand's international obligations under the Kyoto Protocol and the NZ ETS.

Rationale and practical outcomes

Administration of the NZ ETS is complex and relevant to the domain of multiple government departments. Ensuring clear delegation of responsibilities and coordination among departments has been a priority throughout the design and implementation of the system. The separation of administrative and registry functions from policy making functions has helped to distribute effort and decision-making authority across departments and improve transparency. Delegating NZ ETS operations for forestry and agriculture to the Ministry for Primary Industries has helped to ensure that subject specialists can meet the unique needs of NZ ETS participants in those sectors.



ANNEX: TYPOLOGY OF EMISSION UNITS

Acronym	Unit name	Definition
AAU	Assigned Amount Unit	Unit derived from the emission reduction target of an industrialised (Annex I) country under the Kyoto Protocol
CER	Certified Emission Reduction	Unit generated by emission reduction projects in developing (non-Annex I) countries under the Kyoto Protocol's Clean Development Mechanism (CDM)
ERU	Emission Reduction Unit	Unit generated by emission reduction projects in industrialised (Annex I) countries under the Kyoto Protocol's Joint Implementation (JI) mechanism
ICER	Long-term Certified Emission Reduction	Unit issued for forestry projects in the CDM; it expired at the end of the crediting period of the project, which could be renewed over a period up to 60 years
NZU	New Zealand Unit	Unit issued by the New Zealand government for use in the NZ ETS
RMU	Removal Unit	Unit issued for net forestry removals in an industrialised (Annex I) country with an emission reduction target under the Kyoto Protocol
tCER	Temporary Certified Emission Reduction	Unit issued for forestry projects in the CDM; it expired at the end of the Kyoto commitment period after the one in which it was issued

FOR MORE INFORMATION

Additional information about the NZ ETS is available on the following government websites:

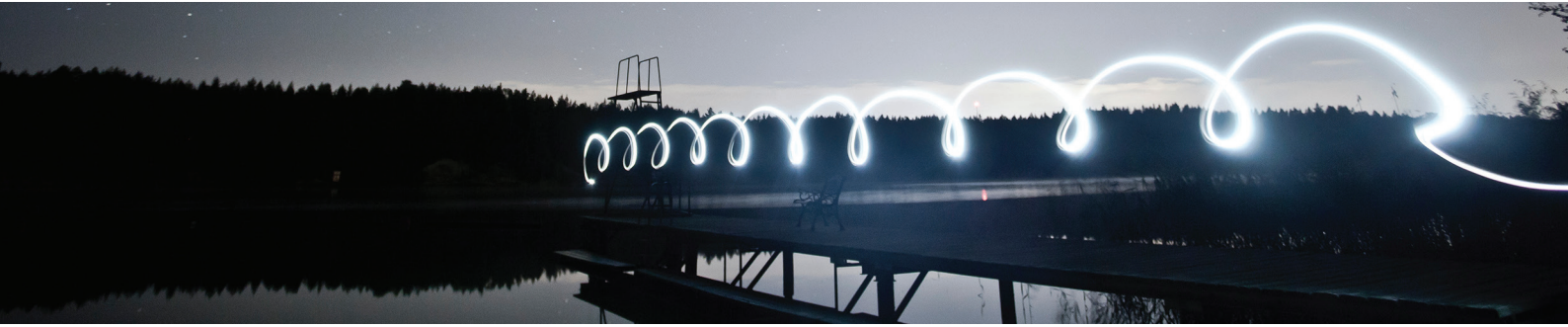
- [Ministry for the Environment](#)
- [Environmental Protection Authority](#)
- [Ministry for Primary Industries](#)



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ENDNOTES

1. See World Bank and Ecofys (2018).
2. For more in-depth information on all aspects of ETS design, refer to the handbook published by the World Bank Partnership for Market Readiness and International Carbon Action Partnership (2016).
3. Gross emissions exclude the forestry sector, whereas net emissions include the forestry sector.
4. This figure reflects data from 2016 (Ministry for the Environment 2018).
5. Synthetic GHGs are HFCs, PFCs and SF₆ excluding PFCs from aluminium smelting.
6. Tree weeds have the ability to spread and colonise other land, harming its social, ecological or economic value. An example is wilding pines growing in tussock grassland.
7. For fertilisers, the processor level corresponds to the point of manufacture or import. For animal production, it corresponds to the point of slaughter, dairy processing or export.
8. The Permanent Forest Sink Initiative (PFSI) awards units for post-1989 forests which are managed under a forest covenant. Units issued to PFSI participants can be traded in the NZ ETS.
9. Imported ERUs, CERs, and RMUs were eligible for compliance in the NZ ETS, subject to some restrictions on sources. As of 2015 (before de-linking from the Kyoto market), the following types of Kyoto units were excluded from the NZ ETS: imported AAUs, tCERs, ICERs and CERs and ERUs from industrial-gas, large-scale-hydro, and nuclear projects.
10. Thresholds for defining highly and moderately emissions-intensive producers are established on the basis of tonnes of emissions per million dollars of revenue and are set in regulation.
11. The allocative baseline (i.e. reference level) for free allocation reflects industry-average emissions per unit of output and is set in regulation.
12. In June 2018, the participant-held bank of NZUs and NZ AAUs totalled about 127.8 million units. This is 4.5 times the 2017 unit surrender volume of 28.6 million units.
13. Unique emission factors can apply to the following activities: owning obligation fuel; purchasing obligation jet fuel; importing, mining or purchasing coal; purchasing natural gas; using geothermal fluid; combusting waste products; or operating a waste disposal facility.
14. This is now the Ministry for Business, Innovation and Employment.
15. This is now the Ministry for Primary Industries.

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