



2026 Emissions Trading Scheme unit limits and price controls scenarios

Market Advisory Group consultation

This material supports engagement with the Market Advisory Group to provide feedback on a set of scenarios for 2026 ETS unit limits and price control settings.

NOTE: This information pack outlines a deliberately broad range of hypothetical (i.e. not government policy proposals or recommendations) for the 2026 ETS unit limit and price control setting scenarios, alongside the key rationale and assumptions for each scenario.

This was used as the basis to seek views from the ETS Market Advisory Group about how they, or broader market participants, might respond to various ETS settings scenarios.

Disclaimer: this document is not government policy and is provided to members of the Market Advisory Group in confidence, as per the conditions set out in the signed confidentiality agreement from each member and the terms of reference.

Introduction

This pack contains four topics for consideration by the Market Advisory Group (MAG):

- Topic 1: Balancing achieving emissions budgets with medium term stability
- Topic 2: Distribution of auction volume in early vs later years
- Topic 3: Approach to meeting the third emissions budget (EB3)
- Topic 4: Aligning price controls to emissions budgets, targets and market dynamics

Within each topic are scenarios which vary in how trade-offs are weighed up based on key assumptions. We are seeking views from the MAG members about how they and/or broader ETS market participants might respond to various options within the scenarios. Views will be sought through workshops with each of the MAG members. Written feedback is also welcome.

Please note that, under each topic, a full range of scenarios has been provided to ensure we receive feedback on the full range of conceivable options, as opposed to limiting the options to those officials view as suitable for consultation.

General background on the ETS, the unit limits and price controls settings process, ETS market supply and demand and price movements has been provided as a separate information pack. That pack consists of publicly available information.

To support the scenarios in this document, further information has been provided as an appendix, including on:

- Seven-steps methodology and key variables
 - Stockpile: estimations, uncertainties and impact on auction volume
 - Forestry: estimations, uncertainties and impact on auction volume
- Proper functioning of the ETS
- Undersupply risk: key factors and uncertainties
- The ETS market model
- New Zealand's marginal abatement cost curves

Definitions

Term	Description
Auction volumes	The quantity of New Zealand Units (NZUs) that the Government makes available for sale through scheduled NZ ETS auctions in a given year
2050 target	New Zealand's legally binding domestic emissions reduction target to achieve net zero emissions of all greenhouse gas (GHG) emissions other than biogenic methane by 2050.
Cost containment reserve (CCR)	A reserve of additional New Zealand Units (NZUs) that can be released into NZ ETS auctions if prices reach a specified trigger level, to limit excessively high carbon prices. There are two tiers of CCR, with different trigger prices.
Emissions budget (EB2, EB3)	The maximum total amount of greenhouse gas emissions allowed in a defined period (e.g. Emissions Budget 2: 2026–2030, Emissions Budget 3: 2031–2035), set under the Climate Change Response Act.
Emissions reduction plan (ERP2, ERP3)	Government plans that set out the policies, measures, and sector actions to meet each emissions budget (e.g. ERP2 supports EB2).
ETS settings	ETS unit limits and price controls for the next 5 years, set by government through an annual ETS settings process. Government has proposed to shift ETS settings to a biennial process.
Hedging	The practice of purchasing or selling NZUs in advance to manage exposure to future carbon price risk.
Liquidity	The ease with which NZUs can be bought and sold in the market without causing significant changes in price.
Long run marginal cost	The cost per tonne of reducing an additional unit of emissions in the long term, once technologies, infrastructure, and behaviour have fully adjusted.
Marginal abatement cost curve (MACC)	A representation of emissions-reduction options ranked by cost.
Market equilibrium prices	The carbon price at which the supply of NZUs equals demand, balancing emissions reductions, removals, and unit availability in the ETS.
New Zealand Units (NZUs)	The tradable emissions units used in the NZ ETS, each representing one tonne of carbon-dioxide-equivalent emissions.
Price controls	Minimum and maximum bounds (price floor and cost containment reserve) on auction prices to manage the risk of carbon prices becoming too low or too high while maintaining alignment with emissions budgets.
Price floor	As published in the ETS settings exercise, the minimum price at which NZUs can be sold at auction, designed to prevent prices falling below levels considered necessary to drive emissions reductions.
Proper functioning	The ETS market is operating in a transparent and durable manner, so that participants can form expectations about supply and demand, to support investment in reducing emissions. NZ ETS participants are able to attain and surrender NZUs to meet NZ ETS obligations. The ETS is effectively playing its role in meeting emissions reduction targets.
Stockpile	The total number of NZUs held in private registry accounts at a point in time, including units held for compliance, hedging, forestry liabilities, or investment.
Surplus stockpile	The portion of the stockpile that is not required for expected future surrender or forestry liabilities and therefore weakens scarcity and price signals.
Undersupply	A situation where the availability of NZUs is insufficient to meet surrender obligations, creating strong scarcity pressure and potentially driving rapid price increases.

Topic 1: balancing achieving emissions budgets with medium term stability

Questions

How would different auction volume choices impact on market/participant confidence in the ETS market?

How would you respond, or expect the market to respond, to signs of undersupply in the later 2020s?

How might the market respond to signals from the Government that undersupply may eventuate in the late 2020s?

Description

The intent of ETS settings is to ensure that we remain on track to meet our emissions budgets and 2050 target. A major risk to EB2 is the surplus stockpile, which could enable emissions above our EB2 limit. To manage this risk, the Government has committed to drawing down the surplus by 2030. There is significant uncertainty in the size of the surplus and assumptions about the surplus stockpile can significantly impact auction volumes. This is further explained in the appendix. The degree of conservatism in surplus assumptions hinges on how strongly budget achievement is prioritised

Despite current secondary ETS market prices being materially lower than the auction price floor, suggesting a well-supplied market, some commentators are flagging the possibility of future “undersupply” risk in the late 2020s. Scarcity is an intentional function of a cap-and-trade scheme like the ETS but undersupply could pose a risk to the proper functioning of the ETS market and market stability. More information on undersupply and proper functioning is available in the appendix.

Our analysis using the ETS market model suggests that under current auction volumes over 2026-30, there will be steady tightening in the late 2020s, but not to the extent that it will impede on the proper functioning of the market. However, this is predicated on a large but orderly drawdown of the stockpile and most forestry units coming to market as they are earned, rather than waiting till the end of the mandatory emissions reporting period (2026-30). If the stockpile is less liquid than assumed and/or fewer forestry units come to market than anticipated, then the market could tighten faster than we expect.

Depending on how the objective of managing risk to achieving emissions budgets is weighed up against the risk of undersupply and therefore, medium term stability, determines differing auction volumes. The below scenarios present a range of auction volume options and their balance of priorities relative to each other.

Scenario	Rationale
S1.A: Lower auction volume	<i>Most favours achieving emissions budgets over responding to undersupply risk (relative to other scenarios)</i> Key assumptions: - High confidence in adequate level of liquidity in the stockpile - Foresters will sell units as price rises, rather than waiting to end of MERP5 - Most conservative approach to reducing the surplus (upper end of the estimated surplus range).
S1.C: Status quo	<i>Favours market stability and predictability, but also implicitly favours achieving emissions budgets over responding to undersupply risk compared with S1.D-E</i> Key assumptions: - Adequate level of liquidity in the non-surplus stockpile - Foresters will sell units as price rises, rather than waiting to end of MERP5

Topic 1: balancing achieving emissions budgets with medium term stability

	- Continues conservative approach to the surplus
S1.E: Higher auction volume	<i>Most favours responding to undersupply risk over achieving emissions budgets (relative to other scenarios)</i> Key assumptions: - Assumes the non-surplus stockpile is largely illiquid, meaning foresters are unlikely to sell units in response to higher prices. For example, because there is a risk NZUs cannot be brought back at a lower price later - Less conservative than central surplus assumption

Topic 2: distribution of auction volume in the early vs later years

Questions

Would participants benefit from knowing there would be zero auctions in 2027 or 2027 and 2028 under some scenarios? Is this better than relying on the auction price floor to prevent auctions from clearing if volume is not needed?

Would cancelling or redistributing 2027/28 auction volume materially reduce market predictability and impact market confidence? Why?

Do you prefer cancelling or redistributing 2027/28 volume? Explain.

Description

Some commentators question the need for auctions in 2026 given, in their view, they are unlikely to clear. It is not possible to alter auction volume for 2026. However, the Climate Change Response Act 2002 (CCRA) does allow changes to the first two years of the next regulated period (2027 and 2028) under certain circumstances.¹

Either redistributing auction volume for 2027/28 or cancelling the volume completely would acknowledge the market appears well supplied in the short term and provide certainty to the market on short-term auction supply. Current auction volumes may also be considered somewhat disconnected with broader market supply – i.e. auction volumes are higher when the market is already well-supplied and lower when there is increased scarcity. Redistributing the 2027/2028 volumes to later in the period could potentially balance overall supply across the period. Auctions not clearing may also increase the risk of undersupply in the future by reducing the stockpile more quickly than anticipated.

However, it is important to note that the auction price floor is explicitly designed to prevent the Government from adding volume to a well-supplied market. Auctions not clearing when prices are low is the system working as intended. Furthermore, either redistributing or cancelling volume may be seen as a significant departure from usual practice, reducing market predictability.

Preliminary modelling in the ETS market model indicates that auctions are likely to be needed from 2027 onwards. Based on our best estimates of other sources of NZU supply, the auction volume is needed over the late 2020s to meet overall compliance demand. We acknowledge that requires a significant increase in prices over the next year or so to occur.²

Scenario	Rationale
S2.A: Cancel auction volume for 2027 and 2028	<i>Favours tightening the market over EB2</i> Key assumptions: - The market is sufficiently supplied in the short term (2026-28) without auctions due to the size of and liquidity in the stockpile (uses most conservative assumptions) - This is reinforced by auctions not clearing and the low secondary market price. - Overall auction volumes can be revisited in 2027 and 2029 to manage undersupply risks.
S2.B: Cancel auction volume for 2027	<i>Favours tightening the market over EB2, but assumes the market requires auction volume from 2028</i>

¹ Refer to [Section 30GB\(5\)](#) of the Climate Change Response Act 2002 for the grounds for which the Minister may amend years 1 and 2 (2027 and 2028).

² For context, the market has previously experienced similar sized gains, albeit driven by very different market conditions. In 2021, spot prices rose from the mid-30s in May to the mid-60s by September. In 2023, spot prices rallied from the July low of \$37 to around \$70 by end of the year. That is, a rally of this magnitude is plausible.

Topic 2: distribution of auction volume in the early vs later years

	Key assumptions: - The market is sufficiently supplied in the short term (2026-27) without auctions due to the size of and liquidity in the stockpile. - Uses a slightly less conservative than S2.A of the size and liquidity in the stockpile - However, some fundamental tightening is expected in later EB2 years, suggesting a need for 2028 volume. - Overall auction volumes can be revisited in 2027 and 2029 to manage undersupply risks.
S2.C: Keep 2027/28 volume	<i>Favours predictability, using other methods to achieve tightening the market and managing undersupply risk</i> Key assumptions: - The market is currently fragile (indicated by low secondary market price and selling/buying behaviour), the Government's interventions should be predictable to avoid worsening confidence. - The auction floor price will remove the auction volume if prices are too low. - Redistribution is not required and market is better placed than Government to determine whether it needs the 2027/2028 auction volumes.
S2.D: Redistribute auction volume for 2027 to later years	<i>Favours temporarily tightening the market in 2027 but avoids undersupply risk in later EB2 years posed by S1.A-B.</i> Key assumptions: - The market is well-supplied in the short term (2026-27) - Overall volume is appropriate, but redistribution can better balance supply over the period - Less conservative than S2.A and S2.B about the size and liquidity of the stockpile
S2.E: Redistribute auction volume for 2027/28 to later years	<i>Favours temporarily tightening the market through 2027 and 2028 but avoids undersupply risk in later EB2 years posed by S1.A-B.</i> Key assumptions: - The market is well-supplied in the short term (2026-28) - Overall volume is appropriate, but redistribution can better balance supply over the period - Less conservative than S2.A and S2.B about the size and liquidity of the stockpile

Topic 3: Approach to meeting the third emissions budget (EB3)

Topic 3 questions

How does the market view the current gap between emissions projections and the EB3 target?

How would the market respond to the different signals in scenarios 3.A, 3.B, and 3.C and the zero auction volumes scenarios 3.D and 3.E?

Do you agree with our assumption that the liquidity of the stockpile is impacted by price expectations over the medium to long term?

Do you agree that the market expects the cost of forestry will drive the ETS price in the long term?

Description

There is currently a gap between projected emissions and our EB3 target. The gap ranges from around 9-14Mt, depending on various assumptions largely relating to emissions in non-ETS sectors, especially agriculture.

Our current modelling suggests that the ETS will not be able to close the gap on its own – moreover, that even permanently reducing auction volumes to zero from 2027 would not fully close the gap. The main driver of this is our expectation that flat to falling price expectations over the long run will make the stockpile more liquid, with firms incentivised to draw down relatively low-cost stockpiled units that are depreciating in value rather than invest in decarbonisation.

The Government is not required to produce the third emissions reduction plan (ERP3) which outlines how it will meet EB3 until 2029. However, the Government could choose to provide further detail on possible approaches for closing the gap in advance of ERP3. There are choices available to the Government about the extent to which 2026 ETS settings respond to the EB3 gap. Each option has differing impacts on market stability and sends different signals to the market about Government commitment to meeting emissions budgets and climate targets more broadly.

Scenario	Rationale
S3.A: Commitment to meeting EB3 through ERP3 without any advance detail.	<i>Favours avoiding pre-empting ERP3 process over signalling approach to meeting EB3</i> Key assumptions: - There is ample time to design policies to address the EB3 gap (ERP3 is due in 2029) - Market is confident in enduring Government commitment to achieving EB3
S3.B: Identify 'plausible sector shifts' that could be achieved through ERP3 policies to demonstrate the potential of ERP3 (e.g. plausible ag tech uptake, solar panel or EV uptake)	<i>Slightly favours sending a signal about meeting EB3 over preference to avoid pre-empting ERP3 process</i> Key assumptions: - There is ample time to design policies, based on evidenced plausible sector shifts, to address the EB3 gap (ERP3 is due in 2029) - A signal about plausible shifts would increase ETS market certainty and support investment decisions
S3.C: Start policy work on complementary policies for ERP3.	<i>Favours sending a tangible signal about meeting EB3 over preference to avoid pre-empting ERP3 process</i> Key assumptions: - Complementary policies are likely to require lead in time before EB3 so development of these is required now

Topic 3: Approach to meeting the third emissions budget (EB3)

	- Starting work on complementary policies would increase ETS market certainty and support investment decisions
S3.D: Set auction volumes at zero from 2031 representing the ETS doing 'all it can' to meet EB3 during the EB3 period. (not mutually exclusive with scenarios 3A-C)	<i>Favours sending a tangible signal about meeting EB3</i> Key assumptions: - Government auctions are not critical to meeting NZU demand during the EB3 period– they are comparatively small compared to other sources of supply, such as forestry and there is ample supply in the stockpile - Setting EB2 auctions to zero is not necessary to meet EB3 and would run counter to the proper functioning of the ETS - This would be a signal to market of government commitment to EB3
S3.E: Set auction volumes at zero from 2027 representing the ETS doing 'all it can' to meet EB3. (not mutually exclusive with scenarios 3A-C)	<i>Strongly favours sending a tangible signal about meeting EB3 over market stability</i> Key assumptions: - Government auctions are not critical to meeting NZU demand – they are comparatively small compared to other sources of supply, such as forestry and there is ample supply in the stockpile - This would be a strong signal to market of government commitment to EB3

Topic 4: Aligning the price floor with emissions budgets, targets and market dynamics

Topic 4 questions

What do you consider to be the driver of lower secondary market prices?

What would be the likely market response to each option?

How could changes to price controls be consulted on without triggering a market reaction?

Description

Price controls, including the price floor and cost containment reserve, are safety valves to manage risks of price extremes in either direction and they signal the bounds of the NZU prices likely needed to meet New Zealand's emissions reduction targets.

The price control settings do not set the NZU price, but can influence that price by withholding units from, or adding units to, the market. At the time of writing, the secondary market price is in the low \$40s, around \$30 below the current price floor of \$71.

Lower market equilibrium prices compared with the auction price floor can signal different things about the ETS market. For one, it may signal a re-pricing of the cost of net emissions reductions in a well-functioning market (e.g. through improved technology or economic conditions, additional forestry supply, lower demand etc). In technical terms, New Zealand's marginal abatement cost curve (MACC) may have reduced. Another perspective is the lower market equilibrium prices may be driven by regulatory uncertainty and external factors, such as short-term focus from the market or market evaluation about the Government's level of climate ambition.

Depending on which view is taken, different conclusions can be drawn about what the price floor should be. Like decisions about auction volumes, decisions about the price floor have potential to signal government commitment to emissions budgets and climate targets.

Ministry for the Environment scenario modelling using the Emissions in New Zealand (ENZ) model suggests that the auction floor price could be slightly reduced, by around \$15. However, separate analysis we commissioned from NZIER to update New Zealand's MACCs for ETS covered sectors (excluding forestry) indicates that there has not been a material reduction in the cost of reducing net emissions (see appendix).

The range of possible price floors is available in the appendix.

Scenario	Rationale
S4.A: Lower, but gradually rising price floor	<i>Favours cost effective emissions reductions and prioritises cost of living</i> Key assumptions: - Market is signalling a re-pricing, demonstrated by ~\$30 difference between secondary market price and auction price floor, likely due to combination of lower abatement costs and additional forestry supply - Aligns with the Government's net-based strategy and more aligned with the long-run marginal cost of forestry
S4.B: Flattening price floor ³	<i>Favours cost effective emissions reductions but conscious of impacts on market and investor confidence</i> Key assumptions:

³ Allowing the auction floor price to continue rising for the "fixed" years of the settings period (2027 and 2028) and then hold it constant in real terms, thereafter, adjusting only for inflation

Topic 4: Aligning the price floor with emissions budgets, targets and market dynamics

	- Market may not be signalling re-pricing, however, the window to find the most efficient price to meet targets could be slightly widened - Aligns with the Government's net-based strategy and more aligned with the long-run marginal cost of forestry
S4.C: Status quo price floor	<i>Favours market stability</i> Key assumptions: - Lower market equilibrium prices more likely due to regulatory uncertainty and external factors - MACC analysis suggests the cost of emissions reductions has not materially decreased - Adjusting price floor would have a negative impact on market confidence
S4.D: Higher price floor	<i>Favours decreasing the likelihood that auctioned units will enter the market, instead relying on stockpile drawdown</i> Key assumptions: - Lower market equilibrium prices more likely due to regulatory uncertainty and external factors - MACC analysis suggests the cost of emissions reductions has not materially decreased

Appendix

This appendix includes contextual and supporting information and analysis to support understanding the scenarios and options within them.

The 7-steps methodology and key variables

Developed in 2020, the seven steps methodology is an approach for calculating maximum annual auction volumes. The Government and the Climate Change Commission have used it every year since then.

The appropriate auction volumes are determined using seven calculations.

1. Align with emissions reduction targets (emissions budgets and the 2050 targets).
2. Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors.
3. Make technical adjustments.
4. Account for industrial allocation volumes.
5. Set the reduction volume to address the New Zealand Unit (NZU or unit) surplus.
6. Set the approved overseas unit limit.
7. Calculate the base auction volumes.

Working through these seven steps provides an estimate of the maximum number of units that could be auctioned while meeting our emissions reduction targets, given current circumstances and our best assumptions for other sources of units.

Steps 1 and 2 combined provide us with the 'NZ ETS cap'. This is the total level of net emissions allowed under the NZ ETS for the settings period. Caps can also be determined for emissions budget periods – for example, the EB2 NZ ETS cap sets the total level of net emissions allowed under the NZ ETS for the EB2 period.

Different assumptions about key variables within the 7-steps methodology drive outcomes for auction volume options.

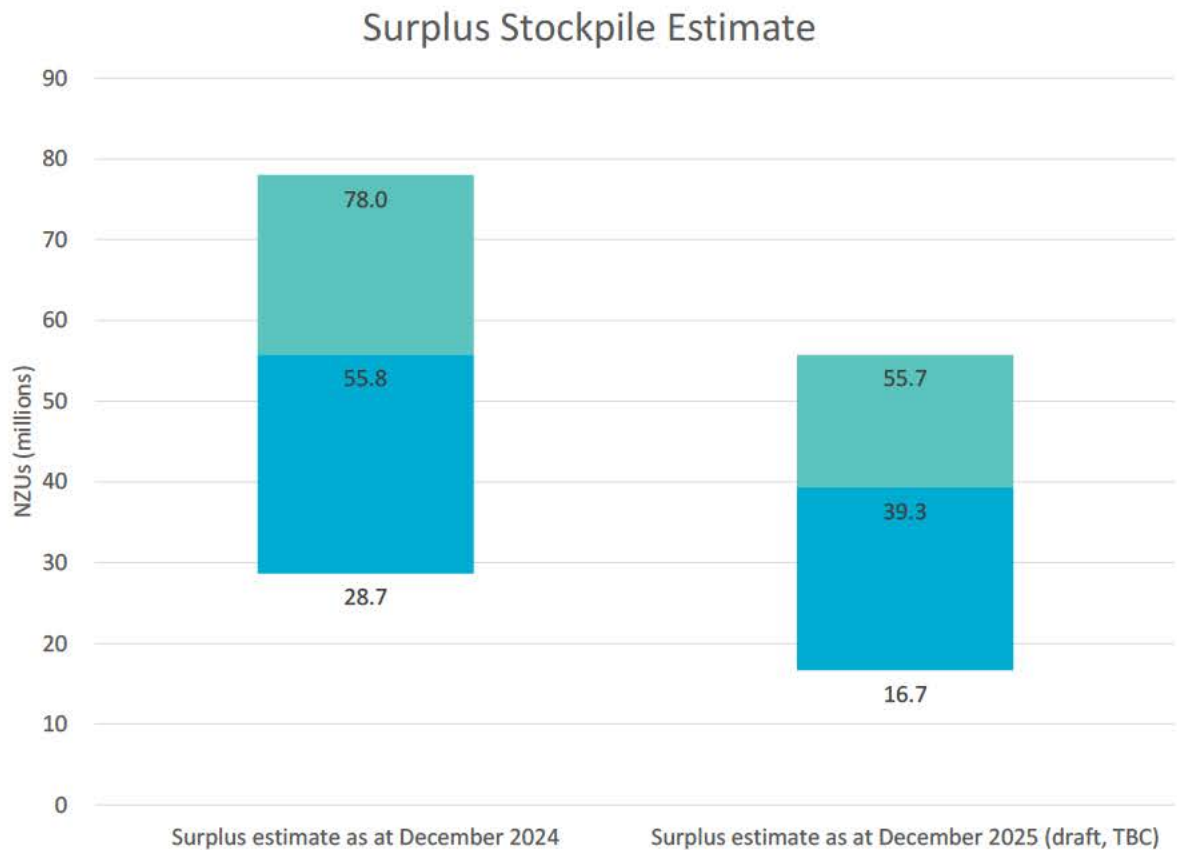
Stockpile: estimations, uncertainties and impact on auction volume

The stockpile is a significant source of supply, made up of different components such as surplus units (NZUs held mainly for speculative purposes as opposed to held against surrender obligations), forestry units held against future harvest liabilities, NZUs held for future surrender obligations i.e., hedging, NZU held against current compliance obligations ('holding'), and pre-1990 (P90) forestry units not expected to come to market.

These stockpile components also vary in **liquidity**, meaning how easily and quickly units can be sold. Generally, the surplus is the most liquid component of the stockpile and units held for near term compliance obligations are the most illiquid. Complex forestry behaviour, such as harvesting decisions and afforestation decisions, is a large driver of the forecast stockpile uncertainty.

Because of the size of the **surplus** and the significant uncertainty surrounding its size and rate at which it is being drawn down, assumptions about the surplus have a significant impact on auction volume outcomes.

The figure below illustrates the uncertainty range of the surplus stockpile estimate. The numbers for December 2025 are preliminary and subject to change, however, show an uncertainty range of 16.7-55.7m NZUs, with a central estimate of 39.3m NZUs.



The Government has committed to drawing down the surplus by 2030, as its existence poses a risk to meeting emissions budgets and targets. Given the uncertainty around the surplus, Government may choose to take a more conservative approach to the surplus, however, this risks undersupplying the market.

Hedged units held for future liabilities are also an area of uncertainty. Foresters and other participants may sell units hedged for future liabilities when prices are high in the near term and repurchase those units for a lower price in later years. This behaviour requires some risk appetite in addition to a medium-term outlook of the market, including that the market equilibrium price will be flat to lower in future. Assumptions about this behaviour impact on estimations of stockpile liquidity which may serve an important role in managing any supply shortages in the late 2020s and in the 2030s. More information on this can be found in the ‘Overview of the ETS and market outlook’ slide deck.

Forestry: estimations, uncertainties and impact on auction volume

Forestry units, predominately from exotic pine, are already the largest single source of new supply into the NZ ETS and from the late 2020s, will be almost all the new units coming into the scheme.

Forestry market dynamics are complex, resulting from a very diverse range of players operating over relatively long investment horizons and with different business models and levels of sophistication. In general terms, exotic afforestation for production/harvest provides a greater return on investment than some sheep and beef farms, which is the main alternate land use of less productive land, at comparatively low NZU prices (~\$25–\$75). At moderate NZU prices (from around \$75), permanent exotic forestry starts to become more profitable than both production forestry and sheep and beef farming.

The Ministry of Primary Industries (MPI) undertakes analysis of future afforestation rates and forestry unit flows. MPI central afforestation projections sit at 27,300 hectares per annum, with low and high projections of 21,150 and 33,450 hectares per annum respectively. This is considerably slower than the average of 72,000 hectares per annum over 2022-25. Almost all the projected afforestation is exotic pine. Trees planted today do not materially contribute to removals within the settings horizon but will be the main source of future supply into the ETS.

Projections of forestry unit flows within the settings horizon largely relate to removals generated by existing forests. For the settings period, MPI projects that 83M NZUs of low-risk units (i.e. units without a harvest liability from averaging or permanent forests) will be generated, within a range of 80 to 89M. However, as noted elsewhere, the timing of when these units enter the market is uncertain under the MERP.

Proper functioning of the Emissions Trading Scheme

At a high-level, the proper functioning of the ETS includes:

- Operating in a transparent and durable manner, so that participants can form expectations about supply and demand, to support investment in reducing emissions.
- NZ ETS participants being able to attain and surrender NZUs to meet NZ ETS obligations.
- Effectively playing its role in meeting emissions reduction targets.

There is no exact definition or threshold about when the ETS market is no longer functioning 'properly'. However, there are some practical signals that may indicate whether the market has moved toward not functioning properly:

- Volatility: sudden and significant price drops/rises, especially where these are sustained for long periods of time
- Cost containment reserve trigger: this indicates the price has reached a point where there are significant impacts on the economy/households. Triggering the CCR is a clear sign that the market is not functioning as intended, requiring intervention.
- Participants faltering on their surrender obligations: instances where participants are failing to secure NZUs to meet their short-term obligations.
- Misalignment with feasible emissions reductions within the economy: where the supply scarcity outpaces feasible emissions reductions.

Undersupply risk: key factors and uncertainties

Some market participants have flagged potential for the ETS market to tighten materially in the later years of the 2020s. In part this is by design – ETS settings decisions have consistently retained the objective of removing the “surplus” stockpile by 2030, by intentionally auctioning fewer units.

The table below shows how demand for NZUs and their sources of supply are currently projected to materialise. (Note this is work in progress analysis and subject to change).

Table 1: Projected NZU Supply and Demand under the provisional status quo option

NZUs (000s)	2026	2027	2028	2029	2030	2031	Total 2026-31
Compliance demand (gross emissions)	32,066	31,532	30,445	29,794	29,068	25,378	178,282
<i>Projected supply sources</i>							
Forestry	10,069	12,138	14,367	16,380	17,803	18,757	89,515
Industrial allocation	4,579	4,428	4,098	4,043	3,988	3,877	25,012
Auctions (current regulations plus 2031)	0	4,300	3,300	2,400	1,700	1,400	13,100
Surplus drawdown	17,417	10,667	8,679	6,971	5,577		49,312
Shortfall						1,343	1,343
<i>Cumulative surplus drawdown</i>	17,417	28,084	36,763	43,735	49,312		

Note: this is a modified version of the seven steps calculation for the provisional status quo option. For this analysis, 2026 auctions are assumed to not clear.

There are two key sources of risk:

- **Stockpile drawdown**
 - Assuming this year's auctions do not clear, the surplus will be drawn down faster than expected. By about 2028, the central estimate of the surplus will have been drawn down. Total surplus drawdown over the period is at the upper end of our estimated surplus range.
 - The surplus estimate itself is highly uncertain and if it is smaller than we anticipate then we could run the surplus portion of the stockpile out before 2030.
- **Timing of forestry supply**
 - Foresters must report their allocations and surrenders in the Mandatory Emissions Reporting Period (MERP5) that spans 2026-30 and may choose to do annual voluntary return. Recently about 70% have made voluntary returns.
 - Settings analysis assumes that the units are available to the market as they are earned, rather than when they are reported. However, some of the forestry units forecast below may not enter the market until 2031 when MERP5 is complete and processed.

Mitigating factors:

- While the ETS settings process focuses on the surplus stockpile that poses most risk to budget accordance, the remaining stockpile remains large (more than 80M NZUs) and could be drawn down further under certain conditions (notably flat to falling price expectations). Within the stockpile, we estimate that emitters are hedging around 2-3 years of their forward demand - this is precisely the volume they should be looking to use to smooth the impact of price volatility on their books.

Ultimately, the ETS is a market-based tool designed to cap emissions – there should be tension in the system between supply and demand. Should the market begin to tighten, the price will shift higher to signal scarcity and draw units into the market, likely from the stockpile and foresters. Higher prices will also incentivise faster gross reductions emissions, although likely only marginally so in the short term.

Any undersupply is expected to be short term. In the long run there will be sufficient forestry supply to meet expected demand for NZUs. This limits the impacts of the risk by supporting the use of hedging volumes and encouraging foresters with harvest liabilities to make their held units available with the expectation they will be able to source the units they need in the future.

Undersupply could impact on the proper functioning of the market in the short to medium term if it leads to short term price spikes that are misaligned with market expectations about long term marginal abatement costs. This may occur if the stockpile is less liquid than expected.

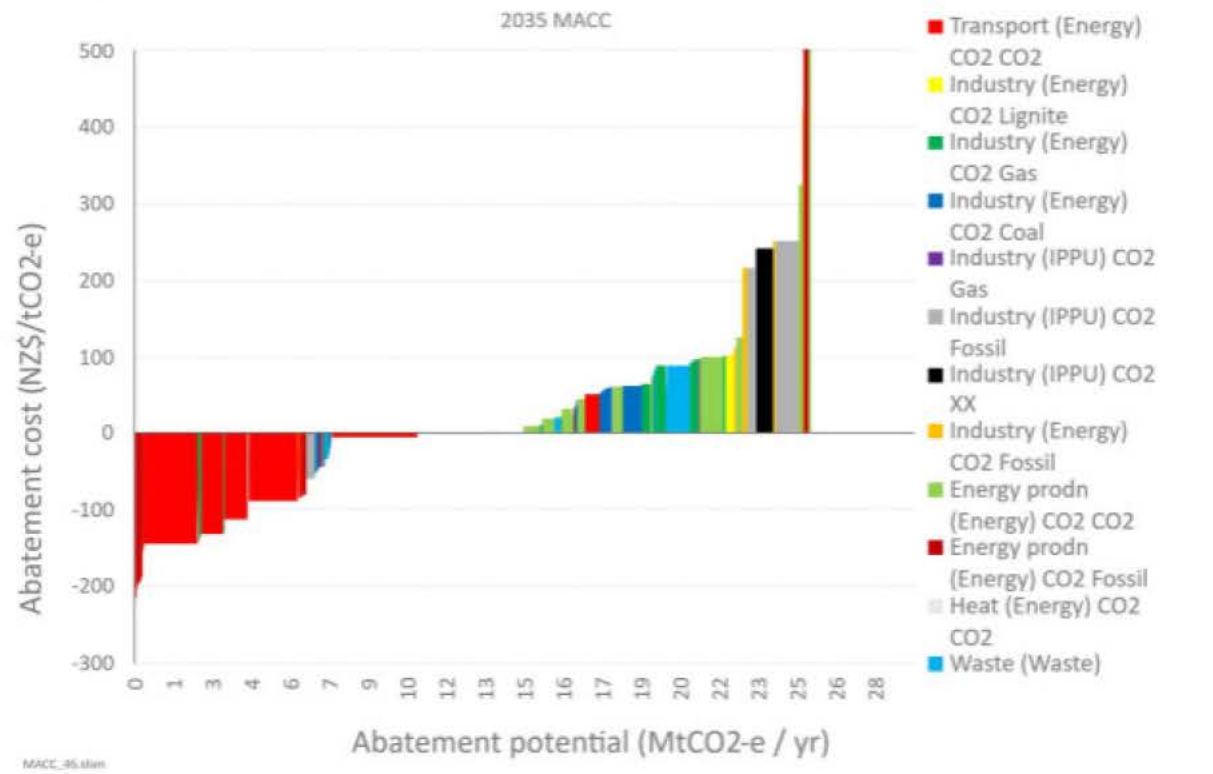
The ETS Market Model

We use the ETS market model as a complementary tool to the 7 steps analytical framework. The market model serves a useful role in cross checking the seven-step methodology and teasing out potential implications of different unit settings, including informing impact analysis.

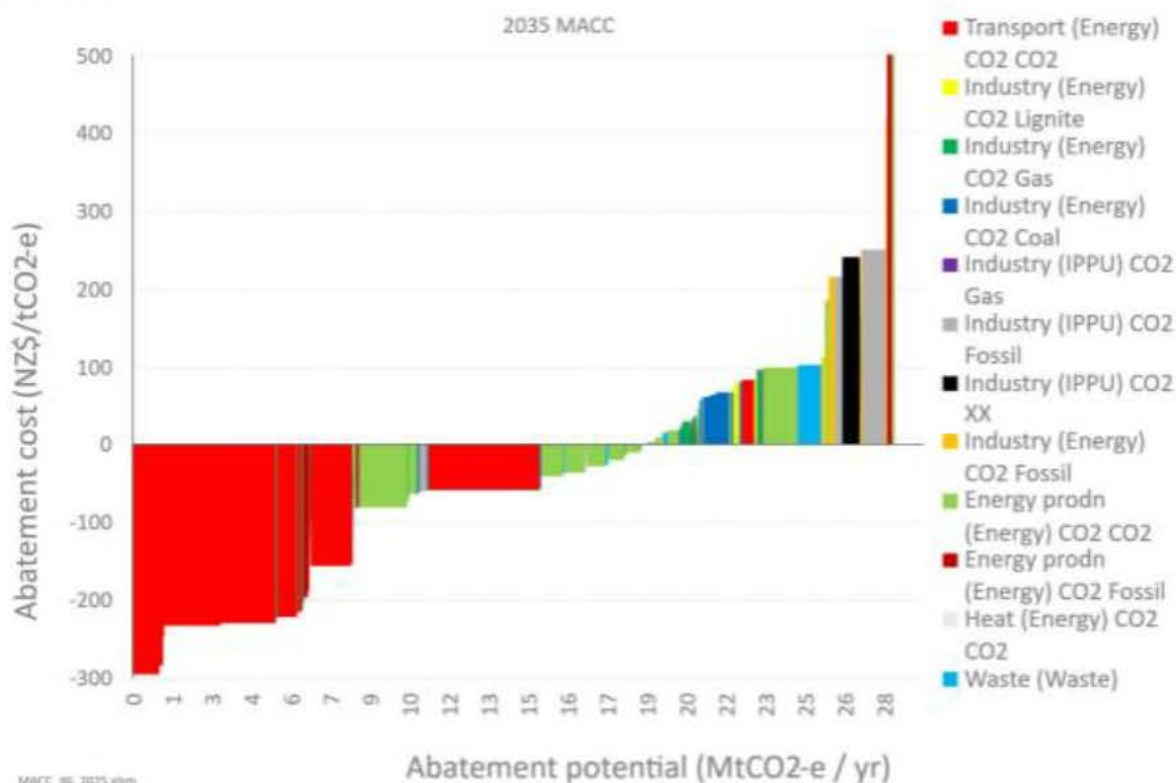
The NZ ETS Market Model estimates supply and demand for NZUs in the ETS under different conditions and can generate price projections based on supply and demand.^{4,5} The model operates in two broad ways. One involves external or exogenous assumptions for price, emission reductions and forestry removals. The other way estimates emission reductions and removals, and the flow of units in and out of the stockpile, internally (endogenously) in the model using equations that relate these changes to different prices. It sets an objective for the market (minimising the stockpile by 2050 while meeting demand every year) and uses price to optimise relative to that objective.

New Zealand’s Marginal Abatement Cost Curves in 2020 and 2025

Figure 11 Aggregated MACCs, 2020 and 2025, excluding land sector (truncated)
a) 2020 version



b) 2025 version



Source: NZIER Research on emissions and the NZ Emissions Trading Scheme, Report to the Ministry for the Environment (2026, not published)