

Opportunities to Improve New Zealand Emissions Trading Scheme Advisory Frameworks and Tools



Ministry for the
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Manatū Mō Te Taiao



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1. Key messages

The Ministry for the Environment (MfE) and the Climate Change Commission (the Commission) have undertaken a short, targeted review of the advisory frameworks and analytical tools used to develop advice on New Zealand Emissions Trading Scheme (NZ ETS) settings – the regulations updating auction unit limits and price control settings for the following five years.¹

The objective was to ensure these frameworks and tools remain fit for purpose and to identify opportunities for improvement, to support market confidence. It is timely to review the analytical frameworks as ETS auctions were established five years ago. In addition, the Commission's 2025 advice on unit limits took some market commentators by surprise and was different from MfE's advice.

We concluded that the overall advisory and analytical frameworks for NZ ETS settings remain fit for purpose. Differences in conclusions can arise from the uncertainties inherent in the ETS settings process, and can offer valuable insights, provided they are transparent and well understood.

This project identified several opportunities for improvement for MfE and the Commission.

1. Enhance communication of key judgements and assumptions, helping decision-makers understand their options and the trade-offs

Headline recommendations often obscure the complex judgements behind ETS settings advice, making it unclear that alternative options could still meet statutory requirements.

The Commission can more clearly identify key assumptions and where justifiably different analyses could lead to materially different outcomes. MfE will explain where it has taken alternative judgements, including through consultation and the report on differences.

This is expected to support improved confidence in advice and informed decision-making.

2. Improve clarity in how market conditions have been considered and address potential sources of confusion

Future auction volumes are set by taking a forward, five-year view. Market information is considered through the settings process, as one important data point amongst many others, to inform medium-term supply settings.

Stakeholders' intuitive expectations are shaped by secondary market prices, auction outcomes, and the conclusions from previous advice. This year the Commission's advice recommended additional units could be auctioned within the cap. There was some confusion about the drivers for the advice, given a perception of significant existing supply and what some perceived as a change in direction from the Commission's 2024 advice.

The Commission and MfE can more explicitly explain how market activity and assumptions inform advice, anticipate how advice might compare to stakeholder expectations, where possible, and proactively address potential sources of confusion.

¹ Other NZ ETS policy issues and other instances of ETS settings differences are out of scope.

This is expected to support improved stakeholder understanding and reduced risk of confusion or uncertainty.

3. Managing surplus uncertainty and addressing risk

Estimating the surplus is inherently uncertain and the surplus poses a risk to meeting emissions budgets. Current advice relies heavily on central estimates.

To address this, both organisations can explore ways to illustrate the implications and constraints of analysis to support decision-making under uncertainty. For example, the Commission could set out what a more conservative estimate of the surplus might produce in terms of auctions settings. More generally, the Commission can also explore an integrated risk assessment across unit supply and price controls to better evaluate trade-offs and risks.

This is expected to support a better understanding of how to manage risks from the surplus.

4. Continually improve analytical tools and approaches

As new tools such as MfE's NZ ETS Market Model and updated Emissions in New Zealand (ENZ) models are developed, there are opportunities for continuous improvement and to expand the tools used to develop the NZ ETS settings advice.

MfE and the Commission are exploring alternative models and approaches for supporting price controls analysis. Improved collaboration, particularly on forestry data, and the use of diverse data sources including surveys and financial disclosures, can strengthen analysis and modelling for settings. Continuous improvements in the functionality of models and exploration of other tools can also support richer insights.

This is expected to support more robust advice that uses the best available data, more confidence that modelling tools are designed and used appropriately, and more informed decision-making.

2. Background

This report first describes the overall system that frames the ETS settings process, and the approach taken to advice, highlighting the analytical processes most subject to judgement. It then identifies opportunities for improvement for both MfE and the Commission to support greater clarity and improved decision-making for ministers and market participants in the future.

2.1. The NZ ETS settings process

The New Zealand Emissions Trading Scheme (NZ ETS) is the Government's key tool to help Aotearoa New Zealand meet its emissions reduction targets. Under the NZ ETS, participants are required to surrender one 'emissions unit' (NZU or unit) to the Government for each tonne of emissions they are responsible for.

For the NZ ETS to support New Zealand to achieve its emissions reduction targets, the supply of units from all sources needs to match up to the allowed emissions under those targets (the cap). The available supply of NZUs is made up of some of the units already held by market participants (the stockpile), industrial allocation, units provided to foresters as their trees grow, and sales through government auctions. Figures 1 and 2 illustrate how different units can add up to meet the cap. Auctions are the only part of supply the Government can regularly adjust, making them essential for maintaining alignment with emissions targets when other sources of supply vary.

The Government manages auctioning through the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020, which control the amount of NZUs the Government can sell at quarterly auctions, and the price floors and ceilings that operate at those auctions.² The settings process makes regulations for the next five years, including reviewing and updating the existing settings. The first two years of settings for each ETS settings decision cannot be amended, except under special circumstances.

Both auction unit limits and price control settings form a package of 'NZ ETS settings' that must accord with emissions budgets, Nationally Determined Contributions (NDCs), and the 2050 target.

2.2. Purpose of this project

From July to September 2025, MfE and the Climate Change Commission (the Commission) conducted a targeted review of the advisory frameworks and analytical tools used in preparing regular advice on ETS settings. The Terms of Reference for this project can be found on the [Climate Change Commission's website](#).

² The regulations could also be used to control the number of international units used in the NZ ETS; however, currently no international units are eligible for use in the scheme. Additionally, the unit limits include industrial allocation units, but do not control them.

The review was initiated for two reasons:

1. It is timely to review the analytical frameworks. The system for ETS settings was established in 2020, so we have several years of analysis to learn from. Based on the current NZ ETS structure, auction volumes will fall to zero in the mid-2030s (see box on page 8), meaning updates to the unit and price control settings will still be needed for several years.
2. The Commission's advice on unit limits took some market commentators by surprise this year, and was different from MfE's advice.³

Different organisations reaching different conclusions is not inherently a problem. However, there is a common interest in all parties having a clear understanding of each other's analysis and why they differ. This project sought, in part, to understand the divergence of views and expectations between the Government, Commission and external stakeholders; and to identify opportunities for improvement.

This report sets out the key findings of the targeted review and is intended to provide transparency to market participants. For the avoidance of doubt, this review is not proposing any legislative changes, nor major changes in analytical approaches in preparing ETS settings advice.

The Commission's statutory independence is a key characteristic of its advisory role, and important to maintaining trust in its advice and in the system for updating the NZ ETS settings. This means it, not the Government, determines the method and tools it uses to advise on NZ ETS settings. Consequently, this report is not binding on the Commission.

³ Noting that the Government ultimately decided to take MfE's recommended settings in 2025.

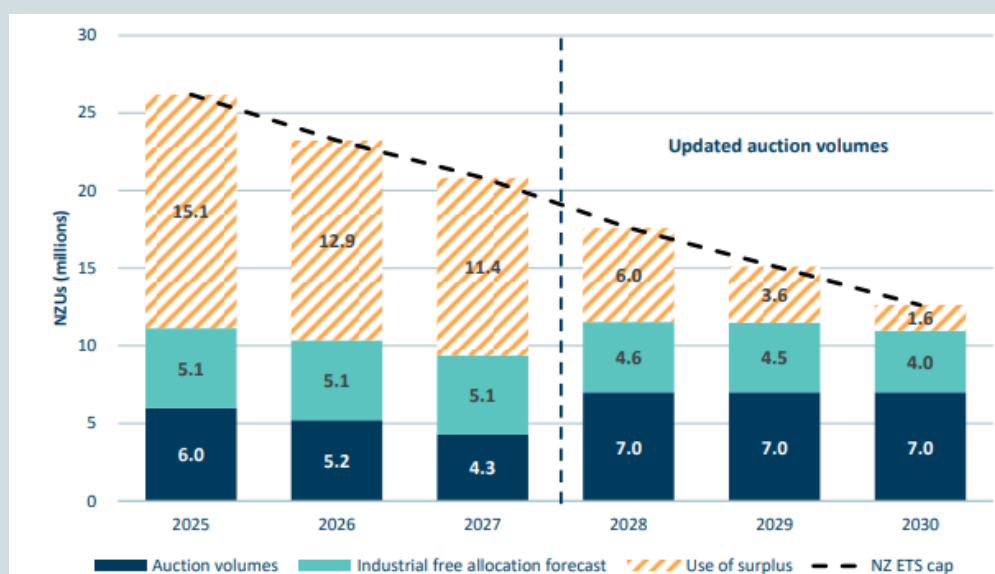
Settings advice for 2026–2030

The Climate Change Commission’s advice

The Commission identified there was capacity within the ETS cap for 30.5 million units to be auctioned over 2026–2030. This resulted in its recommendation that 13.6 million more units could be auctioned compared to status quo settings, backloaded in the years 2028–2030 while still aligning with the Government’s emissions reduction targets. This recommendation was subject to price control settings remaining the same (adjusted for inflation). Key reasons include:

- More volume from the cap could be auctioned primarily because its estimate of surplus units in the market had reduced more quickly than previously forecast and the forecast of industrial allocation had decreased.
- The Commission considered that despite this, NZU prices and non-clearing auctions indicated sufficient unit supply in the short term, so it recommended no change to the unit limits for 2026–2027.
- The backloading of units into the years that can be more easily amended also provided flexibility to adjust to any future changes in the forecast surplus or revisions to emissions budgets.
- Maintaining the auction reserve price would prevent units from being auctioned below the price likely needed to meet emissions budgets.

Figure 1: Climate Change Commission’s recommended auction volumes 2025–2030 under the emissions cap



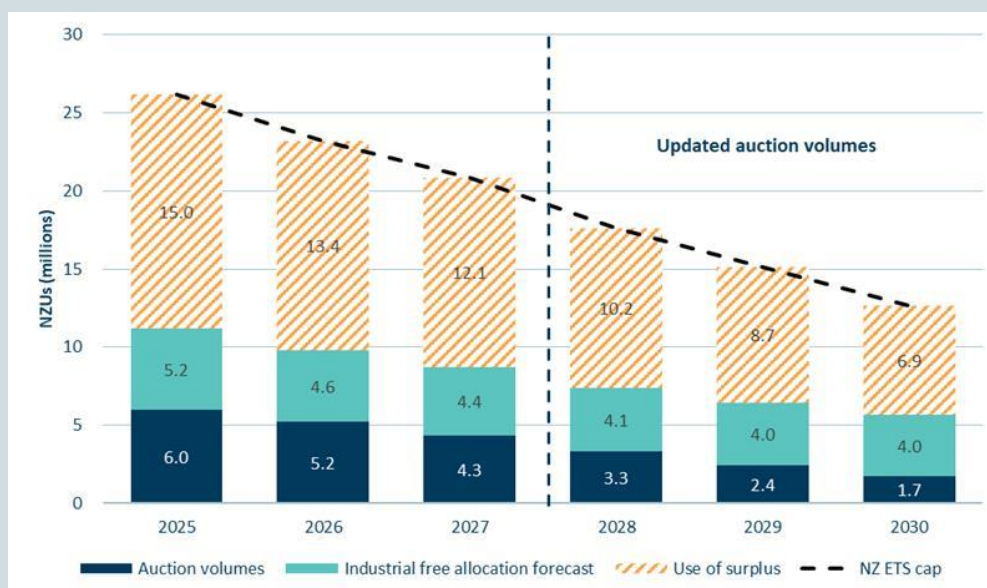
MfE’s advice

MfE recommended maintaining the status quo auction volumes set last year and extended one year (16.9 million units over 2026–2030 and no change to price controls). The advice results in 13.6 million fewer units available for auction over the next five years compared to the Commission’s advice. Key reasons include:

- This is intended to reduce the risk that an oversupply of units poses to achieving our emissions reduction targets, particularly emissions budgets two and three.
- Recent market activity suggests that there remains strong supply of NZUs in the market.

- It considered extending the status quo provides the greatest level of certainty and credibility for the market.

Figure 2: MfE’s recommended auction volumes 2025–2030 under the emissions cap



Both the Commission and MfE recommendations were assessed to be in strict accordance with meeting emissions budget two, the period that currently aligns with the settings period.

2.3. The primary differences in advice this year

This project revealed and reinforced a high degree of consensus between MfE and the Commission’s understanding of statutory requirements and analytical frameworks. Differences in the 2025 advice were primarily related to taking different analytical judgements in three key areas, as set out below.

a. The balance of risks between over- and under-supply of unit volume under the emissions cap, and how best to manage those

The Commission is concerned about oversupply, but also about the damage that undersupplying the market could cause – for example, through excessive price volatility. Its preferred approach to balance these risks this year was by providing for auction volume up to the emissions cap over years 2028–2030, with a robust auction reserve price⁴ preventing units from entering the market if they are not needed.

MfE’s advice took a more conservative approach to the risk of oversupply for achieving emissions reduction targets – especially the challenging third emissions budget. Given the significant uncertainty associated with estimating the surplus, MfE considered it possible that it could be larger than the Commission’s central estimate. Because of the one-sided nature of auctioning as a lever (once units have been auctioned, the Government cannot easily remove them from the market), this year MfE had a higher tolerance for the risk of undersupply than it

⁴ Rising to \$87 by 2030.

did for oversupply. Additionally, MfE considered the risks of under-supply to be low in the short term, given its view that signs suggest the market is currently well supplied.

b. The conclusions to be drawn from recent NZU prices⁵ about the size of the surplus and outlook for supply and demand over the next five years

The Commission considered that there are several factors likely contributing to the current price level, including wider regulatory uncertainty about the NZ ETS and climate policy overall, participants' limited market foresight, and the inefficiency of the NZ ETS market.

While the price and availability of units in the secondary market indicates that there is sufficient unit supply in the short term, the Commission did not consider this provided evidence in itself for increasing the surplus estimate or concluding that status quo settings will provide sufficient units in line with targets from 2028 onwards.

MfE considered that recent NZU prices and partial clearance of auctions in 2024 support the view that the surplus may be larger than the Commission's central estimate, and that sufficient units in line with targets are likely to be available in the market over the next five years.

The impact of our relative assumptions on the size of the surplus, and how that enacts the cap in our respective advice is illustrated by figures 1 and 2.

c. The approach to regulatory predictability and market stability

Both MfE and the Commission agree that regulatory predictability and stability in the market are best supported by prioritising consistency of methodological approach and process, where changes are well signalled and understood, and settings implement the emissions cap. While it was not the determinative factor, this year MfE also noted feedback from public consultation that maintaining status quo settings would support overall market stability and took that into account in its advice.

This illustrates that developing the settings advice is subject to significant uncertainty and there is wide scope for making different judgements and conclusions.

The NZ ETS over the medium to long term

This review focuses on the NZ ETS as it operates today. Currently, the Government can influence NZU supply and, indirectly, price through auction volumes and price controls, but auctioning will phase out by the mid-2030s.

From the late 2020s, forestry will increasingly dominate new unit supply, though its contribution is highly variable due to harvest cycles, accounting methods, and forester discretion, and it is not clear how the market will manage this volatility. Industrial allocation will remain a declining but material supply source until around 2060 and under current methodologies are projected to exceed net ETS sector emissions from the late 2030s. As agricultural long-lived gas emissions are not covered by the NZ ETS, complementary policies – like afforestation on Crown-owned land – are needed to meet the 2050 net zero long-lived gas target. The longer-term challenges to the NZ ETS are outside the scope of this review.

⁵ This refers to both the secondary market spot price as well as recent auctions not clearing, which reflect that spot prices are below the auction reserve price.

3. The statutory and advisory framework for preparing ETS settings advice

Key insights

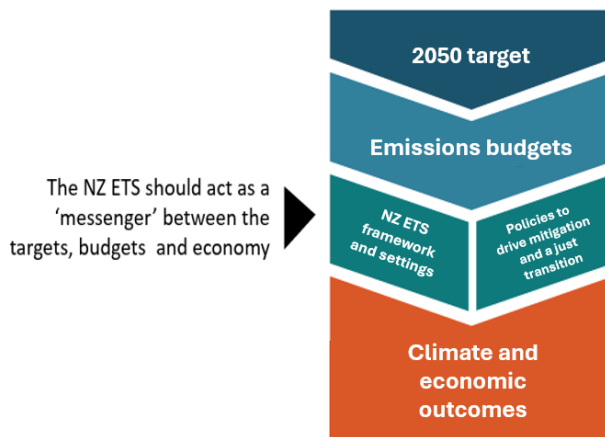
- Ensuring the settings accord with emissions budgets, targets and Nationally Determined Contributions (NDCs) is the key test under the legislation. Another important consideration is the proper functioning of the market.
- The seven-step method used in developing the unit limits in settings advice is a flexible organising framework with scope for a range of judgements.
- Judgements are particularly relevant to the steps determining the cap, estimating the surplus, and assessment of risks.
- Although subject to similar requirements, each organisation holds different information and plays a distinct role when preparing advice. This may result in diverging judgements in analysis and advice.
- Divergence in analytical judgements can offer valuable insights – provided these differences are transparent and well understood.
- Price controls are an important dimension to ETS settings, and work in tandem with unit limits to provide accordance and support proper functioning of the market.

3.1. Where settings advice sits in the climate framework

The Climate Change Response Act 2002 (the Act) sets out roles and requirements for advice and decisions on the annual ETS settings regulations. The 2050 target is the overall emissions reduction target (section 5Q); emissions budgets are then set as ‘stepping stones’ to the 2050 target (section 5W). The Minister of Climate Change must ensure that net accounting emissions do not exceed the emissions budget for the relevant period (section 5X(4)). The annual ETS settings decisions (supported by complementary policies) are a way to give effect to these budgets and targets (see figure 3) as well as Nationally Determined Contributions under the Paris Agreement.

The NZ ETS settings advice is limited to updating and extending the settings regulations; it does not provide an opportunity to recommend changes to other government policies or regulations. Therefore, the Commission’s settings advice takes existing government policies and decisions on the NZ ETS and in other parts of the climate policy framework as read. There are situations where the Commission and MfE may use the settings process to raise or trigger a process to resolve strategic issues – for example, where statutory requirements cannot be satisfactorily met.

Figure 3: How targets, budgets and the NZ ETS fit together



3.2. The statutory requirements for settings advice

Roles and responsibilities overlap and diverge

There are statutory requirements upon the Commission and the Minister (and by extension, MfE) in advising and deciding on ETS settings.

Under section 30GB(2), the Minister must recommend regulations for the supply limits of NZ ETS settings and price control settings for units. The Commission's recommendations must be in line with the requirements of the Minister's recommendations (section 5ZOA(3)). Thus, there is a high degree of overlap in the decision-making parameters the Commission and the Minister operate within. For example, section 30GC(5) details the main matters both the Minister and the Commission (under section 5ZOA(3)(a)) must consider in settings advice.

There are also additional duties and considerations for each to follow, given their distinct roles in the system. For example, it is the Minister's duty to ensure that the net accounting emissions do not exceed the emissions budget for the relevant emissions budget period (section 5X). On the other hand, section 5M outlines matters the Commission must consider in performing its functions and duties, including likely economic effects and the distribution of benefits, costs and risks between generations.

In addition, the timing of the Commission's advice and the Government's decisions means each operates with different information sets, which can lead to differences in analysis. In this year's advice, significant selling pressure emerged in the secondary market after the Commission had finalised its analysis in February. By the time Ministers were making final decisions in August, the price had sat significantly below the floor price for several months and two auctions had not cleared, potentially indicating a greater degree of short and/or medium-term oversupply in the market than was evident earlier.

When properly interrogated, the emergence of divergence helps reveal issues which could deserve especially careful consideration by both parties and by market participants.

The key test for NZ ETS settings is accordance

The key legal test for both the Commission and the Minister (and by extension MfE) is whether the NZ ETS settings accord with New Zealand's 2050 target, emissions budgets, and NDC under the Paris Agreement.

The Act requires the settings (unit limits in combination with price controls) to strictly accord with New Zealand's 2050 target, meaning there is a very high probability that settings constrain emissions to levels necessary to meet the target. For emissions budgets and NDCs, the settings do not have to strictly accord if the discrepancy is justified after considering matters prescribed in the Act. This still requires a good probability that settings keep emissions to the levels necessary to meet the targets.

Proper functioning of the market must also be considered

In deciding whether a departure from strict accordance is justified, there are additional matters that must be considered (section 30GC (3) and section 5M). One of these is the proper functioning of the emissions trading scheme.

There are several possible interpretations of 'proper functioning', including access to information, governance, behaviour of market participants, and broader policy direction.⁶ Two major concepts to draw attention to are:

1. NZ ETS participants' ability to obtain and surrender NZUs in line with emissions budgets and targets to meet NZ ETS obligations.

The settings should aim to reduce the likelihood of unexpected NZU supply shortages such that participants are unable to obtain and surrender the NZUs necessary to meet their NZ ETS obligations, which would result in further price volatility and negatively impact the NZ ETS's ability to reduce emissions.

2. Providing regulatory predictability and supporting market stability.

The purpose of regular adjustments to ETS settings is to ensure they remain fit for purpose. Prioritising stability of methodological approach and process is most likely to achieve the desired outcome – where informed market participants can have reasonable confidence about how regulations may respond to changes (such as an update to projections). This can extend to consistency in the approach to managing any methodological changes.

MfE is required by statute to publicly consult on ETS settings options, which serves as additional measure for regulatory predictability where it may consider broader factors. This year, MfE set out its reasons for considering the status quo option in the consultation document, and this received broad support from respondents.

The Commission's independence in providing robust, evidence-based advice is the other key way the system supports regulatory predictability. This is underpinned by its emphasis on using a coherent and transparent methodology.

⁶ Note that these are not prescribed in legislation.

3.3. The analytical frameworks for preparing ETS settings advice

The seven-step method

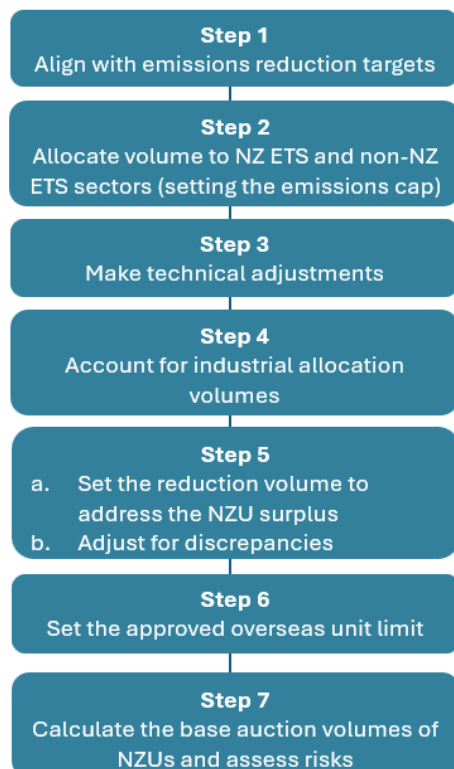
Since the 2020 NZ ETS legislative reforms established the system for the NZ ETS settings, the seven-step method has been used to develop the unit limit settings advice consistent with statutory obligations (see figure 4). The first two steps also inform the price controls analysis. A range of models and tools are used to generate inputs to the seven-step method and recommendations on price control settings.

The seven-step method is a flexible organising framework which allows for relevant factors to be considered in arriving at a recommendation for auction unit limits. It has scope for judgements, and demonstrating how matters in the Act have been considered, including how unit limits accord with emissions budgets and reduction targets.

This project confirmed that the seven-step method is useful to follow as a broadly predictable process, whilst allowing sufficient flexibility to invite expert judgement and respond to changing circumstances in ways that are timely and consistent with legislation. That is helpful because settings advice needs to contend with complexity, uncertainty and risks.

While some steps within the method are relatively straightforward, steps 1, 2 and 5a are subject to greater complexity and uncertainty, requiring more judgement. These are explored further below.

Figure 4: Summary of the seven-step method



Step 1: Align with emissions reduction targets

The first step of the settings process is to determine how the settings will align with emission budgets, NDCs set under the Paris Agreement, and the 2050 target. These are set at different levels and operate over mis-matched timeframes, so a judgement needs to be made how to accord with all three emission targets.

Changes in the 2050 target, new or revised emission budgets, or changes to the viability of meeting NDCs could all be reason to reconsider the approach. This is a key judgement on which the rest of the settings advice hinges. This step was not the focus of consideration in this project, however.

Step 2: Allocate volume to NZ ETS and non-NZ ETS sectors (setting the emissions cap)

Within the seven-step method, step 2 calculates the NZ ETS emissions cap (the cap), ensuring it is in accordance with emissions budgets and targets discussed in step 1. This step is about how New Zealand's emissions reduction goals are shared between NZ ETS and non-ETS sectors.

The Government set a provisional cap for the second emissions budget in the second emissions reduction plan. In August 2025, Cabinet confirmed the cap for second emissions budget (based on the Commission's refined analysis) and agreed a provisional cap for the third emissions budget, covering 2031–2035.⁷ The cap is met through a combination of all sources of unit supply. If the cap is held steady, the volume of non-auctioned units available to the market (eg, stockpiled units and industrial allocation) impact the number of auctioned units which can be made available, as illustrated in figures 1 and 2.

The process for updating settings enables regular assessment of whether the cap accords

The process for updating the NZ ETS settings regulations provides the opportunity to make adjustments to the emissions cap over time – for example, to reflect changes to the area of forest registered in the NZ ETS or methodological changes to the way emissions are estimated. Under certain circumstances, the cap could also be amended to take account of actual emissions performance and revisions to forecasts. This provides for regular consideration of whether the cap continues to accord to maintain the intended level of ambition.

While the flexibility is useful it gives rise to opportunities for judgement, which may also result in regulatory uncertainty, if not well managed.

Ensuring ongoing accordance in the face of changing circumstances requires important judgements to be made

In setting a provisional emissions cap, the Government made a judgement on how much of the available emissions within the emissions budget are allocated to NZ ETS covered sectors versus non-covered sectors. In practice, determining the share of emissions reductions to be delivered by those sectors within the ETS and those outside of it (like agriculture and non-ETS

⁷ The cap covers the same five years as an emissions budget, but is also calculated annually within those five years, usually on a trajectory. When settings periods cover two emissions budgets, the cap is set based on the remainder of the current budget, and the relevant years for the next budget.

forestry) is a key strategic decision for the Government as part of its wider climate strategy and other goals, and therefore the Government is best placed to decide on the appropriate balance.

However, the Commission may also need to make judgements in advising on settings. For example, the Commission may recommend settings based on an adjusted cap where necessary to satisfy the accordance test (ie, where non-ETS covered sector projections are sufficiently high to pose a risk). It may raise options for the Government to consider adjusting the cap – for example, to account for non-ETS policy interventions. A useful example of this is the Commission’s 2024 advice on settings, where it provided advice on choices about interactions between NZ ETS and non-NZ ETS emissions reduction policies, in light of the NZ Steel electric arc furnace installation with government co-funding.

Step 5a: Set the reduction volume to address the New Zealand Unit (NZU or unit) surplus

Step 5a of the seven-step method is an assessment of how many units that are in the stockpile are ‘surplus’, and how fast they should be drawn down over time.⁸

The surplus is highly uncertain and poses a risk to achieving emissions budgets

The total stockpile number is regularly updated and known with some certainty, but the size of the surplus is uncertain and dynamic. Estimating it involves making a range of assumptions. The Commission’s and MfE’s central estimates of the surplus are currently assessed at 50 and 56 million units respectively, with wide margins of uncertainty (29-78 million units).⁹ Total planned auction volumes over 2026–2030 are currently set at 17 million units. The surplus estimate is therefore a consequential element of the overall judgement about auction volumes. The uncertainty range is significant and raises the question of what surplus estimate number to use when determining the appropriate settings.

Estimating the surplus essentially requires estimating the aggregate of many individual and interdependent decisions from market participants across many market segments. Uncertainty in the surplus arises from several factors:

- foresters’ harvest intentions and liability management strategies are variable
- multi-year emissions return periods delay information and unit availability
- industrial allocation changes each year depending on recipient firms’ production levels
- participants’ release of pre-1990 forestry allocation units into the marketplace depends on external, unpredictable factors
- estimating hedging demand is also difficult due to limited data and visibility about participants’ practices.

Surplus units risk enabling emissions above time-bound emissions budgets – for example, if many are surrendered at the same time above the budget level, and therefore pose a risk to accordance.

⁸ Step 5 also includes Step 5b: Adjust for discrepancies. This is usually a relatively small and mechanical adjustment to account for changes in steps 2, 3 and 4 for the current year and first two years of the settings period that cannot otherwise be applied.

⁹ As per the Commission and MfE’s 2025 unit and price control settings advice.

This combination of uncertainty and risk give rise to further ground for expert judgment in the ETS settings process

Given the risk that the surplus presents to accordance, government policy (based on Commission advice) is for ETS auction settings to support a drawdown of the surplus by 2030.¹⁰ Within the seven steps, auction volumes are set at a level that is expected to draw units out of the surplus and be surrendered at a rate consistent with that goal. All else being equal, the more surplus units we think there are, the lower auction volumes should be to maintain a constraint on units available in the market that is consistent with the ETS cap.

However, uncertainty in the surplus estimate may present risks to proper functioning and other matters, and there may be tension between these objectives. For example, an over-estimated surplus may pose a lower risk to accordance, but a higher risk to proper functioning of the market, and economic and distributional impacts if it results in an illiquid market with high price volatility and NZU prices higher than they need to be to achieve targets. High price volatility can also damage the ability of an ETS to efficiently drive emissions reductions, as it makes investments to reduce emissions riskier and more expensive.

To support proper functioning of the market, there should always be a stockpile, and any stockpile will represent a risk to meeting emission budgets, as units could theoretically be surrendered by participants at any time. This means judgements about managing trade-offs in these risks are necessary.

Price controls

This review largely focussed on the unit limit settings, as this was the key area of difference between the Commission and MfE's advice this year. However, price controls are an equally important dimension to ETS settings. Since 2023, price control settings have arguably been a greater influence on auctioned supply than unit limits, given a number of non- or partially-clearing auctions.

The Commission's advice on price control settings is primarily informed by its analysis of the range of emissions prices that would be consistent with meeting emissions reduction targets. It draws on a range of evidence, including research on abatement costs of key mitigation options relevant to meeting emissions budgets, assessment of afforestation rates and costs associated with forestry, and the costs of offshore mitigation that might be needed to meet the NDC or emissions budgets if domestic abatement falls short. It also develops evidence through modelling using the Emissions in New Zealand (ENZ) model. This analysis factors in considerable uncertainties, including modelling scenarios to test policy uncertainty, testing uncertainties affecting baseline emissions, and the role of afforestation.

Unit limits and price controls work in tandem to provide accordance, and must be considered together. Price controls are particularly helpful to support proper functioning – the cost containment reserve can help with managing short-term supply issues, and the auction reserve price helps to manage long-term supply risk.

¹⁰ Note the surplus is not expected to be drawn down to precisely zero, and the surplus will continue to evolve beyond 2030 because of hedging, pre-1990 units, and forest harvest liabilities.

Modelling

The ETS settings process is informed by a wide range of modelling insights and data. These are key inputs alongside other analysis and judgement and are by no means the sole determinant of final advice.

Most, but not all, modelling and data sources are used in similar ways by both the Commission and MfE. Where reasonable confidence in the underlying analysis exists, MfE will often use the Commission's modelling or data as the best available source rather than duplicating analysis (eg, ENZ modelling to support price control settings, forestry modelling to support surplus stockpile estimate). In other cases, MfE will often start from the Commission's analysis and update it with new data as it becomes available or with different assumptions (eg, the industrial allocation forecasts, the surplus stockpile estimate).

The main difference in modelling approaches is that MfE has recently begun using the ETS Market Model¹¹ to model projected market dynamics. These are used as a cross-check on the implications of different policy settings and to inform the accordance assessment, and as an input into household impacts analysis. The Commission is considering the potential to use these types of models as a source of additional insights.

This project has confirmed that the current suite of models is generally fit for purpose and technically robust. As with all models, there is room for technical improvements and enhancements in functionality, and key judgements and assumptions need to be continuously tested and updated. This is discussed further in the following section.

¹¹ The ETS Market Model has been the main tool for this purpose to date, although new functionality in the ENZ model can also support these types of insights.

4. Key opportunities for improvement within the advisory frameworks

This section discusses the opportunities for improvement identified within those frameworks, chiefly to support more informed decision-making by ministers and greater clarity for the market.

4.1. Enhance communication of key judgements and assumptions, helping decision-makers understand their options and the trade-offs

Key insights

- A lot of analytical weight is placed on some key assumptions about supply and demand.
- The nuances of analysis within the seven-step method can be lost when communicating the final recommendations, so the number is the focus as opposed to the judgement calls that drove those recommendations.
- It is helpful for ministers and stakeholders to be aware of the ‘decision space’ around settings advice – where key judgements may result in materially different policy outcomes, and what optionality there is around them.

The Commission provides its advice under conditions of complexity and uncertainty. Its advice therefore involves a range of judgements and technical assumptions, which are included in its full reports and technical annexes. Judgements may be made in response to available information (eg, emissions projections), or gaps in policy.

However, this is not always obvious in the way advice is presented or interpreted. Settings decisions are a single set of numbers under the Act,¹² and the advice is presented as a single set of numbers because of this statutory requirement.¹³ The headline recommendation tends to dominate public attention and, in some cases, can obscure the complexity and breadth of judgements involved.¹⁴ It may not be clear to Ministers what the range of options are that would still meet accordance and other statutory requirements, and what trade-offs may be made within the analysis.

¹² See Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020, Schedule 3.

¹³ S 30GB requirements for the Minister to set unit limits as individual numbers; section 5ZOA(3) requirement for the Commission’s advice to be in line with requirements on the Minister.

¹⁴ This project considered the benefits of alternative presentational approaches but determined that transparently reporting key assumptions and judgments made when developing advice and decisions is a better way to mitigate risks that arise in recommending individual numbers in the settings advice.

A key opportunity for improvement is to communicate effectively the judgements being made, and to support decision-makers in understanding the decision space by highlighting areas where (reasonable) alternative judgements could lead to materially different outcomes. This applies particularly to the surplus estimate and the cap.

Advice should help decision-makers understand why differences in analysis exist, what trade-offs are involved, and how their choices align with policy objectives. This includes being explicit about risks to accordance, proper functioning of the market, and other statutory considerations. Additional approaches like exploring alternative policy scenarios when reliant on major assumptions can be helpful for exploring complex challenges and produce greater insights.

MfE can be clear where it has taken alternative judgements to the Commission which result in diverging settings advice and the reasons why, including through consultation materials and the report of differences.

Clarity on the Government's rationale for key policy decisions (eg, to reduce costs of meeting emissions targets) enables the Commission to take a consistent approach (where appropriate) in future years, and to consider how the NZ ETS settings can work coherently with the other policies that the Government has or plans to put in place. This also applies to any changes it may make in response to decisions taken as part of the adaptive management framework (see section 4.3).

The expected outcome is that greater clarity about judgements being made, and the rationale behind them can improve confidence in the advice and support more informed decisions.

4.2. Improve clarity in how market conditions have been considered and address potential sources of confusion

Key insights

- ETS settings decisions are made on a forward-looking basis, considering future supply and demand, including supply from the full range of sources – not just auction supply.
- Current market conditions and previous advice shape stakeholder expectations, which may not always align with the forward-looking nature of ETS settings.
- The Commission and MfE carefully interrogate whether market activity might indicate any fundamental shifts in supply and demand.
- Anticipating how findings or analysis might compare to stakeholder expectations, where possible, and proactively addressing potential sources of confusion can strengthen advice.

ETS settings decisions are largely concerned with the regulatory settings three- to five-years from the point at which they are made. This forward-looking approach may not align with some market participants' interpretation of what they see in the market today, or what they have taken from previous years' advice (based on earlier data and information).

Advice that may surprise market participants has potential to undermine market confidence, if not well signalled and explained. Market sentiment, based partly on what participants see happening right now, can also be influential in shaping perceptions of the credibility of the advice.

For example, in 2024 the Government and Commission identified a significant risk of oversupply, and adjusted settings accordingly. Partially clearing auctions in 2024 enhanced a perception of significant available supply. The Commission's advice in 2025 that 13.6 million additional units could be released in the latter part of the 2026–2030 settings period therefore felt counterintuitive to some stakeholders.

In fact, the Commission's 2025 advice was consistent with an expectation of rapidly drawing down a significant volume of oversupply (50 million units) from the market. In its assessment that more units could be auctioned, the Commission cited the two most significant factors as:

- the surplus had reduced more quickly than previously forecast
- a decreased industrial allocation forecast.

The Commission also advised that the additional volume to be auctioned was conditional on the existing price control settings. The increasing auction reserve price would ensure that the additional units only entered the market if they were needed. The role price controls play in managing risks of over-supply in the Commission's advice was omitted in much of the public discussion about the Commission's recommendations, which may have contributed to a sense that the advice was surprising.

While stakeholder expectations can't be comprehensively anticipated, explicitly acknowledging and explaining decisions or analysis which might cause confusion, where this is foreseeable, can help improve confidence in advice.

Clarity about how market activity has been interpreted is helpful

Current market activity – like the secondary market price and partially-clearing auctions – provides tangible signals on current supply and demand but is limited in what it can tell us about supply and demand three to five years from now. It is important for the Commission and MfE to consider whether current activity is reflecting short-term factors (eg, selling to support short-term cashflow) or longer-term trends (eg, shifts in underlying supply or demand in the market).

It is helpful for the Commission and MfE to clearly communicate how these signals have been considered – specifically whether and how market activity impacted judgements about the stockpile size, liquidity, unit allocations and surrenders, particularly those related to forestry.

Auction volumes are set based on a forward-view of supply and demand

Future auction volumes are determined by taking a forward, five-year view of how to allocate the emissions available within the cap, and what forward-looking auction volume is consistent with other required considerations (eg proper functioning of the scheme). This considers **all** available sources of supply in the market (stockpile units and industrial allocation units, as well as auction units).

An issue which emerged in 2025 is a misunderstanding of the impact that ‘unsold’ auction units has on future auction supply. Some market commentators argued the 7 million units that did not sell at auctions in 2024 should be ‘withheld’ from auctions, and that not doing so would represent a reintroduction of units, undermining the regulated ‘cancellation’ of unsold units at the end of the calendar year. This conflates the backwards-looking requirement for unsold units to be cancelled in the registry with the forward-looking process to determine auction volumes within the cap.

To clarify this issue, unsold units are not reintroduced.¹⁵ However, auction activity in the previous calendar year can affect the forward-looking settings process, by determining available volume. When setting unit limits, all upcoming auctions are assumed to clear. If they don’t, less supply enters the market than expected, which reduces future estimates of the surplus. All else equal, **a smaller estimated surplus means more units can be made available for future auctions while remaining aligned with the NZ ETS cap, if the cap is held steady.** This is not a redistribution of unsold units. The Commission’s advice this year reflects this dynamic.

Other factors, such as the level of compliance demand or the number of forestry units allocated differing from forecast, can also lead to changes in the estimated size of the surplus, with flow-on impacts to the outlook for future supply.

The expected outcome of these improvements is that stakeholders better understand the advice, and the risk of confusion or uncertainty is minimised.

4.3. Managing surplus uncertainty and addressing risk

Key insights

- ETS settings advice involves significant uncertainty, particularly in estimating the surplus, which poses risks to meeting emissions budgets.
- Advice can explicitly highlight uncertainties in the surplus estimate to support decision-makers in their judgements – for example, what a more conservative estimate of the surplus might produce in terms of auction settings.
- Additional analytical tools and an integrated risk assessment across unit supply and price controls could further strengthen the ability to navigate and manage these uncertainties.

¹⁵ Under regulation s13(2) “any New Zealand units that remain unsold after the last auction in a calendar year are not available for sale at any subsequent auction”.

The NZ ETS settings advisory process involves inherent uncertainty within and across the seven steps, driven by complex, interdependent decisions made by a wide range of market participants. Numerical analysis within the advice frequently draws attention from policy makers and other interested parties, which may overplay the certainty or reliability of the numbers themselves; and the current advice process tends to rely heavily on central estimates across multiple variables and uncertainty ranges. This is particularly true when estimating the surplus.

This uncertainty creates risks for achieving emissions budgets. Decision-makers can be better supported to navigate uncertainty, with risks identified and addressed throughout the settings and other existing governance processes.

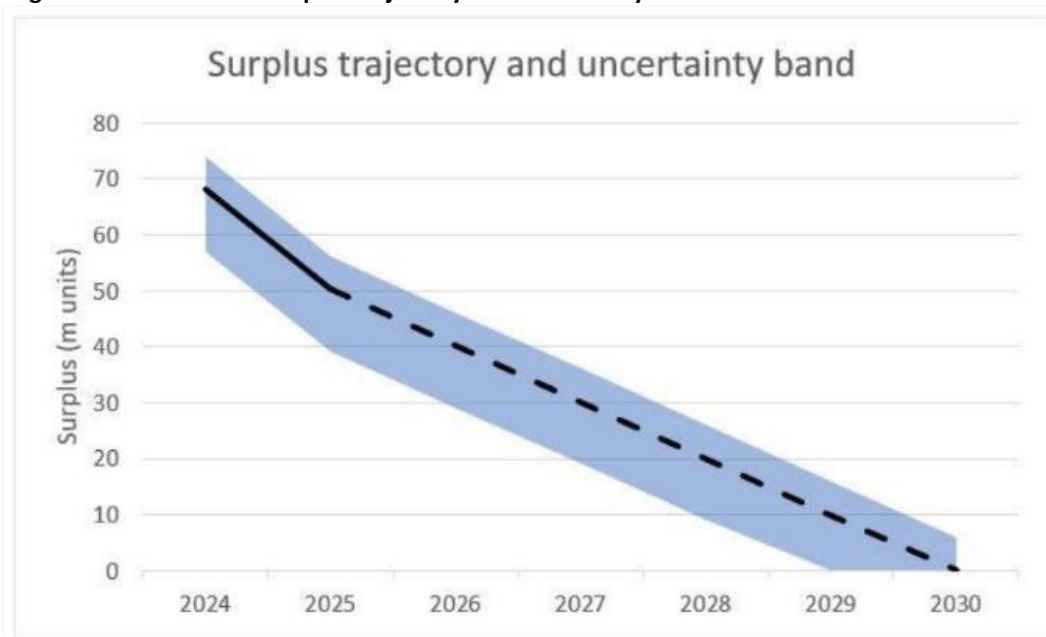
We can illustrate possible options to support decision-making under surplus uncertainty

Framing specific numbers within the wider uncertainty inherent in the settings process is an ongoing communications challenge for the Commission and MfE. This project has identified potential options to illustrate how auction volumes could be managed in the face of uncertain surplus volume, to support decision-makers in navigating the uncertainty. These include:

- **Scenarios** – the reliance on central estimates could be managed more explicitly throughout the process. For example, the Commission could highlight how alternative surplus assumptions (within the uncertainty bounds) would affect auction volumes.
- **Uncertainty bands** – a trajectory for surplus drawdown could be set with an accompanying tolerance band (see figure 4). So long as each year's updated surplus estimate is within the band for that point in time there would be no need to adjust auction volumes (all else being equal). This would also help to illustrate the scope for judgement whilst remaining within the uncertainty band.

This approach could also help to reduce year-to-year changes to auction volumes arising from relatively small deviations of the surplus from its forecast drawdown but could still result in large changes where the surplus estimate changes significantly, as within this year's advice.

Figure 4: Illustration of surplus trajectory and uncertainty band



- **Short-term surplus forecasts** – MfE could develop a short-term surplus forecast based on information received since the Commission produced its estimate and use that to cross-check advice to ensure settings reflect the most current market information (with adjustments made to ensure estimates are compared on a consistent basis).

These ideas are not comprehensive, and any new approach needs careful analysis before being incorporated into analytical frameworks.¹⁶

Integrated consideration of risks across the settings process can also help manage the risks

There is also an opportunity for the Commission to undertake an integrated risk assessment across unit supply and price controls, in addition to step 7 of the method which provides for an assessment of risks for unit limits. This could consider how the unit limit and price control settings work together to satisfy statutory requirements and provides scope to consider the uncertainties across the package of advice. The nature of the risks under consideration may change based on the uncertainties at any given time, which are likely to vary.

On the Government's side, risks can be considered through the settings process or – where significant and strategic, as with major risks to accordance – through the five-yearly emissions budget setting process, and the annual adaptive management process set out in the second emissions reduction plan. The adaptive management cycle provides an annual assessment of whether New Zealand remains on track to meeting the second emissions budget, by tracking delivery and leading indicators, reviewing projections and risks. This is provided to the Minister of Climate Change and Cabinet to decide if corrective action is necessary to achieve the emission budget. Interventions considered might include ETS changes and additional policy measures (inside and outside of ETS-covered sectors).

The expected outcome is that decision-makers can make more informed decisions and better manage risks to accordance.

4.4. Continually improve analytical tools and approaches

There is room for technical improvements and enhancements in functionality in all models, and key judgements and assumptions need to be continuously tested and updated. This is also true for the models and tools used for NZ ETS settings.

As new analytical tools, such as MfE's NZ ETS Market Model and alternative versions of the ENZ model are developed, there are opportunities for continuous improvement and to expand the tool set used to develop the NZ ETS settings advice. This project has identified several specific actions to address modelling and other analytical limitations across unit limits and price controls:

- Both MfE and the Commission are exploring alternative econometric (statistical) models and approaches (eg, scenarios conditional on different afforestation levels). These alternatives may provide greater insight into what is likely to happen over the short- to

¹⁶ There are also several policy responses available to the Government to manage risks to accordance, which are out of scope for this project.

medium-term in terms of emissions and the emissions prices that may be needed to meet emissions budgets. They may also be simpler to run, potentially enhancing the range of future emissions paths and price paths that can be explored.

- We can improve data inputs on forestry, including through greater collaboration between MfE, the Commission and the Ministry for Primary Industries, and explore if there are other data sources that could be combined and used to support the forestry model. This could be in the form of improved inputs or as sense checks on outputs.
- MfE will continue to improve the functionality of the NZ ETS Market Model, particularly for stockpile and forestry response to prices. The Commission will explore whether to include the NZ ETS Market Model (or a similar model of market dynamics) within its suite of modelling tools.
- Other improvements identified for further exploration and collaboration include using additional data sources to better estimate hedging and holding assumptions – for example, MfE's ETS NZU holder survey, the targeted engagement CCC has undertaken each year to support its ETS settings advice, and publicly available financial statements of some emitters.

Where any analytical or methodological changes result in a material change to the recommendations year-to-year, it is helpful to draw these impacts out clearly.

The expected outcome of improved modelling and data is better and more nuanced insights to support ETS unit and price control settings advice.

Glossary of key terms

Term	Definition
Cap	The targeted level of emissions for sectors covered by the NZ ETS. Setting the cap is intended to provide a clear signal to the market on the direction of the NZ ETS, supporting investment decisions. The emissions cap is set for an emissions budget period, with indicative annual numbers within that.
Industrial allocation	NZUs allocated to industry for activities that are both emission-intensive and trade-exposed.
NZU	New Zealand Units - emission units in the NZ ETS. One NZU corresponds to one metric tonne of carbon dioxide-equivalent emissions.
Seven-step method	The seven-step method is a flexible organising framework for calculating unit limits. The steps are set out in the Commission's Advice on NZ ETS unit limits and price control settings for 2025-2029 Technical Annex 1 .
Stockpile	Total NZUs currently held in private accounts.
Surplus	The number of NZUs not being held against an existing or expected future surrender liability, and which are likely to be available for use by participants.
Volume	Generally, this report refers to auction volumes as the number of NZUs which are auctioned.