Reforming the New Zealand Emissions Trading Scheme: Rules for auctioning

Technical consultation document

Ministry for the Environment
Manatū Mō Te Taiao

New Zealand Government

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Ministry for the Environment
Manatū Mō Te Taiao

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Message from the Minister

Right now, our government is taking two bills through Parliament: the Climate Change Response (Zero Carbon) Amendment Bill and the Climate Change Response (Emissions Trading Reform) Amendment Bill. They will put in place the building blocks to support our transition to a low-emissions, climate-resilient Aotearoa New Zealand. Together, the new measures will give New Zealanders certainty about our climate change goals – no matter which government is in power – by setting clear emissions reduction targets and ensuring we have the tools to get there.

Our key tool for reducing emissions and meeting our targets is the New Zealand Emissions Trading Scheme (NZ ETS). We need effective emissions pricing to encourage businesses to reduce emissions, innovate and invest in solutions. The Government is reforming the NZ ETS to help achieve this. Legislation currently before Parliament will enable us to put a cap on emissions from sectors covered by the NZ ETS and manage that cap over time. The reforms will support a credible and robust scheme in the 2020s and beyond, and provide certainty to the market. Enabling the Government to auction New Zealand Units (NZUs) into the NZ ETS market is a key aspect of this legislative change, as it will align the supply of these units with our emissions reduction targets.

The changes proposed in this consultation document will enable us to set up a well-functioning auction system for NZUs that will enable the Aotearoa New Zealand to more efficiently and effectively meet our climate change targets.

Your feedback on these proposals will shape the regulatory changes required to set the rules for auctioning in the NZ ETS. We intend to come back to you for further consultation in 2020 on regulatory proposals for other matters, including compliance and operational aspects of the Climate Change Response Act.

It's important to start consultation on these issues now, to enable regulations to be in place for auctioning to start at the end of 2020 or early in 2021.

So I now invite you to let us know whether these are the right rules for auctioning in the NZ ETS. Will the proposals allow the scheme to do what it's designed to do – reduce emissions and get Aotearoa New Zealand on the path to meet our 2050 target?

Hon James Shaw
Minister for Climate Change

About this consultation

The proposals in this document seek to set the rules for auctioning in the NZ ETS

Auctioning of NZUs is being implemented in the NZ ETS as part of a package of amendments to improve the scheme and enable it to align with New Zealand's emissions targets.

This document sets out regulatory proposals for the rules that will govern auctions. The rules will cover:

- scheduling and price controls
- each stage of the process, from pre-bidding to post-bidding
- some aspects of the role of an independent auction monitor.

Setting the rules in regulations gives the market certainty about how auctions will be run, and ensures that processes will be clear and transparent. The proposals support an efficient auctioning system that balances the need to minimise cost and complexity with preserving the integrity of the NZ ETS.

The proposals are based on an impact analysis of the options for each rule or feature of the auction system against defined objectives and criteria. Each proposal includes a summary of the analysis. The detailed analyses, including the criteria for assessing the options, are in Appendix 1: Supporting analysis.

Your feedback is a key part of developing an appropriate auctioning system for the NZ ETS. We are keen to hear your views on how these decisions may affect you and the market.

What this consultation document covers

Section 1 has background information on auctioning in the NZ ETS, and the context for New Zealand's response to climate change. It also covers existing decisions on auctioning, ongoing climate change policy work, and other consultations on improving the NZ ETS.

Section 2 contains proposals for rules that apply across the auctioning process, including:

- distributing volume across a year's auctions
- scheduling auctions
- dealing with unsold NZUs (units of CO_2 emissions, see Appendix 3)
- postponing or cancelling auctions.

Section 3 set outs proposals for price controls, including:

- setting a price floor (if the Government decides to enact one)
- operating the cost containment reserve (the price ceiling).

Section 4 has proposals and questions for the three stages of auctioning: pre-bidding, bidding and post-bidding.

Section 5 contains proposals on the appointment and role of an auction monitor.

The Summary of proposals covers sections 2 to 5.

Sections 6 and 7 tell you how to have your say, with questions to guide your feedback.

Appendices – Appendix 1 includes the analysis for these proposals, and the criteria for evaluating the options. Appendix 2 lists the sections in the Climate Change Response (Emissions Trading Reform) Amendment Bill relevant to auctioning. Appendix 3 is a glossary and list of abbreviations.

What is not covered

This document is not consulting on the volume of NZUs that will be available for auctioning, or the volumes and trigger price/s for the new cost containment reserve and price floor (if enabled). The Government will seek feedback on proposals for these NZ ETS unit supply settings in a subsequent consultation.

We need to determine how many NZUs will be available for auctioning, and how to communicate these volumes to the market. These decisions form part of a coordinated decision-making framework for the supply of NZUs into the NZ ETS. This framework will guide decisions on unit supply, which the Government will announce annually on a five-year rolling basis. The decisions are intended to align with New Zealand's emissions budgets.

Also not included are proposals for new forestry regulations under the NZ ETS. See below for details.

Other NZ ETS consultations

To submit on regulatory proposals to improve the NZ ETS for forestry, see *A Better Emissions Trading Scheme for Forestry: Proposed Changes to the Climate Change (Forestry Sector) Regulations 2008 to support amendments to the Climate Change Response Act 2002*. This consultation runs from 5 November 2019 to 20 December 2019.

Next steps

Timeframe for consultation

This consultation will run for just over five weeks from Tuesday 12 November to Thursday 19 December 2019. To find out how to participate and make a submission, see section 6.

The Government is expected to decide on these regulations early in 2020.

Summary of proposals

Distribution of volume and auction scheduling

- The number of NZUs for auctioning (auction volume) will be set by the Government according to the coordinated decision-making process and will be consulted on at a later date. This consultation seeks feedback on how to distribute the volume available for auctions across a calendar year.
- The Government proposes to distribute the volume evenly across auctions. This is to create certainty and to avoid disrupting the secondary market.
- We are seeking feedback on how to treat NZUs that are unsold at auction, with a preference to roll them into the next auction, with restrictions. Auctions postponed due to force majeure or IT failure will be rescheduled as soon as practicable.
- The Government proposes to hold auctions from 9am–12noon on auction days. Dates will be published well in advance through the auction calendar.

Price controls

- Price controls allow the Government to manage unacceptably low or high prices in the NZ ETS. This consultation seeks feedback on how a price floor and a price ceiling will work in the auctioning system.
- The Government may propose to implement a price floor as a minimum price at which NZUs may be sold at auction.
- The Government has decided to set a new price ceiling in the NZ ETS, the cost containment reserve. This will replace the current price ceiling, the $25 fixed price option. The cost containment reserve would allow the Government to release a pre-determined number of additional NZUs at auction, if a specified trigger price/s is reached.
- The Government proposes to release NZUs from the cost containment reserve through a separate auction (the reserve auction) soon after the scheduled auction in which the price trigger is hit. This would enable wide participation in the reserve auction.
- The Government proposes that only one price trigger will be set for the cost containment reserve rather than multiple price triggers.

Rules for pre-bidding

- To bid in auctions, participants will need to pre-register once, and then subsequently indicate their intention to bid in each individual auction. The Government is proposing that participants must submit, when appropriate:
  - a pre-registration form, to bid in auctions in general
  - an intention to bid form, to take part in a specific auction
  - collateral, for individual auctions.
- We are seeking feedback on the registration process.
- Potential bidders will undergo due diligence checks. This follows good practice for any financial system and helps ensure the integrity of the NZ ETS.
- The Government proposes that bidders provide collateral to participate in auctions. This ensures a commitment to the auction, and manages the risk of defaults.
- If collateral is required, we invite feedback on its value and type, and also on rules for using and releasing collateral.

Rules for bidding

- The Government proposes a minimum bid of 500 NZUs, with lot increments of 500 NZUs. This is smaller than currently accepted on the secondary market, and will enable wider participation in auctions.
- The preferred minimum price increment (or price step) for bidding is $0.05. This low level will reduce the number of tied bids.
- We seek feedback on whether to set a maximum bid limit per participant, so a single entity does not dominate an auction. Setting a maximum bid limit would add complexity to registration requirements and evidence is lacking that it is necessary, although it is noted as a future risk. The Government is also seeking feedback on the details of how such a limit could operate if required.
- In addition to a price floor, there could be a technical price reserve. This would apply to each auction, and be indexed to the market value of NZUs. This would help ensure NZUs are not sold at unacceptably low prices compared to the secondary market. We seek feedback on this proposal.

Rules for post-bidding

- For the settlement process, the Government proposes payment-before-delivery. Successful bidders pay monies owed before the transfer of NZUs to their account in the New Zealand Emissions Trading Register (the Registry) will be authorised.
- The Government has decided to enable the appointment of an independent auction monitor to oversee auctions in the NZ ETS.
- We seek feedback on:
  - the timing and format for the auction operator to release post-auction information to bidders and to the wider market
  - the proposed settlement period
  - information to be included in the auction monitor's reports
  - how often the auction monitor should assess the auction system.

1 Introduction and context

The world is taking action on climate change: the Paris Agreement

The Government is committed to taking climate change action. In 2015, New Zealand joined 197 parties to the United Nations Framework Convention on Climate Change, signing the Paris Agreement and agreeing to strengthen the global response to the threat of climate change. The Paris Agreement requires each party to determine their contribution to the global effort to reduce emissions and submit a Nationally Determined Contribution to communicate this commitment. Parties must apply domestic mitigation measures to meet their contribution.

Although New Zealand's share of global emissions is very small (0.17 per cent), small countries like us make up around 30 per cent of total emissions. We have the opportunity to show leadership by holding ourselves and other countries to account to meet international commitments.

New Zealand's response: the Zero Carbon Bill and the NZ ETS

The Climate Change Response (Zero Carbon) Amendment Bill (also known as the Zero Carbon Bill) will form the foundation for New Zealand to develop and implement policies to achieve our Nationally Determined Contribution and move to a low-emissions, climate-resilient economy.

- The Zero Carbon Bill sets emissions targets and then establishes emission budgets that act as stepping stones towards these long-term targets. The Government is expected to set the first budgets by the end of 2021, to take effect in 2022. Before this, it will set a 'provisional emissions budget' as an interim measure until the Zero Carbon Bill comes into effect.
- The NZ ETS is New Zealand's main tool to help us meet our targets. The Government is currently reforming legislation to set an overall limit, or a cap, on the number of units supplied into the NZ ETS.[1] This will gradually reduce in line with our climate change targets.

As part of this package of reforms the Government decided to cap emissions covered by the NZ ETS, by establishing a unit supply decision-making framework that includes:

- auctioning
- limiting international units
- price controls.

Decisions on the NZ ETS cap, and how to reflect this in NZ ETS settings, will be the subject of a subsequent consultation.

Further improvements to the NZ ETS

The Government is continuing with a wider work programme to improve the NZ ETS. This will include a broad market governance package to address identified risks to the NZ ETS market.

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[1] Excluding units from removal activities, such as forestry.

Ongoing improvements after the current legislative amendments may result in further consultation on regulatory proposals during 2020.

Developing a new auctioning system for the NZ ETS

Decisions on the proposals here will also feed into the Government's procurement of the platform for managing the auctions on its behalf.

Auctioning in the NZ ETS

A review of the NZ ETS initiated in 2015 found that changes were needed for the scheme to be fit-for-purpose for 2020 and beyond. A package of reforms was required to effectively reduce New Zealand's emissions. The outcomes of the review led the Government to agree in 2017 to a set of in-principle decisions to strengthen the framework of the scheme.

One of those in-principle decisions was to introduce the sale of NZUs by auction in the NZ ETS. The purpose of auctioning units is to align the NZ ETS with our emissions reduction targets,[2] including targets under the Paris Agreement and the Zero Carbon Bill, in a way that supports an efficient scheme.

Auctions are a common feature of emissions trading schemes internationally, and many of the proposals here draw on the design of other well-functioning systems.[3]

The Climate Change Response Act 2002 already provides for the Minister for Climate Change to sell NZUs by auction, following the development of regulations. Auctioning regulations are needed to provide details of the high-level auction design, and for the rules and processes for pre-bidding, bidding and post-bidding activities. Regulations will also cover rules for distributing volume, and price controls to manage unacceptably high or low prices in the NZ ETS.

Auctions will be implemented for spot trading only (immediate settlement), rather than forward or futures trading (with later payment and delivery).

The volume of units available to auction each year will be announced annually by the Government on a five-year rolling basis. The volume to be auctioned will be determined based on the volume of emissions remaining in the emissions budget after taking into account emissions that sit outside the ETS and emissions covered by units that are freely allocated (figure 1). The Government will consult on a provisional emissions budget to determine volumes for the next few years.

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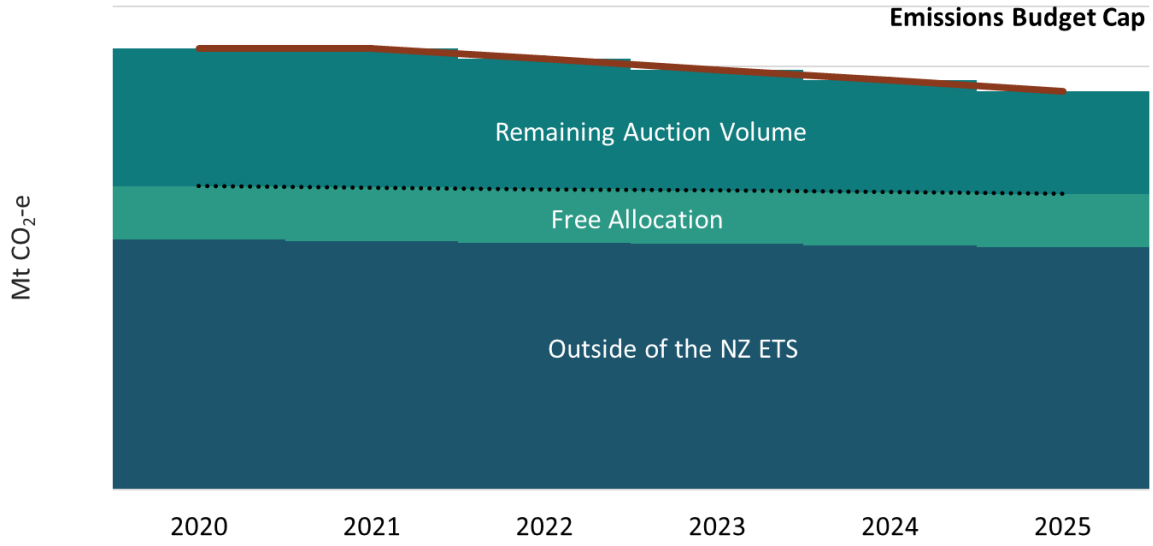
[2] We are not considering directly auctioning other unit types (such as the direct auctioning of international units).

[3] The ETS schemes noted here include the European Union ETS, the Western Climate Initiative (WCI), the South Korean ETS, and the US Regional Greenhouse Gas Initiative (RGGI).

Figure 1: **Illustrative NZ ETS Auction volume taking into account emissions outside the NZ ETS and free allocation**



Existing decisions on auction design

Auction format, frequency and participation

The Government has already made some decisions about auction format, frequency and participation. Consultation on these decisions took place in August/September 2018. As a result, auctions will:

1. be held using a single round, sealed-bid, uniform pricing format
2. take place monthly or quarterly
3. be open for participation to all Registry account holders, subject to further qualifications provided in regulations.

Single round, sealed-bid format

In these auctions, bidders submit their bid(s) simultaneously, and can submit multiple bids. Every 'bid' states the price and quantity of NZUs being sought in the auction. Bids are then ranked from highest to lowest price.

The **market clearing price** is determined by working out the point at which the available supply of NZUs intersects the total volume bid for, when ranked by price. Each successful bidder receives the quantity bid at prices at or above the clearing price. Uniform pricing means that all bidders pay the same clearing price, rather than the actual price they bid. In this case, the price will be the lowest successful bid price. The last successful bid matching the clearing price may only receive part of the volume bid for, depending on the remaining volume.

This format strikes a good balance between minimising complexity, protecting against market integrity risks, and supporting market-wide efficiency. It is also the format used by the majority of emission trading schemes in other jurisdictions, so it enables learning from the experience of others.

The choice of format took into account that a secondary spot market for NZUs already exists in New Zealand.[4] With the secondary market, buyers are not solely dependent on auctions to purchase NZUs. The secondary market also provides an important price signal for NZUs that will influence bidding behaviour in auctions.

Participation

Allowing bidding by all Registry account holders, who meet predetermined criteria, should encourage wide participation and maximise the opportunity for competitive bidding, while allowing the Government to manage risks from market abusive behaviour.

Appointment of an auction monitor and clarity on regulations

The Government has decided to appoint an independent auction monitor and regulate the functions of this role. This independent oversight would mitigate the risk to the integrity of auctions.

The Government also took other decisions to ensure clarity and confidence for market participants about the auctioning regulations. This resulted in a list of matters being set in legislation that the Minister *must* and *may* regulate.

Auctioning decisions in the Bill going through Parliament

The legislative amendments to enact these decisions are going through Parliament as part of the Climate Change Response (Emissions Trading Reform) Amendment Bill (the Bill). A list of amendments relevant to auctioning regulations can be found in appendix 2. The Bill is expected to be enacted in 2020.

The Government is running this consultation alongside the Parliamentary process for the Bill to allow stakeholders to review and provide feedback on the legislative and regulatory proposals at similar times. However, because the Bill is not yet law, there is a risk that changes made to it may impact on the proposals in this document. We will ensure feedback provided to Select Committee on the Bill and feedback provided as a result of this consultation are all taken into account when forming final policy decisions early next year.

Which auctioning system is best for the NZ ETS?

Auctioning in the NZ ETS is closely linked to unit supply settings. Three key unit supply objectives were identified in the NZ ETS review[5] (which resulted in a package of amendments to improve the operation of the scheme, including the decision to introduce auctioning). These objectives are therefore relevant to, and have informed, auctioning objectives. These are to:

- improve regulatory certainty and predictability
- align the NZ ETS with New Zealand's 2030 targets and future targets
- be consistent with the broader NZ ETS design policy intent.

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4 The NZ ETS spot market is where most NZUs are currently traded.

5 For more information on these objectives see www.mfe.govt.nz/more/briefings-cabinet-papers-and-related-material-search/regulatory-impact-statements/regulatory.

The overall objective for introducing auctioning into the NZ ETS is to provide the Government with a tool for aligning units supplied into the scheme with New Zealand's climate change targets.

Given these objectives, there are many different ways to structure and run auctions. To design a system that best serves bidders and the broader intent of the NZ ETS, choices must be made.

At one end of the scale, the system could serve a fully open market, supporting wide access, with few regulations. This would allow the market to operate freely. However, it risks allowing conduct that could compromise NZ ETS market integrity.

At the other end, a very robust system could prescribe the auctioning process to protect all bidders and the wider market. This may be too onerous to attract interest from bidders.

We are seeking a middle ground. In some instances, the Government won't restrict every type of undesirable market behaviour, as this would become too complex for participation, regulation and enforcement. Examples of restrictions could include limiting the number of NZUs a single entity can purchase in auctions to protect against hoarding.

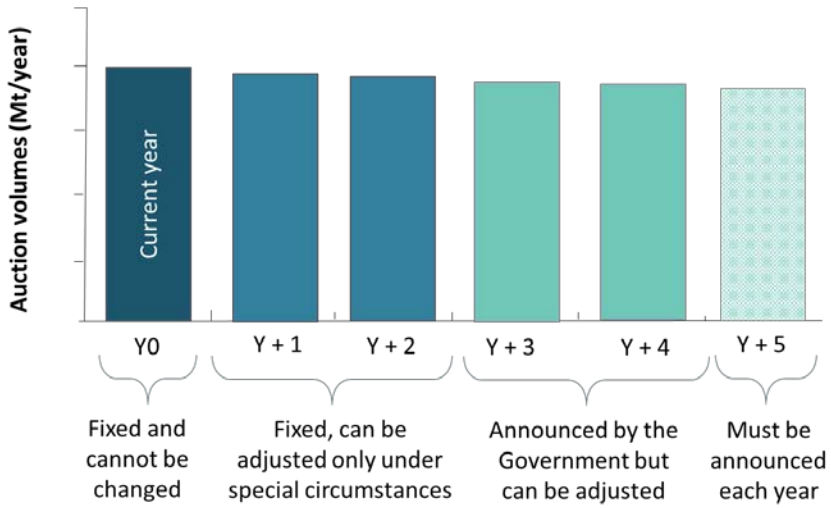
However, the Government does intend to monitor market behaviour in auctions. It will regulate conduct if there is evidence the behaviour reduces the effectiveness and credibility of the scheme. Governance will mature in response to market behaviour and ongoing risk assessment.

How will auction volumes be decided?

The Government will decide on and announce unit supply annually, on a five-year rolling basis, aligning with emissions budgets. The five-year timeframe for communicating auction volumes means the volumes for the current year are fixed and cannot be changed. The following two years are also fixed but may be adjusted under special circumstances, while subsequent years are announced but may be adjusted (see figure 2).

Total NZU volumes for the upcoming auctioning year will be announced in advance. This allows market participants to spread their demand over the year. Knowing the total annual supply also helps participants decide how to comply with their NZ ETS obligations through abatement or NZU purchase.

Figure 2: Communication of NZU auction volumes: the five-year rolling process



2 Rules for the auction process

This section outlines general proposals for how auctions will be run. It does not provide information on the specific auctioning stages (pre-bidding, bidding and post-bidding).

It does not include decisions on how many NZUs will be available (auction volume) as the Government plans to consult on this separately at a later date.

Distributing volume across a year

This section outlines the options for distributing auction volume across a year's scheduled auctions.

As set out in the Introduction and context section, under the five-year rolling process, the volume for the first two years from the present are fixed and unlikely to change. Specific volume for auctions to be held during the next calendar year will be announced during the current year through the auction calendar.

There are two options for distributing volume across a year: evenly or unevenly, using a 'weighted' distribution.

Option 1: Even distribution

This involves taking the total volume of NZUs available for auctioning in a calendar year and distributing them evenly over all scheduled auctions.

Impact

- It is simple to spread the volumes evenly during the year and ensures the Government does not intervene in market trading unnecessarily.
- It is easier for participants to plan their bidding strategies well in advance of a scheduled auction.
- Although trading volumes are heavier in the first half of a calendar year, notably before the surrender deadline, it is expected that many entities with surrender obligations[6] will be purchasing volume throughout the year.

Option 2: 'Weighted' distribution

Volumes are distributed unevenly over the year to allow auctioning of more NZUs at certain times.

Impact

This requires a rationale for what the 'weighted' volumes should be. For example, one approach may be to have an increased volume in the auction preceding the surrender deadline (31 May), or to reduce volume during known low-trading periods, such as at Christmas.

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[6] Some participants in the NZ ETS are required to acquire and surrender NZUs to the Government annually to meet the obligations they owe for emitting carbon dioxide.

This option could take into account the trading variations over a year, and increase the volume at times when participants may be seeking NZUs to meet their surrender obligations.

Weighting volumes for NZ ETS auctions could alter trading practices and disrupt the secondary market.

Preferred option

The Government prefers option 1, as it is simpler for the auction operator and market participants, and avoids disrupting the secondary market.

Questions

1 Do you agree that auction volumes should be evenly distributed over the calendar year?
   - Yes
   - No
   - Unsure

2 If no, do you have a suggestion for how volumes should be weighted?

Unsold NZUs from auctions

If the full allowance of NZUs from an auction is not sold, the unsold units will need to be included in subsequent auctions if they are held within the same calendar year. Unsold units cannot be included in the next two calendar year's volume because auction volumes for these subsequent years are fixed under the Government's coordinated decision-making process. However, they may be considered for inclusion in the year after that (Y+3, or the third year after the current year).

Auction notices will confirm any amended volume for individual auctions. There are several ways to incorporate unsold volume into subsequent auctions.

Option 1: Unsold NZUs added to next auction

Unsold NZUs from an auction are added to the volume for sale in the next scheduled auction.

Impact

This option costs less, as costs increase for the Government and bidders when more complex decisions on redistributing NZUs are needed.

However, if a number of sequential auctions result in unsold NZUs, a large volume of unsold NZUs could end up for sale in a single auction, potentially dampening prices.

Option 2: Unsold NZUs added to next auction, with restrictions

Unsold NZUs are still automatically rolled into the next auction, but only up to a specified limit. Past this limit, unsold NZUs would be added to the subsequent auction, but only within the current calendar year. This could avoid significant variance in volume between auctions; however, any restrictions would need to take into account auction frequency and the inability to roll unsold units into the next calendar year.

An example of this practice can be found in the Emissions Trading Scheme for the European Union (EU ETS), which has recently revised its auction regulations to avoid accumulation of unsold volumes (when several auctions are cancelled). It does this by allowing for unsold volumes to be distributed evenly over the next four auctions that do not already include unsold volumes from previously cancelled auctions. However, the EU ETS runs several auctions per week. NZ ETS auctions, by comparison, will only be held either monthly or quarterly and unsold units need to be included in auctions held within the same calendar year.

Option 3: Other

Other options for unsold NZUs could be considered if consultation feedback supports proposals not included here. For example, cancelling unsold NZUs.

Preferred option

The Government prefers option 2, unsold units are added to the next auction, with restrictions. This option may help to avoid large number of unsold units being added to a single auction.

Question
3 Do you think that unsold units should be: – All added to the next auction – Added to subsequent auctions within a limit (preferred) – Other, please specify 4 If unsold units are only added to subsequent auctions within a limit, what should it be?

Postponed auctions

There may be times when an auction cannot proceed on its scheduled date. Such situations include:

- **Force majeure events** such as a major earthquake or extreme weather event. These are unforeseen circumstances that could prevent an auction from starting or finishing.
- **Failure of IT systems** could prevent the auction operator starting or completing the auction.

In these circumstances, the operator will advise the market of the postponement, and schedule a new date as soon as practical, depending on the severity of the event. The auction will simply be rescheduled and participants who have submitted an intent to bid form will not need to resubmit. No new participants will be able to bid.

Scheduling auctions

Auction calendar

A calendar will be published before the start of each year to give certainty to the market. The operator will have some flexibility to reschedule postponed auctions if required, as described in the section above.

The calendar will specify auction dates, the total annual volume of NZUs to be auctioned, how this volume will be distributed across the year, the price floor (if enabled), the cost containment reserve price trigger(s), and cost containment reserve volumes.

Each auction involves administrative costs and requires preparation, for the participants and the auction operator. Predictability and certainty about the timing and sequence of auctions, estimated volumes and price controls are vital for the market. To maximise predictability, the calendar will be fixed as far in advance as possible.

Dates

Auctions will not be held on weekends, public holidays or during the Easter, Christmas and New Year's Eve holidays. They will not be held on days when important information is released to the market, including relevant economic data (eg, output figures that can affect NZU demand) or NZ ETS reports that can help determine the market's demand shortfall. Avoiding these days will allow market participants time to include the information in their bidding strategies. Such scheduling restrictions improve market efficiency, but may add administrative costs for the auction operator to coordinate with the institutions that release the information.

To limit the risk of auctions disrupting the secondary market during key periods, such as close to the 31 May surrender date, it may be advisable for them not to be held in the period immediately prior.

We are seeking feedback on other key dates to avoid for scheduling auctions.

Bidding windows

The time between an auction opening and closing is referred to as the bidding window. It is common practice in emissions trading scheme auctions for the bidding window to be open for a few hours during a business day.[7] This allows time for bids to be compiled, submitted and confirmed. Participants will be able to prepare their bidding schedules before the bidding window opens.

We are seeking feedback on two options for the duration of the bidding window.

Option 1: Three-hour bidding window, 9am-12 noon

Impact

This option would facilitate efficiency: participants have enough time to place their bids but the window is not protracted, minimising opportunities for collusion.

Also, the secondary market may be able to respond to the results on the same day if the window closes after a three-hour morning slot and the results are published promptly (see page 48).

[7] For example, the RGGI auctions offer a three-hour slot in the morning; the European Energy Exchange (EEX) (which holds weekly auctions for the EU ETS) has a two-hour window in the morning and in the afternoon; the WCI programme has three hours.

Option 2: Longer bidding window

Auctions could stay open for more than three hours.

Impact

This could enable wider participation from overseas bidders.[8] However, there would be higher administrative costs to oversee trading behaviour.

Preferred option

The Government's preferred approach is option 1, have a three-hour bidding window from 9am to 12 noon.

Timing

The timing for the window has implications for bidders and the secondary market. An afternoon slot could be easier for overseas bidders in time zones to the west of New Zealand. However, a morning session could ensure the secondary market has time to absorb and respond to the auction results the same day. This may also allow unsuccessful bidders to meet their purchasing requirements through the secondary market promptly.

Questions

5 Other than public holidays, and days when important economic or emissions data is released, are there any dates when auctions should not be held?

6 The surrender date in the NZ ETS is 31 May. How far in advance of this date should the closest auction be scheduled? Please consider both monthly and quarterly auction scenarios.

7 Do you agree that the bidding window should be three hours, from 9am to 12 noon on the scheduled auction date?

- Yes
- No
- Unsure

[8] For example, some companies with obligations under the NZ ETS are internationally owned and bidding may be managed from their overseas offices.

3 Price controls for auctions

Price controls allow the Government to manage unacceptably low or high prices in the NZ ETS. A price floor sets a minimum emissions price; a ceiling sets a maximum price.

The Government has decided to enable a price floor and ceiling through the auctioning system.

- A price floor sets a minimum price at which units may be sold by auction.
- The current NZ ETS price ceiling is the fixed price option. This will be replaced by a cost containment reserve that operates within auctions.

These controls affect the way NZUs are sold in the event that prices in the NZ ETS exceed the cost containment reserve ceiling, or fall below the auction floor price. In effect they create a corridor of acceptable prices that can be aligned with the extent to which emissions need to reduce to meet New Zealand's emissions reduction targets.

The Government seeks feedback on how to apply these controls. This document does not consider what level to set the price floor or ceiling. Nor does it address the volume of NZUs in the cost containment reserve.

Auction price floor

An auction price floor sets a minimum price at which the Government could auction NZUs. To date, the NZ ETS has not had a price floor. As part of proposed improvements to the scheme in 2018, Cabinet directed officials to look at introducing a price floor after a number of submitters supported the idea during consultation. They suggested a price floor would be a safeguard against low emissions prices that could otherwise reduce confidence to invest in low-emissions projects or forestry.

The Government's preferred option for a price floor, should one be enabled through regulations, is to set a minimum auction price through regulation. Like the cost containment reserve, the level would be set and published annually, so would be well signalled to the market.

Auction price floors are common in emissions trading schemes in other countries. The Western Climate Initiative (WCI) scheme, for instance, uses a reserve price that increases annually by 5 per cent plus inflation. The South Korean ETS also uses a reserve price in its market stability auctions.

The auction operator would not accept bids below the price floor.

Technical reserve price

As well as an auction price floor, we are seeking feedback on setting a technical reserve price as a rule at the bidding stage. Both measures prevent the sale of NZUs below levels deemed unacceptably low by the Government. The difference between the two is that:

- An auction price floor would apply to all NZUs at any scheduled auction and is the minimum price at which the Government would sell them. The value would be published and known to all participants before they bid.
- A technical reserve price would be set before each auction, and would only apply to NZUs sold in that auction. The level would be set in relation to the market price at the time.

For more detail, see section 4 – Bidding rules.

Cost containment reserve (price ceiling)

Price ceilings prevent an emissions price from becoming unacceptably high. They are usually set above the prices normally expected in an emissions trading scheme.

The Government has decided to introduce a new price ceiling in the NZ ETS, a cost containment reserve. This will replace the current price ceiling, the $25 fixed price option.

The cost containment reserve will allow the Government to release additional NZUs for sale at auction if the auction clearing price reaches a specified price trigger. By releasing more NZUs into the market, the cost containment reserve increases the supply of units, therefore lowering prices. The price trigger level will also send a signal to the market, setting expectations for the maximum price of NZUs.

This section seeks feedback on how NZUs from the cost containment reserve will be released to the market if the reserve is triggered. It also seeks feedback on whether the cost containment reserve should have one or more price triggers.

Hitting the cost containment reserve price trigger

When a price trigger is hit, NZUs from the reserve will be offered for sale. Three options are proposed for doing this, based on when the volume is released, and whether the sale of reserve units should be limited to entities with surrender obligations:

- Option 1 – the Government holds a separate reserve auction soon after the scheduled auction that activated the reserve, and is open to all registered auction participants.
- Option 2 – the Government holds a separate reserve auction soon after the scheduled auction that activated the reserve, limiting participation to entities with surrender obligations.
- Option 3 – the Government offers units from the cost containment reserve at the same auction that triggers the reserve.

Option 1: A separate reserve auction open to all registered auction participants

Under this option, the original auction that triggered the reserve sale completes with a clearing price at, or above, the level of the price trigger. When that happens, the Government would schedule another auction specifying the volume available from the cost containment

reserve, and allow any registered participant to bid. This new reserve auction would be held within a few weeks of the scheduled auction, giving all prospective participants time to submit an intention to bid form, and to develop bidding strategies.

The reserve auction would follow the same bidding rules as a scheduled auction (ie, a single-round, sealed bid with uniform price format, see page 12). Bidders would still submit bids at their preferred price, and these would be ranked in descending price order to determine the clearing price. Therefore, the clearing price of the reserve auction may be different from the value of the price trigger that enabled the release of the reserve units, and would depend on current market conditions.

Impact

This option increases the supply of units to the market when prices are high.

A separate reserve auction would be suitable for containing unusual and extremely high emissions prices. By enabling wider participation and not restricting the use of units in the cost containment reserve (ie, allowing these units to be freely traded and banked like other NZUs), this option allows the market to respond to the new supply without intervention from the Government. This would encourage an efficient distribution of reserve units throughout the market, effectively and immediately driving down unacceptably high prices.

Option 2: A separate reserve auction with limited participation

Again, as per option 1, the original auction that triggered the reserve sale completes with a clearing price at, or above, the level of the price trigger. Under this option, the Government would still schedule another auction specifying the volume available from the cost containment reserve a few weeks after the auction that triggered the reserve. However, participation would be limited to entities who need units to meet surrender obligations, as practised in some international ETS markets.

The cost containment reserve could be used to address unit shortages that might result from high emissions prices, while also reducing prices.

As with option 1, the reserve auction would follow the same bidding rules as all other scheduled auctions, including calculation of the clearing price. It would also be subject to the same price control settings, such as the volume available from the cost containment reserve.

Impact

This option also increases the supply of units to the market when prices are high. In addition, it aims to support compliance by auctioning reserve units only to participants with surrender obligations.

Supply from the cost containment reserve could be directed to participants with compliance obligations through a reserve auction that:

- restricts participation to bidders with mandatory surrender obligations
- possibly limits the eligibility to bank NZUs from the cost containment reserve, so these units must be surrendered in the year they were issued.

Restricted participation raises the issue of using reserve units. Units from the cost containment reserve could have restrictions on them so they cannot be on-sold, and only

surrendered in the compliance year they were issued. Restricting the use of units like this could limit the liquidity of the market. If the purpose of the cost containment reserve becomes more about compliance, should the use of these units be restricted to meeting surrender obligations?

A potential weakness of this option is that participants without compliance obligations could still participate indirectly in these reserve auctions by requesting participants with compliance obligations to bid on their behalf. This risk could be mitigated by requiring participants to disclose beneficial ownership information in their intention to bid forms for the reserve auction.

A similar challenge exists if reserve units had restrictions placed on their use, as participants could choose to 'swap out' these units for other NZUs in their account, and sell the NZUs to other participants in the market. In principle, the Government could seek to prohibit both of these activities through regulations, but in practice these rules would increase compliance costs for participants and may be difficult outcomes to monitor and enforce.

Option 3: Offer cost containment reserve volume at the same auction that triggers the reserve

The Government could offer units from the cost containment reserve at each scheduled auction. This would immediately release additional supply to the market if the clearing price is above the price trigger.

The Government would simply add the NZUs from the cost containment reserve to the auction volume if the clearing price has reached the trigger. This new combined volume would be sold to bidders until:

- the full volume (original auction volume plus the cost containment reserve volume) is sold at a new clearing price that may be at or above the trigger price (all bids for the full volume were at or above the price trigger), or
- bid volumes at prices above or equal to the price trigger are satisfied, leaving unsold reserve volume in the cost containment reserve (some bid volumes were bid at prices below the trigger).

In both cases:

- the volume of units sold would be greater than the originally scheduled auction volume
- the auction clearing price would be at or above the price trigger.

Impact

This option would:

- increase the volume at an auction, ensuring more bids can be met
- restrict access to reserve volume, by default, to bidders in the auction that triggers release of the reserve
- moderate emissions prices by pegging back the clearing price closer to the cost containment reserve price trigger.

This option is not suited for a cost containment reserve used for compliance, as it would be impractical to limit bidding on the reserve volume during an open auction to only those bidders with compliance obligations.

Preferred option

The Government prefers option 1 – a separate reserve auction open to all registered auction participants.

Single or multiple price triggers

The cost containment reserve could have one or multiple price triggers, with only some of the reserve volume released when each price trigger is hit. In other words, having multiple trigger prices would divide the total volume of units available through the cost containment reserve. When the first trigger price is reached then a specified volume of units would be sold. If prices continued to rise and a second, higher trigger price is hit then further volume would be sold. Alternatively, a second, higher price trigger may be hit first, in which case the volume from both the first and second reserve volumes would be sold.

Option 1: Single price trigger

Under this option, the full cost containment reserve volume would be available for sale if an auction clearing price was above the single price trigger.

Impact

A single price trigger is more suited to the preferred option of holding a separate reserve auction if the price trigger is struck. Offering the full reserve would be more effective at meeting the objective of the cost containment reserve, and would be simpler.

Option 2: Multiple price triggers

Under this option, a portion of the cost containment reserve volume would be released if an auction cleared above the first price trigger. Additional portions would be released if ascending triggers were struck. The full volume would only be released if the highest price trigger was reached.

The maximum feasible number of triggers is three, as any more would significantly complicate the operation of the cost containment reserve. Activation of more than three ascending price triggers might also indicate that there are significant problems with the entire structure of the NZ ETS that would need to be reviewed.

Impact

Multiple trigger prices would be less effective at significantly dampening prices. Multiple prices would be better suited to a cost containment reserve intended to smooth price increases over time. If prices continue to rise then a steady supply of reserve units would be released to the market. Smoothing prices is not the main purpose of the cost containment reserve. The intention is to set the trigger price well above the expected range of prices, with a large volume of units available. Therefore, we expect the cost containment reserve to be activated only rarely. Multiple trigger prices would add unnecessary complication and volume uncertainty.

Preferred option

The Government prefers option 1 – single price trigger.

Questions

8 When a price trigger is reached in the cost containment reserve, how should the volume of units from the reserve be sold?

- In a separate reserve auction open to all registered participants (preferred)
- In a separate reserve auction with participants limited to those with surrender obligations
- In the same auction that triggered the reserve

9 If you support option 2, should the units sold in the reserve auction be limited for use to meet surrender obligations?

- Yes
- No
- Unsure

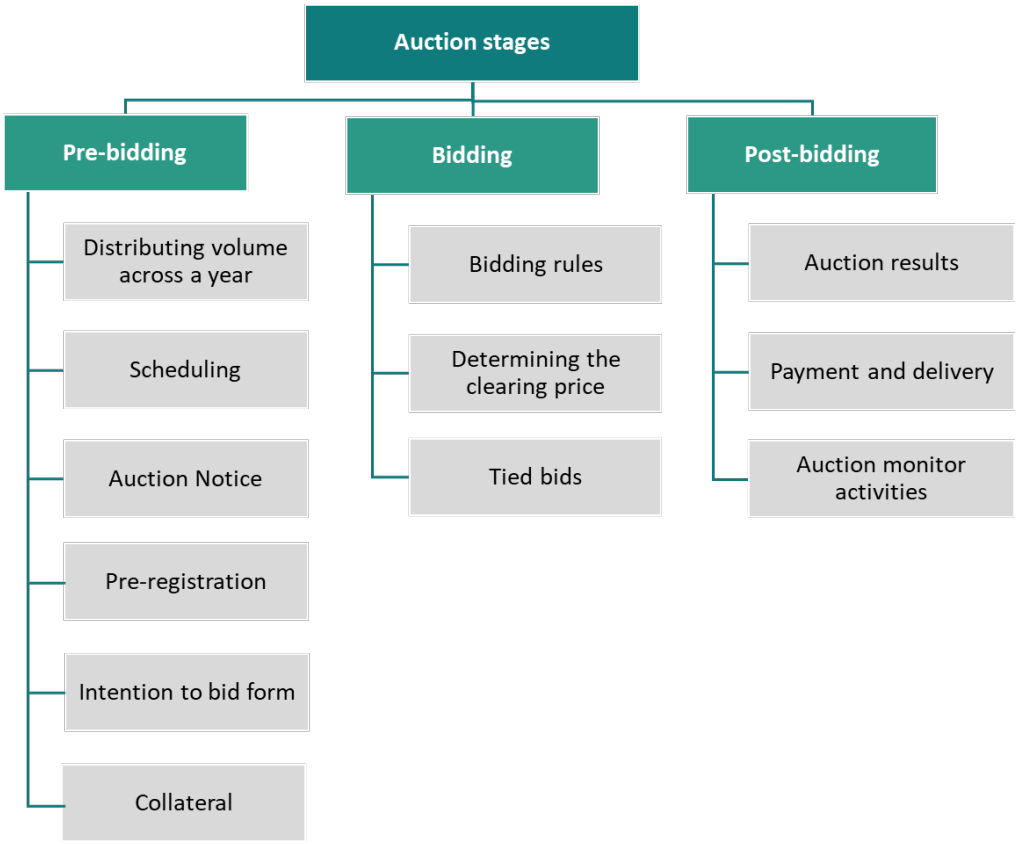
10 Do you agree that the cost containment reserve should have a single price trigger for all the reserve volume?

- Yes
- No
- Unsure

4 Bidding rules

This section outlines proposed rules for pre-bidding, bidding and post-bidding. Figure 3 sets out the details for each stage.

Figure 3: The auction process



Pre-bidding

Before an auction starts, there are a number of steps to ensure eligible bidders have completed registration and enable the auction to run efficiently.

Decisions have not yet been made on who will manage registration. It may be the Government, a third-party agent or the auction operator.

Final decisions on these processes may therefore be revised.

We seek your views on:

- content and lead time for the auction notice
- the registration process
- whether collateral will be required to participate in auctions and, if so, its value and type.

Auction notice

Before a scheduled auction, an auction notice is published. It is typically posted on the auction website, sufficiently far in advance to enable potential bidders to prepare.

All pre-auction information should be released at the same time. Bidders with prior knowledge could otherwise capitalise on market-sensitive information, such as price triggers and volumes from the cost containment reserve, and undermine the integrity of the auction.

The auction notice has two main aims to:

1. announce the date and time of the auction, volumes for sale, whether there is a reserve price, the price floor (if enabled), and the price triggers for the cost containment reserve
2. invite pre-registered bidders to submit an intention to bid form.[9]

There is no set form for auction notices,[10] but they generally give enough information for eligible bidders to prepare to bid. In New Zealand, auctions that fall under the Fair Trading Act must notify potential bidders of the auction terms "before and during the auction".[11] Emissions trading schemes in other jurisdictions also do this.

Although ETS auction notices vary in different jurisdictions, they generally give only basic information and do not set out details, such as the auction terms and conditions.[12] Detailed information for potential bidders is typically posted on a website. This includes documentation such as the terms and conditions of the auction, forms for registration and submitting collateral, and guidance on how the auction works.

NZ ETS auction notices will have minimal content, with all other relevant information available on the auctioning website. The notice will include:

a. date and time of the auction
b. number of NZUs available
c. any price controls (ie, current value of the cost containment reserve and price floor, if enabled)
d. whether there is a technical auction reserve price
e. due date for participants to submit their intention to bid form.

Lead time

The lead time for publishing the auction notice varies across overseas ETS markets. The optimal time for NZ ETS auctions will depend on the auction frequency, and must allow for:

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9 Bidders who are not pre-registered at the time the auction notice is issued may also submit an intention to bid form but only if they can meet all registration requirements before the form is due.

10 Auctions that fall under the Fair Trading Act 1986 must give notice of whether the goods are being sold by the vendor as a supplier; whether there is a reserve price; and whether vendor bids are permitted.

11 Fair Trading Act, s 36ZB (1).

12 In New Zealand, for auctions that fall under the Fair Trading Act 1986, the notice must only specify whether there is a reserve price, and whether vendor bids are permitted (s36ZB (2)). In contrast, the Regional Greenhouse Gas Initiative (RGGI) scheme in the United States provides very detailed auction notices including repeatable information on the auction process.

- the auction operator to confirm the auction volumes based on the results from the previous auction (ie, to account for any unsold NZUs that will be included in the upcoming auction)
- pre-registered bidders to submit their intention to bid forms
- collateral (if required) from potential bidders to be submitted, processed and confirmed.

Questions

11 How far in advance should the auction notice be published?

- 60 calendar days (only an option if auctions held quarterly)
- 30 calendar days
- Other, please specify

Registering to bid

Market participants intending to bid at an auction must register and qualify. To register they must submit a pre-registration form. This may be submitted at any time and will take some time to process.

Once pre-registration is complete, then to participate in an individual auction participants must submit:

1. an intention to bid form
2. collateral (if required).

This process aims to decouple qualifying to participate in auctions in general, from participating in individual auctions if and when participants choose.

Participants must agree to the terms of the auction, signal the information they submit is true and correct, and agree to due diligence checks.

Due diligence checks

Know-your-customer obligations

A pre-requisite for an entity establishing a business or trading relationship is to know its customers. Adequate checks ensure a knowledge of customers' identity, integrity and business profile. Due diligence is necessary for auctions to ensure the integrity, stability and credibility of the NZ ETS. The checks also mitigate the risks of a financial system being used for money laundering and financing of terrorism.[13]

Although it is important to the Government to minimise the administrative costs for auction participants, particularly smaller bidders, it is also essential to follow good practice for due diligence.

[13] The Anti-Money Laundering and Countering Financing of Terrorism Act 2009 establishes requirements for customer due diligence in New Zealand. If an entity does not have direct obligations under the Act, the measures still constitute good practice that should be followed.

Pre-registration

To pre-register, participants will submit information to the auction operator to establish their identity and ensure they are not a risk to the integrity of NZ ETS auctions. The process may take some time, but once completed, if participants confirm their circumstances have not materially changed, they can bid at any future auction simply by submitting an intention to bid form.

There could be a single application form (as for the California cap-and-trade programme) or multiple forms for different types of information (as for the RGGI scheme in the United States and the European Energy Exchange (EEX), the main auction platform in the European Union's ETS).

Pre-registration information

Participants will need to confirm their identity and business capacity. Indicative required information would include (where applicable):

- name of registered account holder[14]
- trading name, if different
- principal business address or registered office address
- company identifier or registration number
- whether the company is publicly listed
- names and contact details for authorised representatives of the registered account holder
- name and contact details of each person authorised to bid in an NZ ETS auction on behalf of the registered account holder
- Registry account number
- whether the participant has any mandatory or voluntary obligations under the NZ ETS (only required if bidding restrictions are applied)
- any convictions for serious crimes (by directors, principals or partners)
- any revoked or suspended permits to conduct business.

The Government or auction operator must verify the information is true and correct. This will require a statutory declaration, signed before a duly authorised person. Depending on final decisions on pre-registration, an updated statutory declaration may be periodically required.

This information is commonly sought from participants in emissions trading schemes in other jurisdictions, and is appropriate for the NZ ETS auctions.

Preferred pre-registration requirements

The Government's preference is for participants to provide the information listed above to pre-register for NZ ETS auctions. We are seeking feedback on any additional information needed for pre-registration.

[14] For example account holders may be natural persons, companies, trusts or incorporated societies.

If there is a maximum bid limit, information would also be required about beneficial ownership or voting influence for associated account holders participating in the auctions. Timeframes for processing applications should allow for providing this additional information.

Intention to bid form

When a potential bidder has pre-registered, they then submit an intention to bid form before each individual auction. This creates a right but not an obligation to participate in an upcoming auction. If they do not submit the form, they cannot participate.

Although some participants may choose to bid in every auction, others may only want to take part occasionally. Submitting an intention to bid form notifies the auction operator of expected participation levels, and allows participants to update their pre-registration information if necessary.

On the intention to bid form participants confirm they intend to take part in the auction announced in the auction notice, and agree to abide by the terms of the auction. The form would contain a declaration that there have been no material changes to their circumstances (as declared in their pre-registration application form). If there are changes, such as a new auction representative, new criminal conviction, or a new beneficial ownership over another entity bidding at the auction, they can amend their pre-registration form.

Lead time for submitting information

Pre-registration

Pre-registration times will vary for different participants and may be more complex if, for example, companies have overseas directors or beneficial ownership in other companies they need to disclose. Companies may need to seek approval from their own boards before submitting forms that enable them to represent the company in auctions. When the pre-registration forms are received, there will be due diligence checks, which may result in further questions.

Anyone applying for pre-registration must allow time for these processes. As an indication, overseas emission trading schemes with quarterly auctions allow a month (30 days for the California cap-and-trade scheme, and 42 days for the RGGI scheme). The NZ ETS requirements are yet to be determined, based on the assessment of the optimal design for an auction system.

We are seeking feedback on the pre-registration process to ensure it is efficient, robust and appropriate for the NZ ETS market.

Intention to bid form

The Government prefers that participants submit the intention to bid form a minimum period of 28 calendar days in advance of an auction. This allows processing and preparation time for the auction operator and participants.

Questions

12 Do you have any comments on the pre-registration process?

13 Do you agree that an intention to bid form must be submitted a minimum of 28 calendar days in advance of an auction?

- Yes
- No
- Unsure

Collateral

The Government needs to manage the risk of a winning bidder defaulting on payment to ensure the credibility of the financial management systems for NZ ETS auctions and preserve the integrity of the auctions. These are requirements for any well-functioning and well-managed market.

To minimise risks, due diligence of potential bidders is undertaken during the application process, and collateral may be required. Collateral ensures a degree of commitment to the auction from participants and deters strategic behaviour, which could occur if a winning bidder refuses to pay – for example, if the auction clearing price exceeds the spot price in the secondary market. It also promotes public confidence in the integrity of the auctions, with an assurance of resilience against settlement risks.

If collateral is required, bidders will need to provide additional information on the type of collateral, choices regarding the use and release of unused collateral, and an intended maximum bid amount (to allow for calculations on the value of collateral required).

Option 1: Collateral required

To participate in an auction, collateral would be deposited with the Government or the auction operator (depending on final decisions regarding the management of the auction system), and held until the auction ends. Different types of collateral could potentially be accepted.

The collateral could be used to settle payment against delivery for winning bids or be automatically returned after the auction.

Impact

Providing collateral would deter frivolous bidders.

However, administrative and transaction costs would increase, as the auction operator would be required to collect, hold, release and report on the collateral. There would also be administrative and transactional costs to the participants providing the collateral, and the opportunity cost (depending on how far in advance of the auction collateral must be provided).

Option 2: No collateral required

In this scenario, a non-performance penalty would apply if there was a default, which would involve legal proceedings for breach of contract. This option would have the highest transaction costs for the Government, with no guarantee the default would be corrected.

Impact

Although defaults are uncommon in emissions trading scheme auctions in other jurisdictions and in the NZ ETS secondary market, failing to protect against this risk could undermine the integrity and the credibility of the auction process. The results of the auction would also affect bidders who would otherwise have been successful.

In addition, the Government would be viewed as having failed to protect against a known risk.

Preferred option

The Government's preference is option 1. This is to ensure the integrity of NZ ETS auctions, gain a commitment from those participating, and safeguard against the risk of default.

The value of collateral

If collateral is required, the value could range from 100 per cent of the participant's maximum bid, to a low proportion of the bid value.

A 100 per cent value may give maximum protection against the risk of default, but could be viewed as overly punitive and may deter participation. A very low value would not adequately protect against default nor preserve the efficiency and integrity of NZ ETS auctions, although it is still likely to deter frivolous bidders.

The value of the collateral will be a function of the maximum bid value for each participant. The maximum bid value is the maximum cost the successful bidder would have to pay. Participants would have to specify their expected maximum bid to calculate the value of the collateral. Bids submitted on auction day that exceed the value required for the collateral (eg, 10 per cent, 25 per cent, 100 per cent) will not be accepted (or may be rounded down until bids match the collateral provided).

The options for the value of collateral include:

Option 1: Collateral is a fraction of the maximum bid

This option would set collateral in the range of 10–25 per cent.

Impact

This option would provide enough security to reduce the risk of default and encourage bidders to be committed to the auction process, but not be so onerous as to deter participation.

Option 2: Collateral is 100 per cent of the maximum bid

This option is used for auctions in other emissions trading schemes, such as the RGGI and the California cap and trade system.

Impact

It has the highest opportunity cost to bidders, depending on the form of the collateral (ie, until the auction ends and the funds are returned, they forego the opportunity to use the monies elsewhere), and may deter some from participating. However, the cost may not be too high if the collateral is only held for a short time.

Option 3: Flat rate payment

A flat rate collateral payment is used in auctions for some of the higher-value radio spectrum in New Zealand,[15] but is not commonly used in emissions trading scheme auctions.

Impact

A flat rate is not advisable, as it could have a disproportionate impact on small bidders. If the fee is too low, the collateral would not provide sufficient incentive against default, and if too high it could discourage bidders. There is also no industry benchmark for setting the rate. This option was considered but discarded by the Government.

Option 4: Margin as collateral

This would be an option if NZ ETS auctions are held on a platform that also facilitates secondary market trading or derivatives trading (eg, a regulated exchange). In this case, the selling and buying positions of all products traded by the exchange participant are netted, and only the open position is collateralised. This option was considered but discarded, as the auction platform is not yet decided.

Preferred option

The Government prefers option 1 – that collateral is required, and that the amount be set within the 10-25 per cent range. This is considered an appropriate range that would facilitate wide participation and discourage frivolous or careless bidders, thereby preserving the integrity of the auctions and adhering to good practice market standards.

Types of collateral

If collateral is required, various types may be submitted.

Option 1: Cash

Participants would deposit monies into a specified account through a bank transfer. They would bear the opportunity cost of not having the monies available for other purposes.

Option 2: Bank guarantee

This is provided by the bidder's bank and guarantees a sum of money to the auction operator. The guarantee is only used if the bidder does not pay for their successful bid.

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[15] For lower value spectrum auctions, no collateral is required. For the higher valued spectrum, such as frequencies used by cellular companies, collateral of $5M has been required.

Transaction costs to participants will depend on the bank's conditions (eg, interest rates, required collateral), and on the borrower's creditworthiness. Costs of the guarantee may also depend on its size, and the relationship with the borrower.

Option 3: Irrevocable letter of credit (ILOC)

This is an obligation by a bank to make a payment once certain criteria are met. In the context of auctions, this means on the success of the bidder, the bank will transfer the corresponding funds to the auction operator.

Compared to cash, the ILOC has a smaller opportunity cost, as there is no transfer of funds if bids are unsuccessful. However, there is administrative time required to obtain an ILOC and transaction fees payable by the bidder to the bank for organising this type of collateral.

Option 4: Credit ranking

In some markets (eg, gas), large participants may participate in auctions on the basis of their credit rating. This option was considered and discarded. This is because NZ ETS auctions require a collateral mechanism that would not result in wide variances in participation costs for different participants. Also, the Government-appointed entity managing the financial services must be able to access the collateral with minimal time and effort in the event of a default, and a credit ranking does not enable this.

Option 5: NZUs

The EU ETS allows units to be used as collateral on the European Energy Exchange. This option would have low transaction costs for market participants but current operating procedures for the New Zealand Registry do not allow for this. There would be additional cost for the Government and it may require a change to legislation affecting the Registry. This option has therefore been discarded.

Preferred option

If collateral is required, the Government prefers being able to accept any of options 1–3 as valid forms of collateral. Cash, bank guarantees and ILOCs are commonly used financial instruments, offer flexibility to participants, and have reasonable cost levels for participants and the Government.

Option 4 is not preferred as it would require an external assessment of credit rating and would only be available to a limited number of entities, such as financial institutions.

Option 5 is not preferred as it would be unnecessarily complex for the Registry, as well as being administratively burdensome.

Lead time for collateral

If participants are required to submit collateral this will be the last step for registration, and sufficient time must be allowed to process collateral before the auction. For example, the lead time for the RGGI scheme is seven days, and for the California cap-and-trade emissions programme, 12 days.

The lead time needs to strike a balance between the lost opportunity to bidders if providing collateral too early, and ensuring registration is completed in time for the auction to proceed efficiently.

Preferred option

The Government prefers that collateral, if required, be submitted five business days before the auction. This minimises opportunity cost to participants, and ensures the auction operator has enough time to prepare.

Use of collateral

There are options for how successful bidders can use their collateral funds post-auction. Some of these options will only be relevant if the type of collateral is cash.

Option 1: Used as payment

It could be mandatory that where the collateral is cash, it is used as payment for the successful bid.

Option 2: Released

All successful bids will be paid separately from any collateral submitted by participants.

Option 3: Bidders choose

Participants can choose whether to settle their successful bids via collateral or make separate payment.

Preferred option

The Government prefers option 3, which allows participants to choose how their funds are used. This gives them flexibility, at limited cost to the Government.

Release of collateral

After an auction, there are options as to what happens to the collateral.

Option 1: Released automatically

Unused collateral is released automatically to all participants after the auction.

Option 2: Kept on request

Collateral can be kept for future auctions, at the request of the participant. Some emissions trading scheme auction platforms[16] enable participants to have their collateral retained for subsequent auctions, or released on request. This option will not be available for all types of collateral. For example, the transaction costs and reporting requirements for holding cash

[16] For example, the RGGI and the EEX. In contrast, the WCI scheme returns all unused collateral, regardless of type, to participants within three days of the close of the auction.

may make this facility undesirable, and the lost opportunity costs for participants means it is unlikely they would choose this option.

Preferred option

The Government prefers option 2, which allows participants to choose whether to automatically release or retain their collateral. This will only be an option if releasing or retaining collateral is not too costly or onerous for the auction operator.

Questions

14 Do you agree that bidders should have to provide collateral to participate in an auction?

- Yes
- No
- Unsure

15 If collateral is required, how much should it be?

- Between 10 and 25 per cent of the maximum bid value (preferred)
- 100 per cent of the maximum bid value
- A flat rate payment, please specify amount
- Other, please specify

16 What forms of collateral should be accepted?

- Cash
- Bank guarantee
- Irrevocable letter of credit
- Credit rating (not preferred)
- Other, please specify

17 How many days before an auction do you think is sufficient lead time for provision of collateral (Government suggests five business days)?

18 Do you agree that collateral (depending on its form) should be used against payments for successful bids, if the bidder requests?

- Yes
- No
- Unsure

19 Do you agree that bidders should be able to choose to have their collateral automatically returned, released at their request, or retained for future auctions?

- Yes
- No
- Unsure

Bidding

Decisions on bidding rules include how to run the auction and, in particular, rules for accepting bids.

We are seeking feedback on:

- rules for submitting bids, including minimum lot size, price increments, maximum bid limit, and the auction technical reserve price
- resolving tied bids.

Bidding rules

Minimum bid

The minimum bid is the smallest number of NZUs you can buy at an auction.

Option 1: Minimum bid of 100 NZUs

Impact

A minimum bid of 100 NZUs may make the auction more accessible for small participants. If this increases the number of participants at each auction then it may slightly increase administration costs to manage an increased number of intention to bid forms and the provision of collateral.

Option 2: Minimum bid of 500 NZUs

Impact

A minimum bid of 500 NZUs would still allow some smaller bidders access to the auction.

Option 3: Minimum bid of 1000 NZUs

Impact

This option may risk excluding small participants.

Preferred option

The Government preference is for option 2 – a minimum bid of 500 NZUs.

Lot size

Lot size is the number of NZUs packaged in one lot for auction. Bids for partial lots will not be accepted – for example, if the lot size is 500 NZUs, a bid for 450 NZUs will not be accepted.

Administrative costs would remain the same across all options, as processing the bidding results is automated.

Auction performance will be reviewed continually and if, after a few years, the lot size appears too low, then it may be increased.

Option 1: Lot size of 100 NZUs

Impact

Smaller lot sizes result in a smoother demand curve[17] but are less appropriate for the scale of auctions envisaged.

Option 2: Lot size of 500 NZUs

Impact

This would allow small participants to buy the units they need, while keeping the process simple and easy.

These smaller volumes will also provide for a smoother bidding demand curve than option 3.

Option 3: Lot size of 1000 NZUs

Auction lot sizes in overseas jurisdictions are often consistent with the practices of their secondary spot markets.[18] In the NZ ETS secondary market, the two NZU match-making platforms require bids in multiples of 1000 NZUs. These platforms are intended for medium and larger trades,[19] so the required lots are likely to reflect this.

Preferred option

The Government prefers option 2 – a lot size of 500 NZUs.

NZ ETS data from the Registry on the volume of transactions in 2018 show that although most transactions are between 1001 and 10,000 units, around 20 per cent were for 1000 units or less for most of the months in 2018.[20] This suggests that participants should be allowed to bid and purchase smaller lot sizes.

Questions

20 What should be the minimum number of NZUs that can be sold at auctions?

- 100 NZUs
- 500 NZUs (preferred)
- 1000 NZUs
- Other, please specify

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17 A demand curve is a graph of the relationship between the price of the NZUs and the quantity that bidders sought to buy at that price.

18 Auctioning in the EU ETS allows for a lot size in multiples of 500 or 1000 units, reflecting an early decision to enable wide participation from smaller emitters (which has not eventuated). The RGGI scheme and the California cap-and-trade programme have a minimum of 1000 units.

19 For example, CommTrade Carbon requires a minimum of 5000 NZUs, with increments in multiples of 1000 units. Carbon Match Ltd notes on its website that most of its buyers are interested in minimum parcels of 10,000 NZUs.

20 https://www.epa.govt.nz/industry-areas/emissions-trading-scheme/market-information/transactions-by-volume/.

Questions

21 Bids are only accepted in multiples of the minimum lot size. What should the minimum lot size be for auctions?

- 100 NZUs
- 500 NZUs (preferred)
- 1000 NZUs
- Other, please specify

Price increments

Price increments are the amount by which bids must be increased during the bidding process per NZU. They can be in dollars and cents without rounding, or in steps such as $0.05. For example, if the minimum price increment were set to $0.05 then bids may be submitted at prices per NZU of either $24.05 or $24.10 but not $24.08.

For the options listed here, administrative costs would remain the same, as processing the bidding results is automated, and the auctions will use the sealed bid, single-round, uniform pricing format.

Option 1: Small increment

Impact

Allowing for smaller increments, for example, bids rising by $0.01 or $0.02 rather than $0.10, may reduce the number of tied bids (see page 42).

Option 2: $0.05 increment

The secondary market allows increments of $0.01 but most bids and offers are in multiples of $0.05.

Impact

The $0.05 price increment helps to reduce the number of tied bids.

Option 3: Larger increments

Impact

Larger increments increase the likelihood of tied bids, as there are likely to be more participants bidding at particular price points.

Preferred option

The Government's preference is option 2 – price steps of $0.05.

Question

22 What should the minimum price increment be?

- $0.01 – $0.02
- $0.05 (preferred)
- $0.10
- Other, please specify

Maximum bid limit

Impact

A maximum bid limit would prevent one entity from dominating the market by purchasing a large number of units and using this to their advantage. There has been no evidence of this type of market manipulation in the New Zealand secondary market to date, but participants have suggested that the potential exists.[21]

Option 1: Set a maximum bid limit

If a limit were implemented, it would be likely to apply to all bids made, not only by single participants, but also by participants that may be related through a group of companies. This is because if the limit only applies to single participants, a group could still manipulate the market by bidding for a large number of units split across its various members.

For the limit to be effective, participants would need to provide pre-registration information about all the companies they own, partially own, or exercise de jure or de facto influence on.

Impact

A maximum limit would preserve market integrity and help ensure fairness and accessibility for smaller participants, but would increase administration.

Option 2: Do not set a maximum bid limit

No maximum bid limit would be set unless and until evidence showed that market behaviour in auctions was impacting market efficiency and integrity.

Impact

Not setting a limit would avoid extra administration which may prove unnecessary, while responding to market manipulation and preserving market integrity if required. The Government would monitor behaviour and respond accordingly, without making auctions more complex to participate in.

[21] See https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/Final-Market-Governance-Report-2017%20-%20Market-Governance-of-the-ETS%20-%20options-and-analysis.pdf.

Preferred option

The Government does not currently have a preferred option. However, if no limit were set initially and market manipulation occurred, the Government would reassess and could set a limit.

We are seeking feedback on the value of the limit, if set, and whether it should apply to single participants or related groups.

Questions

23 Do you think a maximum bid limit should be set?

- Yes
- No
- Unsure

24 If set, should the maximum bid limit apply to:

- All bids made by a single participant
- All bids made by related participants

25 If there is a maximum bid limit, what should it be?

Amending and withdrawing bids

Bidders will be able to amend or withdraw their bids at any time up until the bidding window closes. This will allow them to fix errors or change their minds about proceeding with a bid. No other participant is affected by amendments to bids in a sealed-bid format, and it does not affect the integrity of the auction.

Auctions governed by the Fair Trading Act in New Zealand must allow bids to be withdrawn up until the close of an auction. This is also the practice for emissions trading schemes in other jurisdictions.

Determining the clearing price

The Government has previously decided that all successful bidders will pay a uniform price, rather than the price they bid.

When the auction ends, the operator will rank all bids from the highest price to the lowest. NZUs will be awarded to bidders, beginning with the highest bid price and moving to successively lower bids until the auction's supply of NZUs is used, or until all bids have been filled (see figure 4). The clearing price that all bidders pay (regardless of their bid), is the price of the lowest successful bid, in other words, the lowest bid to receive units in the auction. If the lowest bid is for more units than are left to auction, they will receive all remaining units at the clearing price (meaning they will only get some of the units that they bid for).

Figure 4: Ranking bids in descending price order to find the clearing price

Tied bids

In single-round, sealed bid auctions, ties occur when more than one bid is proposed at the clearing price, and the total amount bid at prices higher than or equal to the clearing price exceeds the volume up for sale. There are three options for resolving tied bids.

Option 1: Random assignment, entire bid

In this approach, winning bids are randomly selected from the tied bids (through a computer programme). Each tied bid is randomly assigned a number, and then sorted by this random number. Volume is awarded to bids in increasing order by this random number until no bids are left. This approach is used in other emissions trading schemes such as the RGGI in the United States.[22] The EEX auctions for the EU ETS also resolve tied bids by sorting using random selection according to an algorithm.[23]

Impact

This option reduces the risk of collusion because bidders trying to coordinate their bids will not be certain whether they will receive the volume they have bid for. However, some market participants bidding at the clearing price may not receive any units.

Table 1 shows an example of the process.

[22] https://www.rggi.org/sites/default/files/Uploads/Auction-Materials/44/FAQs_Apr_09_2019.pdf p 10–11.

[23] https://www.eex.com/blob/9128/587cf1f1f91be0d67607d9c3f54bd459/eex-piiiauctions-guidance-pdf-data.pdf

Table 1: Random assignment, entire bid, tie-breaking example

Bidder name	Bid price	Bidder quantity	Cumulative demand	Random number
Bidder B	$30	1,000	1,000	
Bidder C	$29	5,000	6,000	
Bidder D	$28	4,000	10,000	
Bidder E	$27	4,500	14,500	
Bidder C	$27	3,000	17,500	
Bidder E	$26	500	18,000	3
Bidder D	$26	2,000	20,000	1
Bidder A	$26	1,000	21,000	2
Bidder B	$26	1,000	22,000	4
Bidder A	$25	3,000	25,000	
Bidder C	$25	500	25,500	

In this example, 20,000 NZUs are available. The bids for NZUs by bidders E, D, A and B at $26 cause cumulative demand to exceed the supply of NZUs offered for sale. These bids are the marginal bids and the interim clearing price is the bid price of the marginal bids ($26, highlighted rows).

To resolve the tie, a random number is assigned to each tied bid (see the last column of the table). The NZUs will be awarded to each tied bidder in increasing order by the value of their assigned random number until no NZUs are left. In this example, Bidder D will receive their NZUs first, taking cumulative volume to 19,500. The remaining 500 units would go to Bidder A. Bidders E and B would not receive any units.

Option 2: Random assignment by lot

This is a variation of option 1. Individual lots are randomly chosen from the tied bids and volume is awarded accordingly. For example, each lot of 500 NZUs within all tied bids is randomly assigned a number, and the lots are awarded in an increasing order until none remain.

Impact

This option reduces the risk that bidders bidding at the clearing price will win a disproportionate share of the remaining units. It also reduces the risk of collusion because bidders attempting to coordinate their bids will not be certain of the quantities they will receive. However, as for option 1, the risk remains that some market participants bidding at the clearing price may not receive any units.

Table 2 shows the tie-breaking process for this approach.

Table 2: Random assignment by lot, tie-breaking example

Bidder name	Bid price	Bidder quantity	Cumulative demand	Lot Number (Each lot = 500 units)	Random number
Bidder B	$30	1,000	1,000		
Bidder C	$29	5,000	6,000		
Bidder D	$28	4,000	10,000		
Bidder E	$27	4,500	14,500		
Bidder C	$27	3,000	17,500		
Bidder E	$26	500 (1 lot)	18,000		
Bidder E lot				*1*	*4*
Bidder D	$26	2,000 (4 lots)	20,000		
Bidder D lot				*1*	*8*
Bidder D lot				*2*	*3*
Bidder D lot				*3*	*6*
Bidder D lot				*4*	*1*
Bidder A	$26	1,000 (2 lots)	21,000		
Bidder A lot				*1*	*5*
Bidder A lot				*2*	*7*
Bidder B	$26	1,000 (2 lots)	22,000		
Bidder B lot				*1*	*2*
Bidder B lot				*2*	*9*
Bidder A	$25	3,000	25,000		
Bidder C	$25	500	25,500		

In this scenario, 20,000 NZUs are available. The bids by bidders E, D, A at $26 cause cumulative demand to exceed the supply of NZUs, so these are the marginal bids and the interim clearing price is the bid price of the marginal bids ($26, blue rows).

To resolve the tie, a random number will be generated and assigned to each *individual lot* within each tied bid as per the last two columns of the table. The NZUs will be awarded to each tied bidder in increasing order by the value of their assigned random number until none remain. In this example, there are five lots of 500 left to assign and they are awarded to rows with random numbers from 1 to 5 (grey rows). Bidder D will receive 1000 units (two lots), Bidder B will receive 500 units (one lot) and Bidders A and E will receive 500 units (one lot) each.

Option 3: Pro-rata re-scaling

This option involves reducing all tie bids proportionately so that total demand equals supply. In this case, the number of NZUs awarded from a tied bid would reflect the share of the participant's bid out of the total number of NZUs remaining for sale at the clearing price.

Table 3 shows the tie-breaking process for this approach.

Table 3: Pro-rata assignment, tie-breaking example

Bidder name	Bid price	Bidder quantity	Cumulative demand	Original bid volume multiplied by 5/8 (to nearest unit)	Pro-rata amount awarded (rounded to lots of 500)
Bidder B	$30	1,000	1,000		
Bidder C	$29	5,000	6,000		
Bidder D	$28	4,000	10,000		
Bidder E	$27	4,500	14,500		
Bidder C	$27	3,000	17,500		
Bidder E	$26	500	18,000	313	500
Bidder D	$26	1,500	19,500	1,250	1500
Bidder A	$26	1,000	20,500	625	500
Bidder B	$26	1,000	21,500	625	500
Bidder A	$25	3,000	24,500		
Bidder C	$25	500	25,000		

In this example, 20,000 NZUs are available. The bids for NZUs by bidders E, D, A and B at $26 cause cumulative demand to exceed the supply of NZUs offered for sale by 1500 NZUs. These bids are the marginal bids and the interim clearing price is the bid price of the marginal bids ($26, highlighted rows).

To resolve the tie, lots are awarded to the tied bidders proportionally to their bid size until the remaining NZUs are sold. In this case, the tied bidders have bid for 4000 units collectively but only 2500 are left. So the bid size needs to be reduced by a ratio of 2500:4000 or 5:8 and then rounded to the nearest 500 to account for the minimum lot size. In this case, Bidder E would receive 500 units, bidder D 1500 units, bidder A 500 units, and bidder B 500 units.

Impact

Rounding rules would be required to avoid split lots. This could result in some bidders having their bids rounded down to zero.

Preferred option

The Government prefers option 2, where tied bids are resolved through random assignment. Attribution is to lots rather than bids in their entirety, so as to increase the likelihood that participants with tied bids will receive units. The Government does not consider it necessary to set further rules to prevent an entity winning a disproportionate share of the remaining allowances, as it would be complex to regulate and administer.

Question

26 How do you think tied bids should be resolved?

- Random assignment to the entire bid
- Random assignment by lot (preferred)
- On a pro-rata basis, with rounding
- Other, please specify

Technical reserve price

A reserve price is the lowest price the Government would be willing to accept for NZUs during any particular auction. Setting a reserve price protects against the risk of NZUs being sold at a price significantly below the prevailing secondary market price. This could result from unexpectedly weak competition – for example, if an auction was poorly attended and the bids were very low. To sell NZUs at a price significantly lower than the secondary market price would be a windfall for auction participants at the expense of Government revenue, and potentially disrupt the secondary market.

A technical reserve price is different from an auction price floor. The price floor is a price control the Government has agreed to use if necessary. (See page 20)

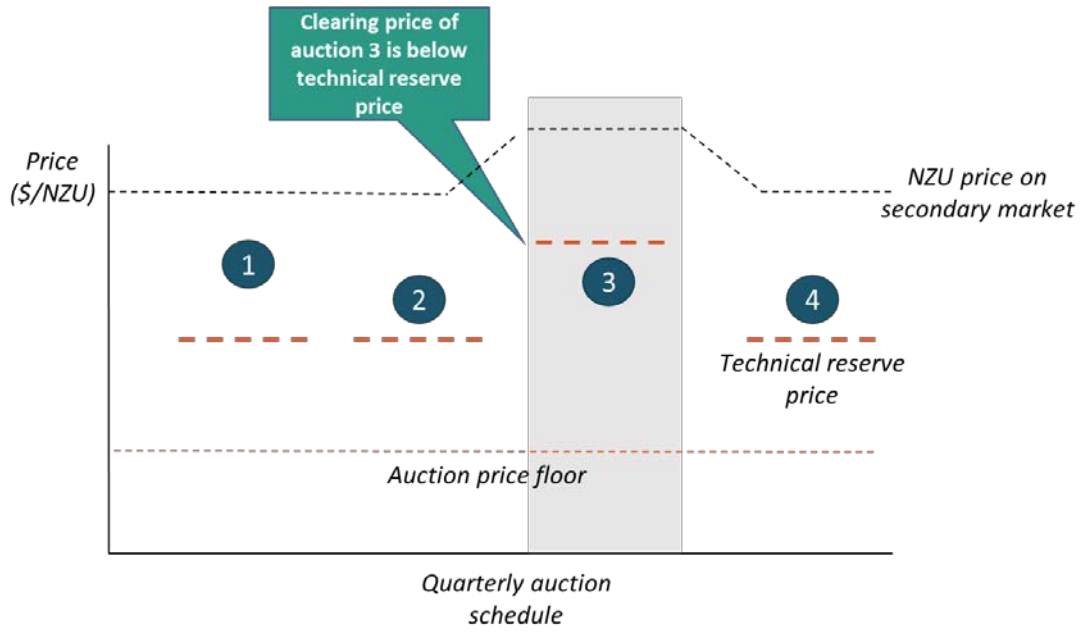
If the winning bid fails to meet the technical reserve price, no units would be sold at the auction.

The technical reserve price would be determined before each auction, and set relative to the market price of NZUs at that time. It would ensure partial alignment of the auction clearing price and the market value of NZUs.

The technical reserve price would be indexed to the market price of NZUs. The auction operator would set the technical reserve price before an auction, using a prescribed methodology based on the secondary market price.

An example of how the technical reserve price may work in practice across four auctions is shown in figure 5.

Figure 5: Technical reserve price vs clearing price over four quarterly auctions for one year



Although all auction clearing prices (numbered circles) in figure 5 are above the auction price floor, the clearing price from auction 3 is below that auction's technical reserve price. This is because the secondary market price at the time of auction 3 has increased which means the technical reserve price is also higher. The technical reserve price was not met in auction 3 and

therefore no volume would be sold. The volume from auction 3 will then be treated as unsold units (see page 16).

Should the methodology for setting the technical reserve price be confidential?

Setting a reserve price requires a methodology; however, it may be advisable to keep the methodology confidential. For example, the EU ETS calculates its reserve price shortly before the auction, based on secondary market trends, and keeps the methodology secret.

Option 1: Publish

The Government publishes the technical reserve price methodology.

Option 2: Keep confidential

The methodology for determining the technical reserve price is kept confidential.

Impact

Keeping the price confidential would prevent it becoming an undesirable focal point for bidding strategies, and discourage attempts to manipulate the clearing price. However, it would reduce the overall transparency of the auctioning system.

Preferred option

The Government prefers option 2, to deter participants focusing their bidding strategies on the technical reserve price.

Questions

27 Do you agree that a technical reserve price should be set for auctions?

- Yes
- No
- Unsure

28 If a technical reserve price is set, do you agree that the methodology for calculating the price be kept confidential?

- Yes
- No
- Unsure

Post-bidding

The post-bidding stage involves notifying bidders of the results, releasing the results to the market, financial settlement of successful bids (payment for bids won), and physical settlement of successful bids (placing NZUs into bidders' accounts in the Registry).

Other activities are verifying the results and publishing a report by the auction monitor. Section 5 on the role of the auction monitor includes questions on the types of data the auction monitor could release.

In this section, we seek your views on the:

- timing and method for releasing auction results
- types of information to release
- requirements for settlement of payment and delivery of NZUs.

Auction results

Some results can be released shortly after the auction; others can only be released to the market when there has been further analysis.

The wider market has an interest in the auction results. Preliminary results can readily be released, including information such as the clearing price and total volumes sold. This information should be released to the entire market simultaneously so all market participants have access to the information at the same time. Results that will take some time to analyse may include information such as a market concentration index.

Participants should also be advised as soon as possible of the success or otherwise of their bids.

This section relates to auction results that should be released soon after the auction, potentially by the auction operator, in an easily accessible format. Results could include:

- clearing price
- total volume of units auctioned
- total volume of bids
- average bid size
- number of bids
- cover ratio (total volumes bid divided by total volumes for sale)
- total number of bidders and the number of successful bidders
- the number of unsold units, if any.

Timing of release

Any delay between the end of an auction and the disclosure of results should be minimal, so the information is reflected in trades on the secondary market. Bidders will be advised of the results of their bids as soon as practicable after information is released publicly.

In the RGGI scheme, the clearing price is published at 10am on the second business day after the auction, followed by a market monitor report shortly after.[24] In the California cap-and-trade programme, results are typically published a week after the auction, during which the market monitor reviews market conduct. In contrast, the EEX (the primary auction platform for the EU ETS) publishes the main results (eg, the clearing price), one minute after closure,[25] and detailed results 10 minutes later.

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[24] See page 10 in https://www.rggi.org/sites/default/files/Uploads/Auction-Materials/38/RGGI_CO2_Allowance_Auction_FAQs_Jan_10_2017.pdf.

[25] See slide 8 in https://www.eex.com/blob/73778/ffcd95243d893a632f61301220fb504d/20170829-auctions-how-to-participate-data.pdf.

Preferred approach

The Government prefers prompt publication of information that can be released, at a maximum within the same business day. It also prefers to advise participants of their results as soon as practical after publication of this information.

Question

29 What results should the auction operator publish as soon as practicable following an auction? Please select all that apply.

- Clearing price
- Total volume of units auctioned
- Total volume of bids
- Average bid size
- Number of bids
- Cover ratio (total volumes bid divided by total volumes for sale)
- Total number of bidders and the number of successful bidders
- Number of unsold units, if any
- Other, please specify.

Payment and delivery

Payment is the financial settlement of successful bids, ie, successful bidders providing monies for the value of the bids won. Delivery is the transfer of NZUs won by the bidder to their Registry account.

Full settlement and delivery usually takes two days. This is because banks making payment on instructions of the bidders have their own procedures to work through. Similarly the Registrar needs to transfer of NZUs (either directly from the Crown account to that of the successful bidder, or through a transfer to a holding account or clearing house account, depending on the system).[26] For the NZ ETS, settlement will likely be within four working days of the auction.

There are two options for the way in which settlement can occur.

Option 1: Payment before delivery

Payment before delivery means that payment by the successful bidder must be made and cleared before NZUs won in the auction are transferred to the bidder's account. This approach is used in the California cap-and-trade programme.[27]

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[26] In the RGGI scheme bidders must pay within seven days, and within five days in the California cap-and-trade programme. Allowances are delivered within 13 and 8 days respectively.

[27] § 95912(k)(4) of the California Code Regulation.

Option 2: Delivery-versus-payment

Delivery versus payment requires both the bidder and the auction operator to be members of, or to use the services of, a central counterparty or clearing house. It involves a concurrent exchange of:

(i) payments from the successful bidders

(ii) units from the auction operator via the central counterparty or clearing house.

Once auction results are published, payment from the successful bidders and allowances from the auction operator are transferred to the central counterparty's or the clearing house's accounts or their members' accounts. The central counterparty or the clearing house then exchanges the payment for allowances, which are then transferred to the auction operator and the successful bidders respectively.

Preferred option

The Government prefers option 1, as it minimises transactional costs and complexity, while sufficiently protecting against payment default.

Questions

30 What is the best approach for settlement of successful bids?

- Payment before delivery (preferred)
- Delivery versus payment
- Other, please specify

31 Do you have a view on the time for settlement (suggested it may take 4 business days)?

5 The role of an auction monitor

This section contains proposals to define the role of the auction monitor. The Government will decide on the most appropriate entity for the role during 2020.

The Government has decided to enable the appointment of an independent auction monitor to oversee auctions in the NZ ETS. More specifically, it has decided that the auction monitor must monitor auction results and publish a report on auction outcomes. The auction monitor may also periodically assess the auction system, to make recommendations for improvement or monitor the conduct of participants and the auction operator, if required.

These proposals will likely be reassessed as part of the development of a market governance framework for the NZ ETS.

Monitoring and reporting auction results

Monitoring and reporting results will increase transparency in the market and ensure all participants are informed appropriately about the results of each auction.

Preferred approach

The Government prefers that the auction monitor will monitor the results of auctions managed by the auction operator and then publish a report on the outcome. This report will:

- inform the market of the results, including information the auction operator may not make available immediately
- enable longer-term monitoring of market trends to inform any periodic assessment of the auction system by the auction monitor.

The report is expected to contain at least the following information:

- detailed volume statistics, eg, average volume bid per bidder,[28] average volume won per bidder
- detailed statistics on number of bids, eg, average number of bids per bidder, number of bids submitted, number of successful bids
- relevant aggregate information (eg, largest bids as a percentage of total volumes sold, percent of volumes awarded to entities with mandatory obligations)
- relevant distributional information (eg, number of units awarded to which winner, with bidder names withheld)
- distribution of successful bids among market participants with and without mandatory compliance obligations
- relevant information on resolved tied bids.

[28] This is different from average bid size, as one bidder can place multiple bids.

Questions

32 What information should the auction monitor report include? Please select all that apply.

- Detailed volume statistics, (eg, average volume bid per bidder)
- Detailed statistics on number of bids, (eg, average number of bids per bidder, number of bids submitted, number of successful bids)
- Relevant aggregate information (eg, largest bids as percentage of total volumes sold, percent of volumes awarded to entities with mandatory obligations)
- Relevant distributional information (eg, number of units awarded to which winner, with bidder names withheld)
- Distribution of successful bids among market participants with and without mandatory compliance obligations
- Relevant information to resolve tied bids
- Other, please specify

33 Do you think that releasing information on the number of NZUs won by each successful bidder, who will not be named, would raise any issues of data confidentiality?

34 Does auction monitor reporting raise any concerns for you with respect to commercially sensitive information?

Periodic assessment of auctioning

The auction monitor has the role of monitoring auction results and reporting on the results. The Government may also require them to periodically assess the auctioning system and suggest improvements.

Preferred approach

The Government prefers that the auction monitor will regularly review the auctioning system. It also prefers that there would be an initial assessment of the auctioning system within a year of the auctioning system starting, with reviews every two years thereafter.

Question

35 How often do you think the auction monitor should review the auctioning system?

- After one year initially, then every two years thereafter (preferred)
- Annually
- Other, please specify

6 Consultation process

How to make a submission

The Government welcomes your feedback on this consultation document. A list of all the questions is in section 7. They are a guide only. You do not have to answer them all, and all comments are welcome.

To ensure we understand your point of view, please explain your rationale and give supporting evidence if needed.

You can make a submission in two ways:

- use our online submission tool, available on our website. We prefer to receive submissions this way
- write your own submission.

If you are posting your submission, send it to Reforming the NZ ETS: Rules for auctioning, Ministry for the Environment, PO Box 10362, Wellington 6143 and include:

- Reforming the NZ ETS: Rules for auctioning
- your name or name of the organisation you represent
- postal address
- telephone number
- email address.

If you are emailing your submission, send it to etsconsultation@mfe.govt.nz as a:

- PDF
- Microsoft Word document (2003 or later version).

Submissions close at 5.00 pm on 19 December 2019.

Contact for queries

Phone: +64 4 439 7400

Email: etsconsultation@mfe.govt.nz

Post: Reforming the NZ ETS: Rules for auctioning, Ministry for the Environment, PO Box 10362, Wellington 6143

Publishing, releasing and analysing submissions

All or part of any written submission the Ministry for the Environment received electronically or in printed form, including your name, may be published on our website, www.mfe.govt.nz. Unless you clearly specify otherwise in your submission, we will consider that you have consented to website posting of both your submission and your name.

Submissions may also be released to the public under the Official Information Act 1982 following requests to the Ministry for the Environment (including by email). Please advise if you object to the release of any information contained in your submission and, in particular, which part(s) you consider should be withheld, together with the reason(s) for withholding the information.

Any personal information you supply to us when making a submission will only be used by the us in relation to the consultation covered in this document. You have the right to request access to or to correct any personal information you supply to us.

After receiving submissions, we will evaluate them and may, where necessary, seek further comments. Your submission will contribute to advice to ministers. The Government welcomes your feedback.

7 Questions to guide your feedback

Questions

1 Do you agree that auction volumes should be evenly distributed over the calendar year?
   - Yes
   - No
   - Unsure

2 If no, do you have a suggestion for how volumes should be weighted?

3 Do you think that unsold units should be:
   - All added to the next auction
   - Added to subsequent auctions within a limit (preferred)
   - Other, please specify

4 If unsold units are only added to subsequent auctions within a limit, what should it be?

5 Other than public holidays, and days when important economic or emissions data is released, are there any dates when auctions should not be held?

6 The surrender date in the NZ ETS is 31 May. How far in advance of this date should the closest auction be scheduled? Please consider both monthly and quarterly auction scenarios.

7 Do you agree that the bidding window should be three hours, from 9am to 12 noon on the scheduled auction date?
   - Yes
   - No
   - Unsure

8 When a price trigger is reached in the cost containment reserve, how should the volume of units from the reserve be sold?
   - In a separate reserve auction open to all registered participants (preferred)
   - In a separate reserve auction with participants limited to those with surrender obligations
   - In the same auction that triggered the reserve

9 If you support option 2, should the units sold in the reserve auction be limited for use to meet surrender obligations?
   - Yes
   - No
   - Unsure

10 Do you agree that the cost containment reserve should have a single price trigger for all the reserve volume?
   - Yes
   - No
   - Unsure

Questions

11 How far in advance should the auction notice be published?

- 60 calendar days (only an option if auctions held quarterly)
- 30 calendar days
- Other, please specify

12 Do you have any comments on the pre-registration process?

13 Do you agree that an intention to bid form must be submitted a minimum of 28 calendar days in advance of an auction?

- Yes
- No
- Unsure

14 Do you agree that bidders should have to provide collateral to participate in an auction?

- Yes
- No
- Unsure

15 If collateral is required, how much should it be?

- Between 10 and 25 per cent of the maximum bid value (preferred)
- 100 per cent of the maximum bid value
- A flat rate payment, please specify amount
- Other, please specify

16 What forms of collateral should be accepted?

- Cash
- Bank guarantee
- Irrevocable letter of credit
- Credit rating (not preferred)
- Other, please specify

17 How many days before an auction do you think is sufficient lead time for provision of collateral (Government suggests 5 business days)?

18 Do you agree that collateral (depending on its form) should be used against payments for successful bids, if the bidder requests?

- Yes
- No
- Unsure

19 Do you agree that bidders should be able to choose to have their collateral automatically returned, released at their request, or retained for future auctions?

- Yes
- No
- Unsure

Questions

20 What should be the minimum number of NZUs that can be sold at auctions?

- 100 NZUs
- 500 NZUs (preferred)
- 1000 NZUs
- Other, please specify

21 Bids are only accepted in multiples of minimum lot size. What should the minimum lot size be for auctions?

- 100 NZUs
- 500 NZUs (preferred)
- 1000 NZUs
- Other, please specify

22 What should the minimum price increment be?

- $0.01–$0.02
- $0.05 (preferred)
- $0.10
- Other, please specify

23 Do you think a maximum bid limit should be set?

- Yes
- No
- Unsure

24 If set, should the maximum bid limit apply to:

- All bids made by a single participant
- All bids made by related participants

25 If there is a maximum bid limit, what should it be?

26 How do you think tied bids should be resolved?

- Random assignment to the entire bid
- Random assignment by lot (preferred)
- On a pro-rata basis, with rounding
- Other, please specify

27 Do you agree that a technical reserve price should be set for auctions?

- Yes
- No
- Unsure

28 If a technical reserve price is set, do you agree that the methodology for calculating the price be kept confidential?

- Yes
- No
- Unsure

Questions

29 What results should the auction operator publish as soon as practicable following an auction? Please select all that apply.

- Clearing price
- Total volume of units auctioned
- Total volume of bids
- Average bid size
- Number of bids
- Cover ratio (total volumes bid divided by total volumes for sale)
- Total number of bidders and the number of successful bidders
- Number of unsold units, if any
- Other, please specify

30 What is the best approach for settlement of successful bids?

- Payment before delivery (preferred)
- Delivery versus payment
- Other, please specify

31 Do you have a view on the time for settlement (suggested it may take 4 business days)?

32 What information should the auction monitor report include? Please select all that apply.

- Detailed volume statistics, (eg, average volume bid per bidder)
- Detailed statistics on number of bids, (eg, average number of bids per bidder, number of bids submitted, number of successful bids)
- Relevant aggregate information (eg, largest bids as percentage of total volumes sold, percent of volumes awarded to entities with mandatory obligations)
- Relevant distributional information (eg, number of units awarded to which winner, with bidder names withheld)
- Distribution of successful bids among market participants with and without mandatory compliance obligations
- Relevant information to resolve tied bids
- Other, please specify

33 Do you think that releasing information on the number of NZUs won by each successful bidder, who will not be named, would raise any issues of data confidentiality?

34 Does auction monitor reporting raise any concerns for you with respect to commercially sensitive information.

35 How often do you think the auction monitor should review the auctioning system?

- After one year initially, then every two years thereafter (preferred)
- Annually
- Other, please specify

36 Do you have any other comments?

Appendix 1: Supporting analysis

The proposals in this consultation document are based on an initial impact analysis of options available for each auction system feature. This appendix includes details of this impact analysis, including the criteria used to assess the options.

Objectives and criteria for analysing options

Key objectives for auctioning in the NZ ETS (as outlined in Section 1: Which auctioning system is best for the NZ ETS?) are to:

- improve regulatory certainty and predictability
- align the NZ ETS with New Zealand's targets
- be consistent with the broader NZ ETS design policy intent.

The overall objective for introducing auctioning into the NZ ETS is to provide the Government with a tool to align units supplied into the NZ ETS with New Zealand's climate change targets. When considering options for each proposal, each option was evaluated against a set of criteria to judge how well the option supports both this objective and the efficient operation of the NZ ETS.

Criteria

Table 4 lists the criteria used to assess the proposals in this document. The NZ ETS review already noted that a mechanism to auction units would bring a net benefit, compared to the *status quo*. Cabinet therefore made an in-principle decision to introduce auctioning in July 2017. Now the task is to identify how best to implement an efficient auctioning system. Options are therefore compared against each other rather than the *status quo*.

Table 4: Criteria for assessing proposals

Criteria	Related issues
Minimising administrative and transaction costs	Transaction costs for participants Administration costs for the Government
Ensuring consistency and proportionality	Accessibility Fairness Simplicity
Supporting market efficiency	Avoids strategic bidding Minimises price volatility
Preserving market integrity	Prevents collusion and manipulation Governance and oversight
Supporting market transparency	Transparency of pre-auction information Transparency of auction results

Detailed explanation of the criteria

The auction design should minimise administrative and transaction costs.

- **Transaction costs** are incurred by auction participants when registering to participate and when providing collateral, if required. There may also be costs from settlement processes when paying for successful bids. High transaction costs can affect accessibility.
- **Administrative costs** are incurred by the Government as a result of implementing, running or overseeing the auction system, including managing the collection and return of collateral (if required), settlement invoicing, debt collection, and reporting.

The auction design should ensure consistency and proportionality. This covers:

- **Accessibility and fairness:** All account holders in the Registry are eligible to participate in auctions. This gives broad access to NZUs sold at auction, subject to managing the Government's exposure to credit risk. Auction design should ensure equal access for all participants, and that larger participants do not have an advantage. The benefits of a market that is sufficiently open to smaller participants must be balanced against the cost effectiveness of the system, and reduce any undue administrative burden.
- **Simplicity**: The auctioning system should be simple, easy to use and understand, so any qualifying bidder, regardless of their auctioning experience, can participate effectively. Simplicity also fosters participation, which helps avoid market abuse.

The auction design should support market efficiency. This criterion focuses on market price dynamics, and particularly on implications for strategic bidding and price volatility. These elements are defined as follows:

- **Strategic bidding** refers to the situation where bidders have incentives to use strategies that reduce the clearing price. This directly affects market efficiency as it prevents the true value of NZUs being revealed. Strategic bidding does not necessarily imply market manipulation, although it may sometimes be difficult to distinguish between the two.
- **Price volatility** is known to dampen incentives for low-emissions investment by increasing the carbon price risk. Auctions themselves should contribute little, if anything, to the volatility of prices. In a well-functioning secondary spot market, the residual risk in NZUs prices will not come from auctioning NZUs, but rather from shocks to demand or supply. Still, depending on market conditions, some auction design elements may contribute to volatility (eg, opportunistic changes to the auction calendar).

The auction design should preserve market integrity, which is defined in the following ways:

- **Prevention of collusion and manipulation**. Auctions should be designed to minimise opportunities for collusion between participants or for manipulation of the clearing price. Auctions should limit opportunities for manipulative 'hoarding'. This can happen when participants bid prices above the competitive price, hoard allowances, and then 'squeeze' the market as the compliance deadline approaches. This can be a particular issue in an under-supplied market.
- **Governance and oversight**. The auctioning system should operate at arm's length from the Government's role as a policy decision-maker, and rules should control the Government's release of market-sensitive information.

The auction design should support overall market transparency. Pre-auction information (eg, operating rules, schedule and volumes) and results (eg, clearing price) should be publicly available and accessible to all in a timely manner, while ensuring confidentiality and having regard to collusion risks. This will provide certainty about the auctioning process.

Approach to outlining and assessing options

The proposals are outlined to transparently assess options against objectives and criteria, and to provide reasoning for preferred options. In general, the format involves: outlining the choice required; identifying the options; describing how options are assessed against the relevant criteria (refer table 5 for notation). The details of the proposal are outlined in the main body of this document, and the impact analyses are in this appendix.

This approach allows stakeholders to comment on our understanding of the current situation, problems and assessment of options, and provide information on what should be considered in final regulatory policy decisions. This feedback is a very important source of evidence that helps the Government to strengthen proposals, understand impacts, and take decisions about how to manage them.

Table 5: Symbols used in the tables

Impact	Symbol	Impact	Symbol
Significant positive impact or lower risk	✓✓	Significant negative impact or higher risk	xx
Positive impact or lower risk	✓	Negative impact or higher risk	x
No change	o		

Impact analysis of proposals

Distribution of auction volume

Preferred option: Even distribution of volume

Table 6: Assessment of options for annual auction volume distribution

Criterion	Option 1: Even distribution	Option 2: Weighted distribution
Minimise administrative and transaction costs	✓	x
Ensure consistency and proportionality	✓	x
Support market efficiency	✓	x
Preserve market integrity	o	o
Support transparency	✓	o

Minimise administrative and transaction costs

Even distribution of volume is the simplest option for the auction operator, and gives the most clarity to market participants. A weighted distribution would cost more to administer as it would require a process for determining and updating the weighting of volume across the year.

Consistency and proportionality

The simplicity of even distribution makes it easier for participants to determine their bidding strategies in advance and understand the distribution of volume across the year. On the other hand, if distribution is weighted, participants may need to adjust bidding strategies frequently to reflect increases or reductions in volume in different auctions.

Support market efficiency

If volumes are weighted around surrender dates, then providing additional volume before the surrender period could disrupt the secondary market. NZ ETS participants with compliance obligations are expected to plan their purchase or abatement strategies in advance, and not rely on additional NZUs being offered before the settlement period to meet their needs.

Impact analysis of unsold NZUs from auctions

Preferred option: Unsold NZUs added to next schedule auction

Table 7: Assessment of options for unsold NZUs

	Option 1: Unsold NZUs rolled into next auction	Option 2: Unsold NZUs spread across remainder of auctions
Minimise administrative and transaction costs	✓	x
Ensure consistency and proportionality	✓	✓
Support market efficiency	✓	✓
Preserve market integrity	o	o
Support transparency	o	o

Minimise administrative and transaction costs

Automatically rolling unsold NZUs into the next auction is the simplest option for the auction operator. Costs increase with more dynamic decision-making on redistributing NZUs.

Support market efficiency

Market efficiency is supported by the simplest option, option 1. However, it may be better supported by option 2. Setting limits on the proportion of auction volume that can come from ‘rolled over’ NZUs would prevent oversupply in an individual auction, which could dampen the clearing price.

Support transparency

Both options 1 and 2 are transparent as to process, but opaque as to how many NZUs could potentially be added to the volume of a scheduled auction. The latter will always be an unknown factor.

Impact analysis of auction timing

Preferred option: A three-hour bidding window (9.00am–12 noon) on the day of the auction

Table 8: Assessment of options for bidding window

	Option 1: Bidding window 9.00am–noon	Option 2: Longer bidding window
Minimise administrative and transaction costs	✓	x
Ensure consistency and proportionality	o	o
Support market efficiency	✓	x
Preserve market integrity	✓	o
Support transparency	o	o

Minimise administrative and transaction costs

A shorter bidding window is preferred as a longer window will increase the costs of overseeing trading behaviour. There are no additional administrative costs to the participants from an extended bidding window.

Support market efficiency

The 9am-12 noon bidding window allows enough time for bids to be compiled, submitted and confirmed, and for the clearing price to be published in time to allow for the secondary market to respond in the afternoon. A longer window will mean the market will take longer to learn the clearing price, and reduces the opportunity to respond on the same day.

Preserve market integrity

The smaller bidding window preferred in option 1 reduces the opportunities for collusion.

Impact analysis for hitting the cost containment reserve price trigger

Preferred option: A separate reserve auction open to all registered auction participants

Table 9: Assessment of options for the cost containment reserve

	Option 1: Separate reserve auction open to all registered auction participants	Option 2: Separate reserve auction limited to participants with surrender obligations	Option 3: Offer cost containment reserve volume within scheduled auctions
Minimise administrative and transaction costs	x	xx	✓
Ensure consistency and proportionality	✓	x	x
Support market efficiency	✓✓	✓	✓✓
Preserve market integrity	o	o	o
Support transparency	o	o	o

Minimise administrative and transaction costs

Holding a separate reserve auction (options 1 and 2) would have higher administration costs than offering cost containment reserve volume within a scheduled auction (option 3). Option 2 would have additional administration costs from the Government having to validate that only participants with compliance obligations can bid, and then also possibly track units from the cost containment reserve if their use is restricted.

Ensure consistency and proportionality

Separate reserve auctions following the same rules as scheduled auctions would be a simple way to disperse additional volume when prices become unacceptably high (option 1). Limiting participation in that separate auction for compliance reasons would mean that participants do not have equal access to the new volume, which is inconsistent. Offering volume within a scheduled auction may also be slightly less consistent, as it limits participation to those bidders who had decided to bid in that scheduled auction.

Option 1 may be preferable to option 2 as it ensures consistent treatment of all bidders and equal access to cost containment reserve units.

Support market efficiency

All options strongly support market efficiency. Option 1 would allow the market to respond to additional supply, effecting cost containment. It would also more efficiently distribute cost containment reserve volume within the market. Option 2 would direct these units to participants with greatest need, and eliminate the risk of this supply contributing to the stockpile.

Option 3 supports market efficiency by increasing the probability of demand being met at a scheduled auction, and ensuring rapid cost containment by immediately adding extra supply when prices are high.

Impact analysis for single or multiple price triggers

Table 10: Assessment of options for number of price triggers

	Option 1: Single price trigger	Option 2: Multiple price triggers
Minimise administrative and transaction costs	o	o
Ensure consistency and proportionality	✓	x
Support market efficiency	✓✓	x
Preserve market integrity	o	o
Support transparency	o	o

Ensure consistency and proportionality

Releasing the full reserve when a single price trigger is reached would be simpler for participants to understand, particularly considering that volumes could change mid-auction if more than one price trigger level is set and only a subset of the reserve volume is released at each trigger price.

Support market efficiency

Option 1 would allow the full reserve to be immediately released to the market. This would increase the chances that the demand for cost containment reserve units could be met, promoting greater market efficiency. There is substantial risk with Option 2 that demand may not be met at the lower price trigger levels as less supply would be offered. Depending on how many price trigger levels are set, the full reserve would only be released if the highest price trigger is hit.

Option 2 gives the Government another tool to manage cost containment reserve supply entering the market, but risks strategic bidding from participants to drive up the clearing price to ensure more volume can be released based on higher price triggers.

Impact analysis for the use of collateral

Preferred option: All participants submit collateral to bid in auctions

The Government prefers that each participant in an auction provide collateral, in the range of 10 per cent to 25 per cent of their expected maximum bid, which signals a commitment to the bidding process and protects against default risks.

Table 11: Assessment of options for collateral

	Option 1: Collateral is required	Option 2: Collateral is not required
Minimise administrative and transaction costs	x	✓
Ensure consistency and proportionality	✓	o
Support market efficiency	✓	x
Preserve market integrity	✓	x
Support transparency	✓	o

Minimise administrative and transaction costs

There will be administrative and transaction costs for participants and the Government if collateral is required. However, there would also be considerable costs to the Government to pursue and resolve a default settlement if there was no collateral to set against the debt.

Costs for participants to submit collateral, and for the Government to receive, report on, and return collateral are a necessary part of running financial services such as auctioning, and is good industry practice to protect the integrity of the market.

Support market efficiency

Providing collateral will ensure bidders are committed to the auctioning process and the market will not be flooded with recreational or opportunistic bidders. It will also deter strategic behaviour if the winning bidder refuses to pay in circumstances where the auction clearing price exceeds the spot price in the secondary market.

Preserve market integrity

The provision of some type of financial guarantee is standard industry practice. It is important that auctions are viewed as robust, credible, and a well-functioning part of the NZ ETS.

Impact analysis for minimum bid and lot size

Preferred option: Minimum bid set at 500 NZUs

Table 12: Assessment of options for minimum bid size

Criteria	Option 1: 1,000 units	Option 2: 500 units	Option 3: 100 units
Minimise administrative and transaction costs	o	o	x
Ensure consistency and proportionality	x	✓	✓
Support market efficiency	o	✓	✓

Minimise administrative and transaction costs

Costs may vary slightly between the options if a smaller minimum bid size leads to increased number of participants bidding at auction. A higher volume of bidders increases the administration necessary to manage intent to bid forms and collateral provided.

Ensure consistency and proportionality

A smaller minimum bid will allow access to the market for smaller participants. A minimum bid of 1000 NZUs may exclude some of these participants.

Support market efficiency

A lower minimum bid size will allow access to auctions for smaller bidders. Smaller bidders may currently encounter barriers to trading on the secondary market as it tends to support trading for larger bidders (through higher purchase minimums and price increments). This will support some participants with smaller surrender/repayment obligations to access the market without facing potentially higher costs by being required to use intermediaries.

Preferred option: Lot size of 500 NZUs

Table 13: Assessment of options for bid increments

Criteria	Option 1: 1,000 units	Option 2: 500 units	Option 3: 100 units
Minimise administrative and transaction costs	o	o	o
Ensure consistency and proportionality	x	✓	✓
Support market efficiency	✓	✓	x

Minimise administrative and transaction costs

Costs will not vary between the options.

Ensure consistency and proportionality

A smaller lot size will allow access to the market for smaller participants, whereas a lot size of 1000 NZUs may exclude some of these participants. A lot size of 500 NZUs provides consistency and simplicity for participants and the auction operator.

Support market efficiency

A smaller lots size results in a more variegated bidding demand curve.

Impact analysis for price increments

Table 8: Assessment of options for price increments

Criteria	Option 1: Small increment – $0.01 or $0.02	Option 2: $0.05 increment	Option 3: Larger price increment – $0.10
Minimise administrative and transaction costs	o	o	o
Ensure consistency and proportionality	o	✓	o
Support market efficiency	✓	✓	x

Minimise administrative and transaction costs

Administrative and transaction costs will not vary between the options.

Ensure consistency and proportionality

A price increment of $0.05 is consistent with common increments in the secondary market.

Support market efficiency

A smaller price increment lowers the chance of tied bids and results in a smoother demand curve.

Impact analysis for maximum bid allowance

No preferred option

Table 15: Assessment of options for maximum bid limit

Criteria	Option 1: Set a maximum bid limit	Option 3: No maximum bid limit, but retain the option
Minimise administrative and transaction costs	x	o
Ensure consistency and proportionality	✓	✓
Support market efficiency	o	o
Preserve market integrity	✓	o
Support market transparency	o	o

Minimise administrative and transaction costs

To deter market manipulation, the limit is likely to need to apply to the total volume of bids made by any group of companies with a common ownership. As a result, participants would be required to provide information in their pre-registration application about all the companies they own, partially own, or exercise de jure or de facto influence on. This would create an administrative burden for participants and for the auction operator, who would need to collect and assess the information. A simpler option may be to apply the bid limit to all bids by a single participant; however, this may not fully address market integrity risks.

Consistency and proportionality

If there is a risk of market manipulation, implementing a maximum bid limit increases fairness and accessibility. However, it may increase the cost and administrative burden involved in participating and running auctions. As a result, this criteria highlights the need to assess whether there is a risk of market manipulation and to balance that risk with the need to make auctioning widely accessible. Retaining the option to implement a limit if there was evidence of market manipulation may deter this behaviour.

Preserve market integrity

Implementing a maximum bid limit would better support market integrity. Without current evidence of market manipulation, it is difficult to assess the level of impact it would have.

Impact analysis for the method to resolve tied bids

Preferred option: Tied bid resolved by a random assignment by lot approach

The auctioning system requires a method for resolving tied bids. The Government prefers the simplest method, which is to randomly assign each tied lot with a number and allocate NZUs in increasing order until none remain. This method is a variation of the method used in auctions for other emissions trading schemes overseas.[29]

Table 16: Assessment of options for resolving tied bids

Criteria	Option 1: Random assignment by bid	Option 2 Random assignment by lot	Option 2: Pro-rata re-scaling
Minimise administrative and transaction costs	o	o	o
Ensure consistency and proportionality	x	o	✓
Support market efficiency	o		o
Preserve market integrity	✓	✓	o
Support market transparency	o		o

Consistency and proportionality

The random assignment approach may produce less consistent or proportional outcomes than pro-rata scaling of tied bids and there is a higher risk that tied bids at the clearing price may not receive any NZUs. This risk is slightly reduced in option 2 as opposed to option 1 because random numbers are assigned to individual lots rather than entire bids.

Preserve market integrity

The random assignment approach reduces the risk of collusion, because bidders attempting to coordinate their bids would be less certain of the quantities they would receive. However, this option also means that some market participants bidding at the clearing price may not receive any NZUs.

[29] For example, in the Regional Greenhouse Gas Initiative and California schemes, and in the EU ETS.

Impact analysis for approach to payment and delivery

Preferred option: Payment required before delivery of NZUs to successful bidder

Table 17: Assessment of options for settlement

Criteria	Option 1: Payment before delivery	Option 2: Delivery versus payment (concurrent exchange)
Minimise administrative and transaction costs	✓	x
Ensure consistency and proportionality	o	o
Support market efficiency	✓	✓
Preserve market integrity	✓	✓
Support market transparency	o	o

Minimise administrative and transaction costs

Option 1 reduces the number of parties required for settlement and simplifies the process, which reduces costs. The use of additional clearing house services required for a concurrent exchange to fulfil settlement (option 2) would increase transaction costs, as the clearing house would charge a fee. For a clearing house to be used for settlement, it would need to have authority to hold NZUs as Crown assets in its Registry account. There are likely to be additional costs for the Government if a change to current legislation affecting the Registry is required.

Support market efficiency

Both options protect against defaults, but with option 2 the Government would have to transfer NZUs from the Crown account to the clearing house account and would have to retrieve them in the case of a default. With option 1 the NZUs would not have left the Crown account.

Appendix 2: Auctioning-related amendments in the Climate Change Response (Emissions Trading Reform) Amendment Bill

Table 18: Key sections of the Climate Change Response (Emissions Trading Reform) Amendment Bill relevant to auctioning

Bill section	Section title	Contents
6A	Minister's power to sell by auction	Unchanged from existing legislation, this clause empowers the Minister to sell NZUs by auction within a prescribed overall limit and to appoint agents to conduct the sale.
30GA	Regulations for auctions to sell New Zealand Units	Enables regulations to be made to prescribe matters relating to the auctioning of NZUs under section 6A. This section also outlines which matters 'must' and 'may' be the subject of regulations if regulations are recommended. Matters that 'must' be regulated include the format of the auction, a schedule for auctions, and the start date of auctioning.
30GB	Regulations about overall limits and price controls for units	Enables regulations to be made to specify overall limits for the number of NZUs to be auctioned in specific years. Also enables regulations to be made to specify the values of price controls such as the cost containment reserve and price floor.
30GC	Requirements for regulations about overall limits and price control settings for units	Specifies the regulatory requirements that must be met to specify price controls, along with matters the Minister must consider when setting these limits and price controls.
30GD	Regulations for auction monitor	Enables regulations to be made to appoint an auction monitor, who must be independent of any auction agents or participants. Enables regulations to be set specifying the role of the auction monitor.
30GE	Sharing information with auction monitor	Facilitates the sharing of information with the auction monitor from the Environmental Protection Authority, the Registrar, the Chief Executive, and any auction agent.
30GF	Obligation of confidentiality on auction monitor	Specifies the confidentiality obligations of the auction monitor, with the exception of providing regular reporting on its functions, or supplying aggregate statistical information.
30H	Procedure for certain regulations relating to units and auctions	Specifies the requirement for the Minister to consult with those affected before making regulations and outlines when regulations come into force.
30J	Signing false declaration for regulations made under section 30G or 30GA	Outlines the penalty that applies if a person signs a declaration they know to be false, that is required under the noted sections. This includes regulations related to auctioning, so will apply to declarations required to participate in auctions.

Appendix 3: Glossary of terms and abbreviations

Glossary of terms

Clearing price	The price that all bidders for that particular auction will pay for their units.
Cost containment reserve	A price ceiling for the NZ ETS that will be incorporated into the auctioning system.
Date of delivery	Date at which winning bidders will receive the units in their Registry account.
Date of payment	Date at which payment will be required from winning bidders.
Demand curve	A graphical representation of the relationship between the price of a good or service and the quantity demanded for a given period of time.
Emissions budgets	Under the Zero Carbon Bill, a series of emissions budgets will act as 'stepping stones' towards New Zealand's domestic 2050 target. Each emissions budget will set the amount of greenhouse gases that can be emitted over a five year period.
Lot size	Number of New Zealand Units associated with one lot of the auctioned product.
New Zealand Emissions Trading Register (the Registry) account holders	Businesses or people who own NZUs and therefore have an account in the Registry that records how many units they hold.
Price floor	A price control mechanism that will be incorporated into the NZ ETS auctioning system. The Government would not sell any units at auction below the level at which the price floor is set. Price floors provide a tool to help manage unacceptably low prices in the NZ ETS, as they ensure units will not be sold below a pre-determined, published price.
Price ceiling	A tool to help manage unacceptably high prices in the NZ ETS. There are different types of price ceilings utilised by emissions trading schemes around the world. The NZ ETS will use a cost containment reserve incorporated into the auctioning system. If a price trigger is met in an auction, a pre-determined number of New Zealand Units will be released for sale to market. The additional supply will reduce prices.
Registry	The New Zealand Emissions Trading Register is our national registry for emissions units, including those owned by the Crown. Its purpose it to ensure the accurate, transparent and efficient accounting of New Zealand Units. The Registry is operated by the Environment Protection Authority.
Reserve auction	A separate auction held to auction volume from the cost containment reserve if the price trigger is hit in a previous scheduled auction.
Settlement price	The price a bidder pays for their units to settle their transaction, ie, clearing price times the number of units purchased, and perhaps less any collateral (if applicable).
Volume	A number of NZUs.

Abbreviations

EEX	The European Energy Exchange – the main auction platform in the European Union's Emissions Trading Scheme
ETS	Emissions Trading Scheme
EU ETS	Emissions Trading Scheme for the European Union
ILOC	Irrevocable letter of credit
NZ ETS	New Zealand Emissions Trading Scheme
NZU	New Zealand Unit of emission (1 metric tonne of CO_2 or CO_2 equivalent)
RGGI	Regional Greenhouse Gas Initiative
WCI	Western Climate Initiative – provides administrative and technical services for emissions trading schemes, including joint auctions between the California and Quebec schemes.