Ministry for the Environment
Manatū Mō Te Taiao

PROACTIVE RELEASE COVERSHEET: NZ ETS unit limits and price control settings for 2025-2029

Minister	Hon Simon Watts	**Portfolio**	Climate Change
Name of package	New Zealand Emissions Trading Scheme unit limits and price control settings for 2025-2029	**Date to be published**	Recommend 20 August 2024, if approved by the Minister

List of documents that have been proactively released		
Date	***Title***	***Author***
On approval by Minister	1. Briefing: *Key issues and options for NZ ETS settings*	Ministry for the Environment
	2. Cabinet paper*: New Zealand Emissions Trading Scheme unit limits and price control settings for 2025-2029*	Office of the Minister of Climate Change
	3. Cabinet minute: CBC-24-MIN-0083 *New Zealand Emissions Trading Scheme unit limits and price control settings for 2025-2029*	Cabinet Office

Information redacted **YES / ~~NO~~**

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Summary of reasons for redaction

Some information has been withheld for the reasons of maintaining legal professional privilege and the confidentiality of advice tendered by officials.

Ministry for the Environment
Manatū Mō Te Taiao

Briefing: Key issues and options for NZ ETS settings

Date submitted: 11 July 2024
Tracking number: BRF-4919
Sub Security level: Sensitive
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Simon WATTS **Minister of Climate Change**	**Discuss** with officials and **provide** direction on options	12 July 2024

Actions for Minister's office staff
Forward this briefing to the associate Minister of Climate Change. **Return** the signed briefing to the Ministry for the Environment (ministerials@mfe.govt.nz).

Appendices and attachments
Appendix 1: Summary of ETS Market Model results Appendix 2: Options analysis for key issues Appendix 3: Mandatory consideration required by the Act Appendix 4: Slides for discussion on key issues and options for NZ ETS settings

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Minister's comments

Key issues and options for NZ ETS settings

Key messages

1. You are due to take final policy decisions on NZ ETS settings to Cabinet on 7 August 2024. NZ ETS settings include the number of units supplied at auction (unit limits) and auction price control settings.

2. The Government's decisions on NZ ETS settings will form a key part of the second emissions reduction plan (ERP2), due to be published at the end of this year, and will contribute to its sufficiency. These decisions will be closely scrutinised, and provide an important opportunity to support market confidence and stability.

3. The NZ ETS market is currently over-supplied, which could cause emissions to exceed the limits set by emissions budgets. The imbalance puts downward pressure on NZU prices, and is evidenced by successive auctions not clearing in 2023, and in June 2024, and the March 2024 auction partially clearing at floor price.

4. This briefing seeks your decisions on key issues determining the options presented (as outlined throughout the briefing) and direction on the options that will be presented in the Cabinet paper. We are meeting you on Friday 12 July to discuss and receive your feedback.

5. NZ ETS settings decisions are governed by the framework set out in the Climate Change Response Act 2002 ("the Act"). Your recommendations on NZ ETS settings must meet "accordance tests" set out in sections 30GC(2) and (3) of the Act. You must be satisfied that the settings are "in accordance with" any emissions budget, NDC currently in place and with the 2050 target. Notably, nothing less than "strict accordance" is required with the 2050 target.

6. S9(2)(h) [redacted]

7. NZ ETS unit supply settings take into account all sources of NZU supply (including industrial allocation, and the units currently held in the stockpile), as well as the share of the emissions budget allocated to emissions outside the NZ ETS.

8. For unit limits, the key judgement involved in this year's decisions is on how to assess and manage the supply that may be available from the stockpile. While the stockpile is an important part of the proper functioning of the ETS, the inability to control the timing of surrender of these NZUs creates uncertainty around achievement of emissions budgets and targets.

9. Managing this uncertainty involves:

    i Assessing the size of the "surplus" stockpile – these are the NZUs that are readily available to gross emitters and likely to allow for excess emissions

    ii Deciding how quickly these surplus NZUs should be drawn from the stockpile.

10. Our assessment is that the surplus stockpile has increased in size from a central estimate of 49.1M NZUs in 2022 to a central estimate of 67.3 M NZUs. This is due to an increase in post-1989 forests registering in the scheme, a slight decrease in units held for hedging by non-forestry emitters, and an increasing rate of units held by pre-1990 foresters being used for surrenders, showing these units are more liquid than previously assumed.

11. Our assessment differs slightly from the Commission's assessment because we have incorporated recently released data. This includes the release of the 2024 Inventory, updated industrial allocation forecasts, and using the stockpile as of December 2023, instead of September 2023.

12. We have engaged EY to provide an independent review of the analysis, methodologies and assumptions underlying our assessment of the stockpile. The review is not yet complete so may result in slight adjustments to this assessment.

13. Given this increase in the size of the surplus stockpile, we do not consider that status quo settings would meet the accordance test, due to the low probability of meeting the emissions budgets and targets. A reduction in auction volumes is therefore required.

14. Table 1 sets out two options for adjusting unit limits. Both options involve a reduction in unit volumes to reduce the stockpile. In our assessment, both of these options presented may be able meet accordance requirements but with different levels of risk. S9(2)(h) [redacted] Likelihood of achieving emissions targets is the core criteria for comparing the options.

Table 1: Options for ETS unit supply settings 2025-2029.

Option	Description	Total auction volumes 2025-29 (millions NZUs)
Status quo	Current settings	45.1
1. Full drawdown option	Minimum reduction to auction volumes to draw down the surplus stockpile by 100% by 2030	21.2 (-23.9 from status quo)
2: Partial drawdown option	Reduction in auction volumes to draw down the surplus stockpile by 80% by 2030	33.8 (-11.3)
Climate Change Commission recommended	No longer relevant due to new data.	22.7 (-22.4)

15. Option 1 is more likely to meet emissions targets and therefore to meet the accordance tests, because it reduces auction volumes to a level that would eliminate the estimated surplus stockpile within the EB2. Units would be left in the surplus stockpile by 2030 only if net emissions were below the target level (i.e. if emissions budgets were over-achieved). Indicative modelling suggests that under this option:

    i NZU prices could rise to around $105 by 2029, which would correspond to household expenditure on emissions of around $770 per annum for the average household. This compares with a projected rise in NZU prices to around $85 by 2029 under status quo settings, about $625 per annum for the average household.

ii Auction revenue across the period is projected at $1.6-1.8 billion, which is $1.6 billion lower than status quo (assuming all auctions clear in the settings period; there is a greater risk of auctions not clearing under the status quo).

16. A key assumption in these revenue projections is that all auctions clear over the settings period. In practice, the relationship between auction volumes and revenues is not as simple as “auctioning fewer units means less revenue”. In a scenario where the Government decided not to change current ETS settings, the likelihood of auctions fully clearing this calendar year would be much reduced, especially compared with option one. Reflecting these dynamics, actual auction revenue may actually be higher in 2024 under option one relative to the status quo.

17. Option 2 is an example of an approach that involves less than a full drawdown of the surplus. For the purposes of illustration, we have used 80%. Drawing down a portion of the surplus reduces the risk it poses. However, compared with Option 1, there would be a greater risk of not achieving emissions targets because it allows for portion of the surplus stockpile to remain in place by 2030. This could allow either for excess emissions during EB2, if these units are accessed and surrendered by emitters, and/or carries a surplus forward into EB3.

18. Although we consider that it may be possible to justify this option as meeting the accordance tests, it will carry higher risk due to the lower probability of achieving targets, S9(2)(h) [redacted] Under this option, modelling suggests that:

i NZU prices could rise to around $95 by 2029, with average household costs of $685 per annum.

ii Auction revenue across the period is projected as $2.5-2.7 billion, $0.7 billion lower than status quo (assuming all auctions clear in the settings period).

19. The impacts on near-term market confidence are likely to differ significantly between the two options. Maintaining the historic and understood approach of aligning settings to eliminate the surplus by 2030 (as recommended by the Commission) in Option 1 is more likely to support market confidence and secondary market pricing. The potential risks of a negative market reaction to Option 2 could be mitigated, at least to some extent, by the way in which the decision was communicated and explained. S9(2)(h) [redacted]

20. From the standpoint of advancing your climate change mitigation policy objectives, our recommendation would be that you propose Option 1 to Cabinet. This option provides the highest chance of achieving emissions targets, and supports market confidence by sending a clear, positive signal about the Government’s intention to manage the ETS in line with emissions targets. However, Option 2 could be considered if Ministers are concerned about the wider implications of tighter auction supply and the associated likelihood of higher NZU prices.

21. We seek your direction on whether you wish to present a preferred option to Cabinet, or whether you wish to present options without expressing a preference between them.

22. An accordance assessment of the options you wish to present to Cabinet will be attached to the draft Cabinet paper. Two key general insights arising from the accordance assessment to date are:

    i Accordance with the NDC is dependent on the existing government decision that the NDC will be met through a combination of domestic abatement and international purchasing. S9(2)(h) [redacted]

    ii The ETS is limited in its ability to drive achievement of emissions budget 3 and the 2050 target due to emissions outside the ETS. Additional policies to increase removals and emission reductions outside the ETS will be needed.

23. If you were interested in aiming to over-achieve on emissions budgets, so as to reduce overall levels of risk and seek to support achievement of the NDC, you could consider *further* tightening the ETS cap and reducing auction volumes. You could justify this with reference to the 4Mt of reductions expected from New Zealand Steel's new electric arc furnace. Reducing auction volumes by 4M units across the settings period would "lock in" this abatement, and manage the risk of the waterbed effect negating the emissions benefit of this project. This option was included in the consultation document, with most submitters favouring it.

24. We recommend retaining the price control settings in current regulations, updated for recent inflation forecasts and extended to 2029. Modelling results suggest that the current price corridor created by auction floor and cost containment reserve triggers remain fit for purpose at this stage. Lowering price control settings risks undermining market confidence and impacting on the likelihood of future auctions clearing in the near term. Most consultation feedback does not support lowering price control settings.

25. Once we have received your feedback, a draft Cabinet paper will be provided for your feedback. We anticipate Ministerial consultation from 17 July to 29 July, ahead of lodgement on 1 August. We will continue working closely with key agencies during this time.

Recommendations

We recommend that you:

1. discuss and provide feedback on key choices and options:

Key issues	Key choices	Decision
Align with emission targets and allocate emissions budgets to NZ ETS and non-NZ ETS sectors	Status quo approach: allocate emissions budgets to NZ ETS by aligning with the 2024 Greenhouse Gas Inventory.	Yes | No
	In addition to above, further tighten unit limits to account for the NZ Steel abatement	Yes | No
Set the surplus reduction volume	Draw down the new estimate of surplus stockpile by 80% by 2030	Include **option 2** partial drawdown in the Cabinet paper as a preferred option; OR
	Draw down the new estimate of surplus stockpile to zero by 2030	Include full drawdown in the Cabinet paper as a preferred **option 1**; OR
	Present **both options** in the Cabinet paper without specifying a preferred option	
Price control settings	Status quo for auction price controls (including auction price floor, cost containment reserve price, and cost containment reserve	Yes | No
	Lowering auction price controls	Yes | No

Signatures

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Climate Change Mitigation and Resource Efficiency
11 July 2024

Hon Simon WATTS
Minister of Climate Change
Date

Key issues and options for ETS settings

Purpose

1. This briefing seeks your decisions on the key issues outlined in the briefing paper and your feedback on options for inclusion in the Cabinet paper.

Background

2. The Government's strategy is to take a least cost approach to tackling the climate challenge and achieving climate targets. As per this strategy, the New Zealand Emissions Trading Scheme (ETS) is intended to be the primary tool to deliver on that strategy.

3. You are due to take final policy decisions on ETS settings to Cabinet on 7 August 2024. ETS settings include volume of units supplied at auction (unit limits) and auction price controls.

4. These decisions will form a key part of the second emissions reduction plan (ERP2), due to be published at the end of this year, and will contribute to its sufficiency. The Government's decisions on ETS settings will be closely scrutinised, and provide an important opportunity to support market confidence and stability.

5. ETS unit limits and auction price control settings are prescribed in the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020. These settings are required to be reviewed and updated every year, with a fifth year added to the regulations (2029 in this case). This provides the Government the ability to address any issues that arise for a particular year, to ensure that ETS settings stay on track to be in accordance with emissions budgets and targets. This adaptive management approach also provides certainty and stability to the market.

6. Consultation on ETS settings ran from 15 May to 14 June. In total, 106 submissions were received from experts, NGOs, businesses, and individuals. Submissions generally support reducing unit limits for the next five years consistent with the Commission's recommendations and maintaining price control settings, largely in line with the Commission's recommendations. A summary of submissions will be attached to the draft Cabinet paper.

7. Updates to ETS settings must be published by 30 September 2024. This means Cabinet's decision must be sought soon to meet this statutory deadline. We are seeking your decision on key choices that will inform the final options for the Cabinet paper.

S9(2)(h) [redacted]

8. S9(2)(h) [redacted]

9. S9(2)(h) [redacted]

    [redacted] [redacted]

    [redacted] [redacted]

10. S9(2)(h) [redacted]

11. S9(2)(h) [redacted]

12. S9(2)(h) [redacted]

13. S9(2)(h) [redacted]

14. S9(2)(h) [redacted]

15. S9(2)(h) [redacted]

16. S9(2)(h) [redacted]

Key issues and choices for NZ ETS settings this year

17. Within the legal framework (i.e. the accordance test), NZ ETS settings functions as a lever to impact supply needed to achieve the emissions budgets and targets. Calculating

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[1] S9(2)(h) [redacted]

unit limits therefore involves allocating a portion of emissions permitted under the NZ ETS, then factors in the current and projected levels of supply in the market.

18. This is the methodology we use for calculating unit limits, which was presented in the consultation document. We also considered price control settings needed to drive emissions reduction to achieve emissions budgets and targets.

19. We have highlighted the key issues as consulted this year, against the corresponding step for unit limits, as well as the key issue for price control settings.

Table 2: Key issues

Step	Key issue
1 & 2. Align with emission targets and allocate emissions budgets to NZ ETS and non-NZ ETS sectors	Update demonstration pathway that aligns with targets and ETS/non-ETS split for methodological updates in the 2024 Greenhouse Gas Inventory. This has the effect of slightly overachieving emissions budgets (by 1.9Mt over 2025-29). Issue - should unit limits be further tightened to account for unanticipated emissions reductions when the emissions budgets were set i.e. NZ Steel electric arc furnace.
5. Set the surplus reduction volume	Update estimates of the surplus stockpile using recent data. See slide 4 in **Appendix Four** for details. Issue – how quickly should the surplus be drawn down to manage risk to achieving emissions budgets.
Prince control settings	Analysis suggests the price control settings (auction floor price and cost containment reserve trigger prices) remain fit for purpose.

20. We have summarised our analysis for these key issues below, including options that we do not recommend and options that present lower certainty of meeting the accordance test. A detailed options analysis including pros and cons is attached at **Appendix Two**.

21. The assessment of pros and cons are against mandatory matters and additional matters you must consider as required by the Act, which is attached as **Appendix Three**.

22. Combination of these key choices informed the two options we have outlined in this briefing.

23. The other unit limit calculation steps are mechanical adjustments to account for the discrepancy between the Inventory and the NZ ETS, and industrial allocation volumes.

24. The summary of submissions attached to the draft Cabinet paper will provide analysis on the key issues, as well as feedback on the calculation for each step, in more detail.

Meeting the NDC

25. ETS settings are unable to be in strict accordance with the NDC, as the gap between the NDC and emissions budgets is larger than the forecast auction volume under the status quo. In other words, all else equal, even not auctioning any units until 2030 would still not be sufficient to fill the NDC gap. The relevant legal requirement therefore is that ETS settings must be in general accordance with the NDC.

26. We have provided options for ETS settings this year underpinned by the core assumption that the Government (in the absence of action or statements to the contrary) intends to pursue a mix of domestic and offshore mitigation to meet the NDC, as per New Zealand's submission on the first NDC under the Paris Agreement. This submission and previous Cabinet decisions [CAB-21-MIN-0434 refers] provided the evidence base for general accordance last year.

27. S9(2)(f)(iv) [redacted]

Step 1 and Step 2: Aligning with emission targets, and allocating emissions budgets to NZ ETS and non-NZ ETS sectors

28. In these steps, domestic emission budgets are converted into annual caps on national emissions and then into an annual cap for ETS-covered emissions.

29. The status quo approach to step 1 and step 2 relies on updating the Commission's demonstration pathway, which we use as the year-by-year target pathway for achievement of emissions budgets, to reflect the most up to date inventory methodologies for estimating historic and future emissions. This methodology is now well-signalled and well-communicated to market participants and other stakeholders.

30. The current demonstration pathway was developed to underpin the emissions budgets, and was implicitly adopted by the last Government in the first emissions reduction plan. The second emissions reduction plan (ERP2) will set a new pathway to 2030, which can then be used for NZ ETS settings next year.

31. Two issues are raised by the use of the demonstration pathway this year:

    i Due to most recent 2024 inventory updates, the demonstration path now slightly over-achieves on emissions budgets (by 1.9Mt across 2025-2029),

    ii The demonstration path includes a split of "effort" between ETS and non-ETS sectors that will not perfectly reflect this Government's approach or policies, or latest developments in agriculture – interim projections conducted for ERP2 suggest that agricultural emissions may be 0.9Mt *lower* across the settings period than assumed by the demonstration path.

32. Using the demonstration path at steps 1 and 2, therefore, results in auction volumes being set at 2.8m lower than could be seen as *necessary* to achieve EB2. Settings which aim for some over-achievement of budgets can a) reduce overall uncertainty around achievement of emissions budgets, as part of a broader risk management approach and b) reduce the gap between budgets and the NDC through additional domestic abatement.

33. An alternative approach to estimating non-ETS emissions (Step 2) would be to try to reflect our emerging understanding of the shares of effort resulting from this Government's strategy. Given ERP2 is not yet finalised, the way we would do this is via using the interim projections used for ERP2 consultation. This projections approach is option 2 (see Table 1, Appendix Two). Under this option unit limits could increase by 0.9M in total over the next five years.

34. However, as outlined in **Table 1, Appendix Two**, option 2 carries risks and uncertainties. It worsens accordance with EB3 due to the additional NZUs available for auction. Adjusting the emissions allocated in the NZ ETS each year according to new projections may also undermine market certainty and predictability. Therefore, we recommend option 1. We have based our options development for this year on this methodology, recognising that it includes this over-achievement.

35. The relevance of submissions on this issue is not clear because projections have changed significantly since consultation. When we consulted, projections of non-ETS emissions were above the share of the emission budget. As the ERP2 projections were finalised however projections were much closer to their original position.

Adjusting for the impact of NZ Steel's electric arc furnace project

36. You may wish to consider aiming to further over-achieve on emissions budgets. Doing so reduces the level of overall risk to achievement of those budgets, as well as reduces the need for offshore abatement to achieve the NDC.

37. If you were interested in doing so, you could justify this with reference to the to the 4Mt of reductions expected from New Zealand Steel's new electric arc furnace (estimated to reduce emissions by 1Mt per annum from 2026). These reductions are additional the assumptions made when the demonstration path and emissions budgets were first set.

38. Reducing auction volumes by 4M units across the settings period would "lock in" this abatement, and manage the risk of the waterbed effect negating the emissions benefit of this project.

39. Doing so would mean the Government has decided to use the ETS to try to address the NDC gap, and would align with your expressed preference to achieve the NDC domestically as much as possible, as well as your ETS-led strategy. It will, however, place further upward pressure on ETS prices, compared to a scenario in which the 4M units are released via auction.

40. This question was tested in consultation – the majority of submitters support making the additional adjustment because it would put New Zealand in a better position to achieve its climate targets, and reduce offshore abatement required to meet the NDC.

41. We have outlined the pros and cons of the status quo approach and making the additional adjustment for NZ Steel abatement in **Appendix Two table 1**. This improves accordance across all emission targets and reduces the NDC gap.

42. We seek your direction on whether you would like to include this adjustment in the options presented to Cabinet. Doing so would reduce auction volumes of any of the options considered by 4M across the settings period.

Key choices for step 1 and step 2:

i. Status quo for both step 1 and step 2

ii. In addition to above, for step 2 only, make additional reduction for the NZ Steel abatement.

Step 5: Surplus stockpile reductions

43. The NZ ETS market is currently over-supplied, which could cause emissions to exceed the limits set by emissions budgets. The imbalance puts downward pressure on NZU prices, and is evidenced by successive auctions not clearing in 2023, and in June 2024, and the March 2024 auction partially clearing at floor price.

44. The ability to bank NZUs in private accounts is an important feature of the NZ ETS to provide liquidity and allow participants to manage their future liabilities.

45. A portion of the NZUs held in private accounts are considered unlikely to come to market as they are held against future forestry harvest or forestry land use change liabilities (i.e. post 1989 forest (p89), pre 1990 forest (p90)), or are being used to hedge future surrender liabilities by non-foresters. The remainder is termed as 'surplus stockpile'.

46. While the stockpile is an important part of the proper functioning of the NZ ETS, the inability for the Government to control the timing of surrender of these NZUs, in particular the surplus stockpile, poses a risk to accordance with emissions budgets and targets.

47. The estimate of surplus stockpile estimate is based on the size of the stockpile at the end of December 2023. This is not the most recent estimate of the stockpile (30 June 2024), but we consider it most appropriate to use as it is most consistent with the NZ ETS settings architecture, where auction volumes and price control settings updates apply from the beginning of a calendar year.

48. We did not use the June 2024 data point, as doing so would risk underestimating the size of the surplus stockpile. June is the point in the annual cycle where unit holdings are always at their lowest (following the May deadline for surrenders), and does not account for units that may be sold at remaining auctions in a calendar year. S9(2)(h) [redacted]

49. The ETS settings consultation used a 30 September 2023 stockpile estimate, as this was what the Commission had included in their advice to you[2]. The Commission's technical annex encouraged the Government to use December data to underpin its decisions, as it would reflect the outcome of the December auction (which did not clear).

50. Our estimate of the surplus stockpile (67.3M NZUs) is similar to the Commission's (68.0M NZUs). It uses recent data on how quickly holders of emission units from the pre-1990 forestry allocation plan are transferring these units to other accounts.

51. We have also made a small adjustment (0.6M NZUs) to the volume of units held by compliance participants for hedging purposes, to align with the data set out in steps 1 and 2. We do not have evidence to support a change to the volume of units held by post-1989 foresters against their future harvest liabilities but will continue to review this portion of the stockpile.

52. Our estimates will be independently reviewed before being included in the Cabinet paper.

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[2] Refer to Climate Change Commission "Advice on NZ ETS unit limits and price control settings for 2025-2029- Technical Annex 1: Unit limit settings" February 2024

53. The Government can encourage faster use of the NZUs in the surplus stockpile by managing the number of NZUs it sells in auctions. Status quo ETS settings aim to draw 49 million NZUs from the stockpile by 2030. This is now highly unlikely to be in accordance with emissions budgets and targets, given the increase in size of the surplus stockpile and the risk this poses.

54. We have considered two options for adjusting unit limits, in addition to the status quo:

    Option 1: Draw down the new estimate of surplus stockpile to zero by 2030

    Option 2: Draw down the new estimate of surplus stockpile by 80% by 2030

55. In our assessment, both of these options may be able to meet accordance requirements but with different levels of risk. S9(2)(h) [redacted]

56. Option 1 is more likely to meet emissions targets and therefore to meet the accordance tests, because it reduces auction volumes to a level that would eliminate the estimated surplus stockpile within the EB2 period assuming net emissions at the target level. Units would be left in the surplus stockpile by 2030 only if net emissions were below the target level.

57. Option 2 is an example of an approach that involves less than a full drawdown of the surplus. For the purposes of illustration, we have used 80%. Drawing down a portion of the surplus reduces the risk it poses. However, compared with Option 1, there would be a greater risk of not achieving emissions targets because it allows for portion of the surplus stockpile to remain in place by 2030. This could allow either for excess emissions during EB2, if these units are accessed and surrendered by emitters, and/or carries a surplus forward into EB3.

58. Although we consider that it may be possible to justify this option as meeting the accordance tests, it will carry higher risk due to the lower probability of achieving targets, S9(2)(h) [redacted]

59. The impacts on near-term market confidence are likely to differ significantly between the two options. Maintaining the historic and understood approach of aligning settings to eliminate the surplus by 2030 (as recommended by the Commission) in Option 1 is more likely to support market confidence and secondary market pricing. The potential risks of a negative market reaction to Option 2 could be mitigated, at least to some extent, by the way in which the decision was communicated and explained. S9(2)(h) [redacted]

60. From the standpoint of advancing your climate change mitigation policy objectives, our recommendation would be that you propose Option 1 to Cabinet. This option provides the highest chance of achieving emissions targets, and supports market confidence by sending a clear, positive signal about the Government's intention to manage the ETS in line with emissions targets. However, Option 2 could be considered if Ministers are concerned about the wider implications of tighter auction supply and the associated likelihood of higher NZU prices. We will provide further advice on how Option 2 meets the accordance assessment alongside the draft Cabinet Paper.

Key choices:

i Option 1: Draw down the new estimate of surplus stockpile to zero by 2030

ii Option 2: Draw down the new estimate of surplus stockpile by 80% by 2030

61. How the surplus stockpile impacts auction volumes over 2025 to 2029 also depends on your decision regarding whether the tests for adjusting 2025 and 2026 ETS settings have been met. We have considered two options:

    iii Option 1: Update 2025-2029 unit limit settings with the new draw-down rate

    iv Option 2: Only apply the new draw-down rate for 2027-2029.

62. The Act specifies the requirements for when the first two years of settings can be updated. We consider that the requirements are met for two reasons:

    i The settings can be adjusted if units were sold at the minimum price in the year the amendments to ETS settings are made (s30GB(5)(a)(i)), as occurred in the March auction this year.

    ii The new liquid stockpile estimate is a significant change to the previous estimate. Continuing with the status quo underestimates the liquid stockpile, and creates risk to the accordance of ETS settings with emission targets. In our view, this change is a special circumstance and significantly impacts the proper functioning of the NZ ETS (s30GB(5)(b)(i)).

63. Based on analysis detailed in table 3 in Appendix Two, we recommend updating ETS settings for all years from 2025-2029 (Option 1). The important advantage of this option is that smoother adjustments to auction volumes supports market certainty and functioning, as opposed to a very steep drop in auction volumes from 2027. This approach was supported by the majority of submissions.

64. Options presented in this briefing assume adjustments are made to all years within the settings period.

Price control settings

65. Auction price control settings help manage the NZU price in auctions from being too high (which may unduly affect households and the economy) or lower than needed to meet emissions budgets and targets. The auction floor price acts as a release mechanism – if the market is sufficiently supplied that auctions fail to clear, the floor price prevents additional units being sold and tightens supply automatically.

66. We consulted on two options on NZ ETS settings price control settings: maintaining the status quo and lowering price control settings (both the auction price floor price and the cost containment reserve price). Submissions overall support maintaining the status quo price control settings. Many submissions noted that the auction price floor provides the only signal about future prices. Lowering price control settings was seen as destabilising the market and increasing uncertainty. Very few submissions supported lowering price control settings.

67. We used the NZ ETS Market model to test the minimum price needed to incentivise sufficient NZ ETS sector emission reductions to meet the emissions budgets. Modelling

the different unit supply options in the market model also provides insights on the cost containment reserve trigger price.

68. Modelling shows that the auction floor price as set in current regulations ($64 today, rising to $79 by 2028) is fit for purpose. While the modelling suggests marginal changes could be made, the auction floor price still needs to increase over time to incentivise sufficient emission reductions to meet the emissions budgets. However, lowering price control settings risks undermining market confidence and impacting on the likelihood of future auctions clearing in the near term. Therefore, we do not recommend lowering the auction price floor at this stage.

69. Similarly we do not recommend lowering the cost containment reserve trigger prices. In the modelling undertaken of the different options, projected prices did not exceed the current trigger prices in any of the scenarios tested (see Figure 1 in Appendix One), including in the more extreme sensitivity tests. The only scenario where prices neared the trigger price levels was in a situation of zero auction volumes, at which point price controls are no longer relevant. This suggests that the trigger price is sufficiently high that it will not unduly influence price discovery in the market3 and that it remains above the levels needed to encourage abatement and removals.

70. Table 4 **in Appendix Two** compares the status quo option and the option to lower the price control settings:

71. We also consulted on options for the size of the cost containment reserve. Submissions overall support maintaining the status quo volume of the cost containment reserve instead of increasing it to align with the amount of the surplus stockpile drawn down each year. The latter option would increase the risk the ETS settings do not accord with emission targets as more volume would be added to the market compared to the status quo.

72. Based on analysis detailed in Table 5, **Appendix Two,** we recommend making no changes to the cost containment reserve volume.

Key choices:

- i (recommended) Status quo for auction price controls (including auction price floor, cost containment reserve price, and cost containment reserve volume)
- ii (not recommended) Lowering auction price controls
- iii (not recommended) Increasing cost containment reserve volume to reflect surplus stockpile reduction

Options and initial accordance assessment for these options

73. Based on the above analysis, we present the following options for ETS settings.

[3] Prior to 2023, the substantially lower cost containment reserve trigger price acted as a “magnet” in the secondary market, in the absence of other price signals.

Table 2: Two option sets of ETS settings 2025-2029

Option	Description	Total auction volumes (millions NZUs)
Status quo	Extended to add 2029	45.1
1: Full drawdown option	Use the most up to date demonstration path estimate. Draw down surplus stockpile to zero by 2030. Update auction volume for all years. Maintain the current price control settings and adjust for forecast inflation from 2027.	21.2 (-23.9 from status quo)
2. Partial drawdown option	Use the most up to date demonstration path estimate. Draw down surplus stockpile by 80% by 2030. Update auction volume for all years. Maintain the current price control settings and adjust for forecast inflation from 2027.	33.8 (-11.3 from status quo)
Climate Change Commission recommended	No longer relevant due to new data (2024 Inventory instead of 2023 Inventory, updated industrial allocation forecasts, and using surplus stockpile estimate as of December 2023 instead of the September reference time).	22.7 (-22.4 from status quo)

74. Modelling shows that the full drawdown option and the partial drawdown option could achieve EB1 and EB2, with different levels of risk. The achievement of EB3 under both options would require additional measures, especially in the agricultural sector.

75. The key difference between the full drawdown option and the partial drawdown option is the level of risk associated with the achievement of EB2. The full drawdown option is likely to accord, as indicated by the modelling and because it mitigates the risk created by the surplus by the end of the EB2 period. Units would be left in the surplus stockpile by 2030 only if net emissions were below the target level i.e. if the emissions budget is over-achieved.

76. It is less clear whether the partial drawdown option would be in accordance. Modelling indicates that EB2 could be achieved under this option, and we consider that it may be possible to justify this option as meeting the accordance tests. However, it will carry higher risk due to the lower probability of achieving targets, S9(2)(h) [redacted]

77. The risk is greater because this option allows for portion of the surplus stockpile to remain in place by 2030. This could allow either for excess emissions during EB2, if these units are accessed and surrendered by emitters, and/or carries a surplus forward into EB3. The option also relies on the assumptions underpinning the modelling such as the inclusion of proposed ERP2 policies. S9(2)(h) [redacted]

S9(2)(h)

78. Both options could also include the adjustment for NZ Steel. Doing this would reduce auction volumes by 4M NZUs in the settings period, compared to the volumes in the table above.

79. We note that these numbers are still being reviewed for quality assurance. Final numbers will be included in the Cabinet paper.

80. We seek your direction on whether you wish to include both options presented in table 3 below in the draft Cabinet paper, or only one.

Table 3: Unit limits from options above

	2024	2025	2026	2027	2028	2029
Option 1: Full drawdown option	14.2	6.0	5.2	4.3	3.3	2.4
Option 2: Partial drawdown option	14.2	9.0	7.9	6.8	5.6	4.5
Climate Change Commission recommended (for reference)	*14.2*	*5.9*	*5.0*	*4.9*	*3.9*	*3.0*

Modelling insights

Insights from ETS Market Model

81. The NZ ETS Market Model estimates supply and demand for NZUs in the NZ ETS under different conditions, and can generate price projections based on supply and demand. We have tested the options above in the model to provide further insights and to help cross-check whether a given combination of unit settings and price controls are sufficient to achieve emissions budgets, NDCs, and the 2050 target. For the avoidance of doubt, these modelling results are not the accordance test, although they can help inform it.

82. Both options are projected to have total net emissions within emissions budget one limits.

83. Total net emissions in the full drawdown option are projected to be lower than the limits for emissions budgets two once ERP2 proposed policies are included, and the risk to budget achievement posed by the stockpile is reduced. Net emissions in emissions budget three for the full drawdown option are still above the budget once ERP2 policies are included. Including the NZ Steel adjustment for this option would increase the likelihood of achieving emissions budget three (and increase the buffer for emissions budget two).

84. Under the partial drawdown option, total net emissions just meet emissions budget two once ERP2 policies are factored in, but the stockpile risk to budget achievement is higher. Emissions budget three is exceeded even with proposed ERP2 policies.

85. Further modelling results for the options are attached in **Appendix One** and in the accompanying slide pack.

Potential fiscal impacts

86. While NZU auctions produce a cash inflow for the Crown, the newly auctioned NZUs are a liability for the Crown (representing the Crown's obligation to accept NZUs for ETS participants' emission responsibilities). Because both an asset (cash) and a liability (NZUs) of equal size have been created, no revenue is recognised at this point; ETS auctions are revenue-neutral despite generating a cash inflow. Revenue is only recorded once NZUs are surrendered. As a result, changes to ETS auction settings do not immediately impact Crown revenue despite impacting cash inflows.

87. We have developed projections of ETS cash proceeds based on the modelling results. The key assumption is that auctions clear in the settings period; there is a risk that they will not if prices rise by less than projected by the model, and this risk is highest under the status quo. The relationship between auction volumes and revenues is not linear. The upwards pressure placed on prices by reducing auction volumes partially offsets the volume reduction and, additionally, makes auctions more likely to clear.

88. Table 4 set out the projected ETS cash proceeds. Projected prices for the status quo sit just above the auction floor price, indicating the status quo is at most risk of future auctions not clearing. Under both the full and partial drawdown options there is projected to be a larger gap between projected prices and the auction floor price.

Table 4: Projected ETS cash proceeds

Options	Projected auction cash proceeds (2025-29)	Difference from status quo
Option 1: Full drawdown option	$1.6 - 1.8 billion	$1.6 billion
Option 2: Partial drawdown option	$2.5 - 2.7 billion	$0.7 billion
Status quo	$3.3 billion	

89. In a scenario where the Government decided not to change current ETS settings, the likelihood of auctions fully clearing this calendar year would be much reduced, especially compared with option one. Reflecting these dynamics, actual auction revenue may be higher in 2024 under option one relative to the status quo. This is relative and is not a view on the outright likelihood of auctions clearing or not for the remainder of 2024.

S9(2)(h) [redacted]

S9(2)(h) [redacted]

90. S9(2)(h) [redacted]

91. S9(2)(h) [redacted]

92. S9(2)(h) [redacted]

S9(2)(h) [redacted]

93. S9(2)(h) [redacted]

94. S9(2)(h) [redacted]

95. S9(2)(h) [redacted]

Treaty implications

96. We note Māori has a significant interest in the NZ ETS.

97. It is difficult to quantify and qualify the overall impact the options presented in this briefing on Māori because the impact could be positive, negative, and neutral depending on the role and capacity Māori play in the NZ ETS.

98. Therefore, we have highlighted the following impact in more general terms. For Māori forest owners or owners of land suitable for afforestation, these options would provide benefit for them because the likelihood of an increase in the NZU price. This would, in particular, provide benefits for those entered in the post-1989 permanent forest category, as well as to participants registered under averaging accounting (as they no longer face surrender obligations when they harvest the forests).

99. On the other hand, an increase in NZU price would lead to an increase in emissions costs being passed on from firms who face surrender obligations. This flow-on effect would see whānau Māori disproportionately impacted as they are over-represented in lower income groups, and therefore have more limited ability to absorb costs increases.

100. We hope to receive feedback on the impact NZ ETS has on Māori during the consultation on the second emissions reduction plan. This will feed into the final advice on the second emissions reduction plan, and where appropriate, analysis and advice relating to the NZ ETS.

Next steps

101. We will discuss this briefing with you on Friday 12 July. Timing is tight for updated settings to be published by 30 September, therefore we recommend you take a paper to Cabinet by 7 August at the latest.

102. While we have engaged with the Treasury, the Ministry for Primary Industries and the Ministry for Business, Innovation and Employment throughout this process, formal agency consultation will begin after we have provided you with this briefing. Table 5 below outlines the timeframe for next steps.

Table 5: Next steps for ETS settings 2024-2029

Stage	Date	Comment
Cabinet (Economic Policy) Committee process and drafting		
Agency consultation	11 July – 15 July	
Ministerial consultation	17 Jul – 29 Jul	
Lodgement	1 August	
Cabinet Committee	7 August	
Cabinet	12 August	
Drafting period	13 August – 10 Sep	

S9(2)(f)(iv)

[redacted]

103. The Cabinet paper will also include analysis and recommendations on two technical regulatory updates affecting the geothermal and liquid fossil fuel sectors, which were not delegated to you to directly issue drafting instructions.

Appendix One: Summary of ETS Market Model results

Modelling approach, key assumptions and caveats

1. The NZ ETS Market Model estimates supply and demand for NZUs in the NZ ETS under different conditions, and can generate price projections based on supply and demand. The model provides further insights and can help cross-check whether a given combination of unit settings and price controls are sufficient to achieve emissions budgets, NDCs, and the 2050 target. As with any modelling, these results should be interpreted as providing an indication of the potential impacts and orders of magnitude. For the avoidance of doubt, these modelling results are not the accordance test, although they can help inform it.

2. All models are subject to a high degree of uncertainty, which typically increases the further out in time they attempt to model, and rely on a range of model specific and other assumptions. Two particularly important assumptions, which have a large influence on the output of the analysis, are the assumptions we make around the behaviour of holders of stockpiled units and foresters' responsiveness to NZ ETS prices.

3. The model has been aligned with the ERP2 interim baseline projections and updated with other relevant data used elsewhere in the ETS unit and price control settings analysis, including latest projections for industrial allocation and estimates of the stockpile of NZUs.

4. Afforestation and therefore removals entering the ETS respond to ETS price signals. Some constraints have been placed on these afforestation rates to reflect recent downward revisions by MPI to the amount of land thought available and suitable for afforestation.

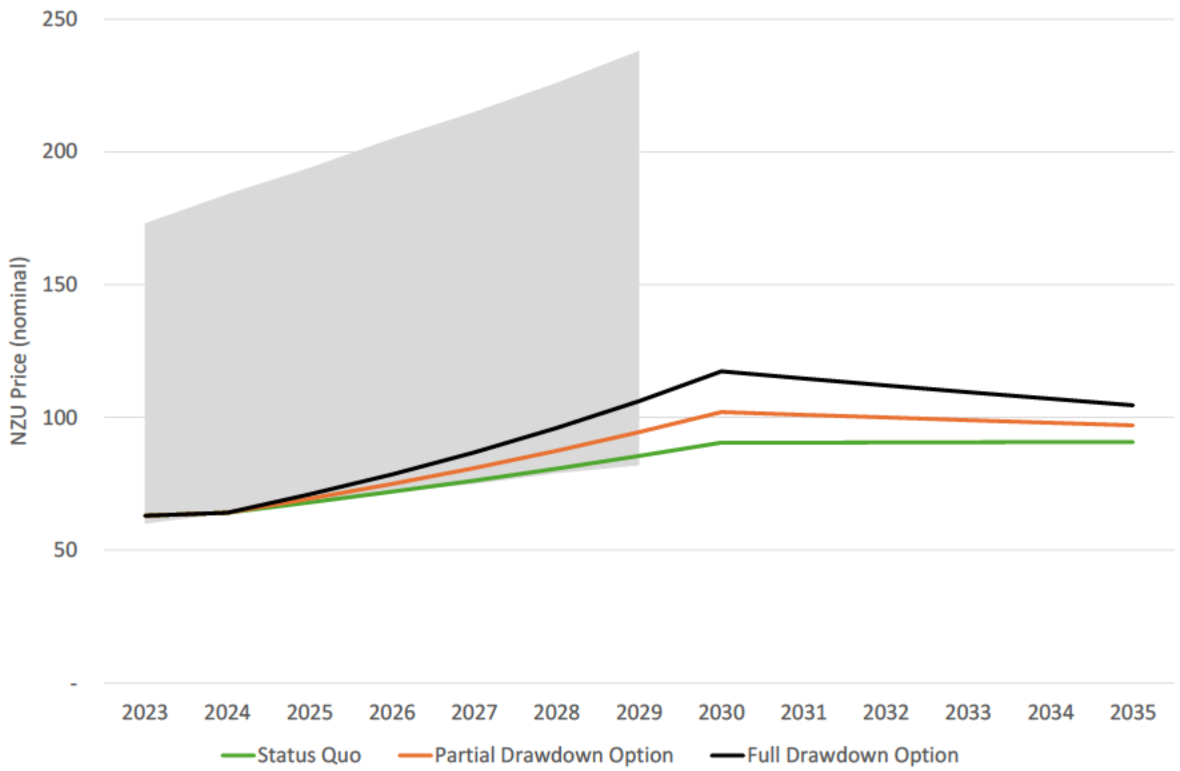
Projected market dynamics

Projected price pathways

5. Prices are estimated within the model based on minimizing any differences between supply and demand of NZUs in any given year. For the main analysis and to simulate shorter term price expectations by participants, a further assumption has been imposed that prices will rise until 2030 before falling (in inflation adjusted terms). 2030 is approximately when forestry units are expected to become the majority of NZU supply. This broadly reflects the same market dynamics assumed in the ERP2 price assumption, while allowing for different unit supply settings to determine the peak in price.

6. Figure 1 shows the projected central estimates of ETS prices for the different options. As would be expected, reducing auction volumes puts upward pressure on prices in the near term. The role of forestry in the medium to long term is expected to put downward pressure on prices. There is some uncertainty over when forestry will exert this downward pressure; it could happen sooner if market participants begin to change their price expectations more quickly than anticipated.

Figure 1 NZU Prices projected by the ETS Market Model



Note: Shaded area shows price controls corridor
Source: Ministry for the Environment

Impacts on households and inflation

7. Household expenditure on emissions prices is low, albeit unevenly distributed. At current ETS prices, expenditure on emissions makes up about $441 per annum (in 2024 dollar terms) for the average household (0.4% of gross income). The lowest income households spend around $232-250 per annum (1.3% of income) and the highest income households around $633-735 (0.3% of income). Most of the impact of emissions prices on households is via fuel prices, especially petrol. Household energy costs and indirect impacts on food prices via production and freight costs make modest contributions.

8. Based on the price projection for status quo settings, household expenditure on emissions prices is expected to increase to about $625 per annum (0.6% of gross income) by the end of the settings period. Under the partial drawdown option expenditure is expected to increase to $685 per annum (0.7% of gross income) and under the full drawdown option, $770 per annum (0.8% of gross income).

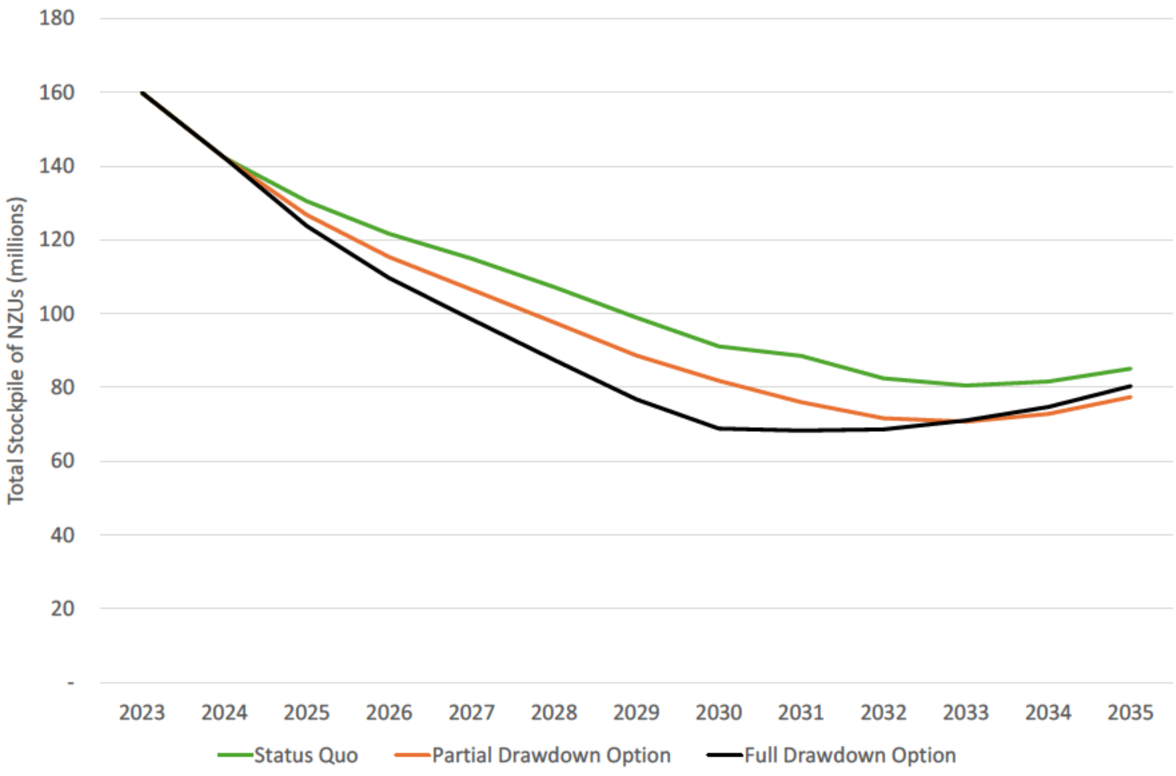
9. Each $10 increase in ETS prices is estimated to increase inflation as measured by the Consumer Price Index (CPI) by 0.13%. Over the ETS settings period, the partial drawdown options increase CPI inflation by around 0.07 percent per annum faster than the status quo settings, and around 0.15 percent per annum faster under the full drawdown option.

10. The indexation of main benefits offsets some of the impacts of emissions prices on the lowest income households.

Projected stockpile

11. One of the key choices outlined earlier is to what extent supply needs to be tightened to reduce the large stockpile of NZUs. Figure 2 shows projections of the total stockpile of units over time. While all options are expected to reduce the stockpile of units over the 2020s, those options that tighten supply the most reduce the stockpile by a larger amount, reducing the risk this poses to achieving emissions budgets. The stockpile is projected to increase again over the medium to long term, reflecting growing number of units being held against future harvest liabilities as the role of forestry in the ETS increases.

Figure 2 Total Stockpile of NZUs projected by the ETS Market Model



Source: Ministry for the Environment

Appendix Two: Options analysis for key issues

Table 1: Aligning with climate change targets

	Option 1: status quo approach	Option 2: Account for NZ Steel abatement and align with inventory updates
Pros	Reduces the risk and uncertainties associated with achieving emission budgets. Would support over achievement of emission budgets.	Further reduces the risk and uncertainties associated with achieving emission budgets. Would support further over achievement of emission budgets. Reduces gap to achieving NDC.
Cons	Maintains gap to achieving NDC. Higher emissions price than otherwise.	Further increases in emissions price than otherwise.

Table 2: Allocating emissions inside and outside the NZ ETS options

	Option 1: Status quo approach	Option 2: Projection based approach
Pros	No added risk or uncertainties about meeting the emissions budgets. Not departing from current approach to emissions budgets provides certainty to the market. Over-achievement of current emission budget improves NDC and EB3 accordance	If projections show non-ETS emissions are lower than their share of the emission budget, this option will 'lock in' those emissions reductions in the ETS.
Cons	Slightly lower auction volumes than option 2 in the current circumstance, where projections of non-ETS emissions are below their share of the emission budget.	Creates risks and uncertainties: If projections show non-ETS emissions are higher than their share of the emission budget, this option will reduce auction volumes compared to option 1. It also means ETS participants make up for the reduced achievement of non-ETS participants. 90% of biogenic methane emissions are outside the NZ ETS. The NZ ETS cannot achieve the 2030 biogenic methane target, nor can it compensate for insufficient reductions in agricultural biogenic methane.

Table 3: Surplus stockpile draw options

	Option 1: Updated all years	Option 2: Update 2027-2029 only
Pros	Smoother adjustment to auction volumes supports market certainty and functioning.	Lesser change than option 1 for 2025-2026.
Cons	Small negative impact on regulatory certainty as updates to unit settings will come into force next year (instead of settings remaining unchanged for two years). However, consultation feedback overall supports this option.	Sharp reduction of unit limits for 2027-2029 (from 12.6 million, 10.7 million for 2025-2026, to 3.7million, 2.8 million, and 1.9 million to 2027-2029) would impact market function as participants would have considerably less auction volumes from which to seek units to fulfil their compliance needs.

Table 4: Price control settings options

	Option 1: Status quo	Option 2: Lowering price control settings
Pros	No change supports market certainty and stability. Supports investment certainty. If auctions fail to clear, the surplus stockpile will be drawn down faster than expected in this year's ETS settings decisions, improving accordance with emission targets.	May help auctions to clear in the short term only, subject to significant uncertainties noted below.
Cons	A continued risk of auctions not clearing given the oversupply present in the market, existing low secondary market prices compared to the auction reserve price setting.	Downward pressure on prices. Lesser economic incentive for emission abatement and removals and decarbonising investments. Risk of accordance with emissions budgets and targets. Increased market uncertainty. Risk of perverse reaction to further downward pressure on price due. Increased likelihood of auctions not clearing, adding additional volume to stockpile.

Table 5: Cost containment reserve volume (CCR) options

	Option 1: Status quo	Option 2: Increase CCR volume to reflect surplus stockpile reductions
Pros	Limits additions to the surplus stockpile, therefore better accordance with emissions budgets and targets.	Could provide more protection against higher prices.
Cons	Less effective at preventing high NZU prices than option 2.	Reduced reduction in the surplus stockpile due to the higher volumes available compared to option 1. That extra volume means greater risk to accordance to emission targets.

Appendix Three: Mandatory considerations in the Act

Table 1: Matters in section 30GC of the Climate Change Response Act 2002	Comments
The Minister must be satisfied that the limits and price control settings are in accordance with: (a) the emissions budget and the nationally determined contribution (b) the 2050 target.	The NZ ETS must accord with New Zealand's emissions budgets, the NDC, and 2050 target, which all require either gross emissions reductions or increased emissions removals. Accordingly, settings should support emissions reductions and removals. The NZ ETS supports gross emissions reductions by providing a price signal to incentivise the uptake of low-emissions technology, energy efficiency measures, and other emissions reductions opportunities. The NZ ETS drives emission removals by providing a price signal that rewards removal activities such as afforestation. Due to the risk the stockpile creates to the achievement of emissions budgets, options that risk continuation of the stockpile will rate negatively on this criterion.
Matters the Minister must consider	
Projected trends in greenhouse gas emissions, including both emissions covered by the NZ ETS and those that are not covered.	This is considered when determining the unit limits as an input to emissions inside and outside the NZ ETS.
The proper functioning of the NZ ETS.	The NZ ETS should operate in a transparent and durable manner that allows participants to form expectations about supply and demand to support investment in domestic emissions abatement. The restrictions on how settings are updated allow changes to be made in response to new information, while maintaining regulatory predictability. Options that undermine this standard approach rate negatively in this criterion. This criterion also includes NZ ETS participants being able to attain and surrender NZUs to meet NZ ETS obligations. Ensuring the NZ ETS is functioning properly supports actions in emission reductions and removals, as well as the role of the NZ ETS in meeting emissions budgets and targets.
International climate change obligations and contracts New Zealand may have for accessing offshore mitigation from other carbon markets.	New Zealand has no current instruments or contracts with other jurisdictions to access emissions reductions in their carbon markets.
The forecast availability and costs of ways to reduce greenhouse gas emissions that may be needed for New Zealand to meet its emissions reduction targets.	This is derived from the policies and measures in the emissions reduction plan and is considered when the unit limits are calculated in step 1 and step 2.

The recommendations made by the Climate Change Commission (the Commission) under section 5ZOA of the Act.	The Commission's recommendations are included among the options considered for all NZ ETS unit settings decisions.
Any other matters that the Minister considers relevant	We have included one additional matters the Minister may consider relevant when considering this advice. This is the impact on price. This is because potential impact on NZU price may affect abatement efforts and therefore likelihood of achieving emissions budgets and targets.
Additional matters the Minister must consider in analysing price control settings	
The impact of emissions prices on households and the economy.	Settings manage the costs imposed by the NZ ETS on the economy, on households, and on different sectors and regions.
The level and trajectory of international emissions prices (including price controls in linked markets).	There are two reasons for considering the level and trajectory of international emissions prices. First, that international emissions prices provide a comparison of New Zealand's contribution to the global effort towards addressing climate change, notwithstanding fundamental differences exist between individual emission pricing schemes. Secondly, that offshore mitigation could be needed to meet emissions reduction targets in addition to reducing emissions domestically.
Relevant matters in section 30GC of the Climate Change Response Act 2002	**Criteria that reflect this matter**
Inflation.	All price control options have been adjusted for forecast inflation. Inflationary impacts of the NZU price are considered in the criterion 'the impact of emissions prices on households and the economy above'.

Appendix Four: Slides for discussion on key issues and options for NZ ETS settings

Discussion on key issues and option packages for NZ ETS settings

These slides are to aid discussion on *Briefing: Key issues and option packages for NZ ETS settings*

Ministry for the Environment
Manatū Mō Te Taiao

Summary

1. The purpose of the session is to discuss key choices that will inform the option/s you intend to present to Cabinet.
2. You must be satisfied that any option you present is in accordance with emission budgets, the NDC and the 2050 target.
3. There is clear evidence showing that the market is over-supplied and could cause emissions to exceed emissions budgets.
4. The key judgement is how to assess and manage the stockpile to address some of the over-supply. This includes:
   i. Assessment of the size of the surplus (i.e. readily available to gross emitters and therefore likely to result in excess emissions) portion of the stockpile, and
   ii. Deciding how quickly to reduce auction volumes to reduce the stockpile.
5. We seek feedback on the two options presented in the briefing, with the main difference being how quickly they aim to draw down the surplus portion of the stockpile. These are:
   1. Full drawdown option, which draws down the surplus stockpile fully by 2030
   2. Partial drawdown option, which draws down the surplus stockpile 80% by 2030
6. We seek your feedback on whether to further tighten the ETS cap (and therefore auction volumes) to “lock in” the abatement expected from New Zealand Steel’s new electric arc furnace.

Determining options and key choices

Step	Key updates and issues	Key choice*
1 & 2. Align with emission targets and allocate emissions budgets to NZ ETS and non-NZ ETS sectors	Updated demonstration pathway that aligns with targets and ETS/non-ETS split for methodological updates in the 2024 Greenhouse Gas Inventory. This has the effect of slightly overachieving emissions budgets (by 1.9Mt over 2025-29). Issue - should unit limits be further tightened to account for unanticipated emissions reductions when the emissions budgets were set i.e. NZ Steel electric arc furnace	Retain slight overachievement of emissions budgets as part of broader risk management approach and to contribute to NDC (-1.9M NZUs to auction, recommended) If unit limits should consider ERP2 interim emission projections for non-NZ ETS sectors (+0.9M NZUs to auction, not recommended) **Make additional reduction for the NZ Steel abatement (-4.0M NZUs to auction – key issue for discussion)**
3. Technical adjustments	Adjusts for differences between the Inventory and ETS coverage	No decision needed, technical update
4. Account for industrial allocation	Updates to projections include new electricity contracts for NZAS, NZ Steel's electric arc furnace, and resetting of allocative baselines this year	No decision needed now, choices on industrial allocation policy later this year may lead to further adjustments being necessary in 2025
5. Set the surplus reduction volume	Update estimates of the surplus stockpile using recent data. See slide 4 for details. Issue – how quickly should the surplus be drawn down to manage risk to achieving emissions budgets.	**Option 1: Draw down the surplus stockpile by 100% 2030 (recommended)** **Option 2: Draw down the surplus stockpile by 80% by 2030**
6. Set the approved overseas unit limit	No adjustment as there are no approved overseas units	No decision needed
7. Calculate the base auction volumes		Option 1 Full drawdown (Auction 21.2M NZUs over 2025-29, recommended) Option 2 Partial drawdown (Auction 33.8M NZUs over 2025-29) See slides 5-6 for further details
Price control settings	Analysis suggests the price control settings (auction floor price and cost containment reserve trigger prices) remain fit for purpose.	**Retain existing price control settings, adjusted for updated inflation forecasts (recommended)**

* For steps 1, bracketed figures show the change in auction volumes relative to the ETS cap for 2025-29. For step 7, bracketed figures show the remaining volume that can be auctioned.

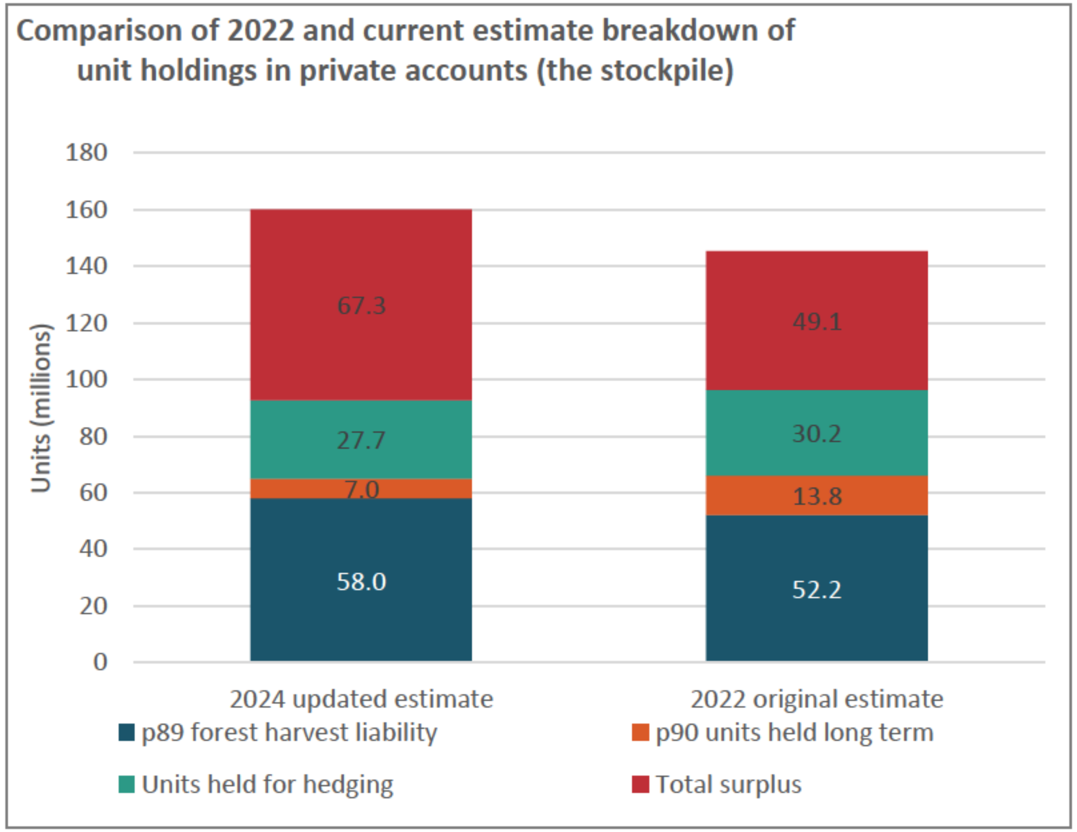
Key choice: surplus estimate

- The two key judgements for assessing and managing the stockpile are assessing the size of the surplus stockpile and how quickly these should be reduced.

- The size of the total stockpile increased from 145.3M NZUs in 2022 to 159.9M NZUs in Dec 2023*. Our estimate of the surplus stockpile has increased from an estimate of 49.1M NZUs in 2022 to an estimated 67.3M NZUs (similar to the Commission)

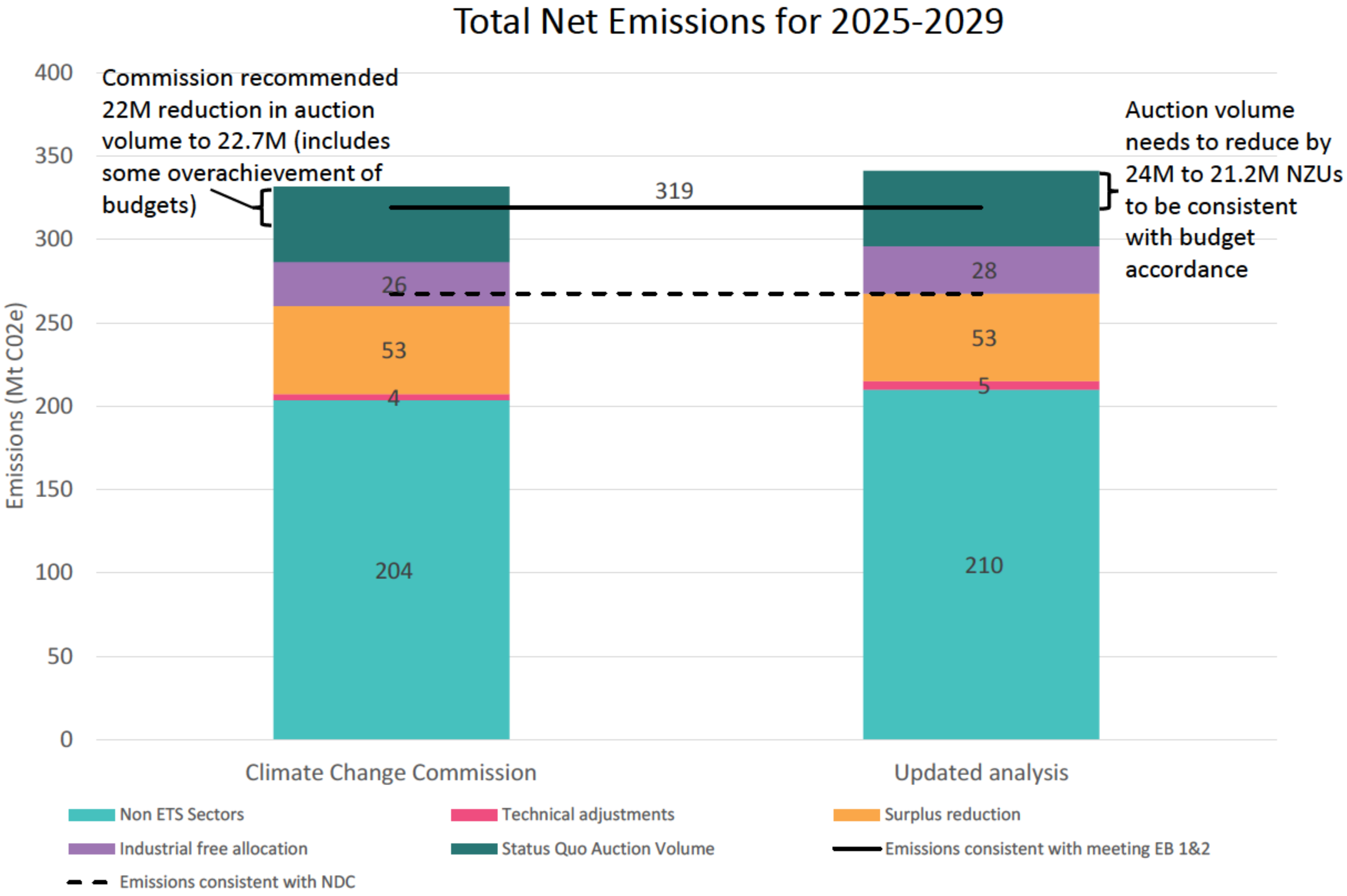
- The key choice is determining how quickly the surplus stockpile should be drawn down. We have assessed two options:

  1. Draw down the surplus stockpile by 100% 2030 (recommended)
  2. Draw down the surplus stockpile by 80% by 2030



* The stockpile as at December 2023 represents the full cycle of auctions, allocations and surrenders for 2023 and is the most appropriate point in time to estimate the stockpile for subsequent calendar year calculations. The most recent published stockpile figure (June 2024) does not reflect the full annual cycle, notably the remaining auctions for 2024.

Status quo auction volumes no longer align with budgets



The chart shows the breakdown of volumes following the 7-step methodology, as calculated by the Commission (LHS) and by MfE.

Differences compared with the Commission analysis:

- Step 1 and step 2 – updated for latest GHG inventory data, including for non-ETS sector emissions (+6).
- Taken together, the inventory and non-ETS sector emission updates mean the ETS share of emission budgets is higher (+2)
- Step 4 – updates to volumes allocated to IA due to NZ Steel, NZAS and allocative baseline update (+2)
- Step 5 – estimated surplus is similar
- Step 7 – the higher ETS share of budget is offset by more IA, leaving marginally fewer units to be auctioned (-1)

Option sets for NZ ETS settings

Ministry for the Environment
Manatū Mō Te Taiao

	Description	Total auction volumes 2025-29 (million NZUs)	Initial comments on accordance	Summary of modelling	Summary of other impacts
Status quo	Status quo volumes set out in regs, extended to 2029 (using the same rate of reduction)	45.1	Unlikely to accord, as the increase in the size of the surplus stockpile leads to a low probability of meeting the emissions budgets and targets. This is supported by modelling.	Modelling indicates this option can meet EB2 (with proposed ERP2 policies) but not EB3, and retains a significant stockpile risk to budget accordance.	Modelling projects NZU prices to rise to around $85 by 2029, about $625 per annum for the average household. Assuming auctions clear, ETS cash proceeds are projected at about $3.3 billion for 2025-29. There is a greater risk of auctions not clearing under the status quo.
1. Full drawdown option	Draw down surplus by 2030. Update auction volume for all years.	21.2 (-23.9 from status quo)	This option is more likely to meet emissions targets and therefore to meet the accordance tests because it reduces auction volumes to a level that would eliminate the estimated surplus stockpile within the EB2 period, assuming net emissions at the target level. Modelling also indicates it is likely to accord.	Modelling indicates this option would overachieve EB2 (with proposed ERP2 policies) but not meet EB3. Including the NZ Steel adjustment for this option would increase the likelihood of achieving EB3 (and increase the buffer for EB2).	Modelling projects NZU prices to rise to around $105 by 2029, about $770 per annum for the average household. Assuming auctions clear, ETS cash proceeds are projected at about $1.6-1.8 billion for 2025-29 ($1.6 billion lower than status quo).
2. Partial drawdown option	Drawn down 80% of surplus by 2030. Update auction volume for all years.	33.8 (-11.3 from status quo)	It may be possible to justify this option as meeting accordance tests, but this carries higher risks due to the lower probability of achieving targets. This option maintains a portion of the surplus into the 2030s that risks either allowing excess emissions during EB2, if these units are accessed and surrendered by emitters and/or carries a surplus forward into EB3.	Modelling indicates this option just meets EB2 (with proposed ERP2 policies) but not EB3, and retains a stockpile risk to budget accordance.	Modelling projects NZU prices to rise to around $95 by 2029, about $685 per annum for the average household. Assuming auctions clear, ETS cash proceeds are projected at about $2.5-2.7 billion for 2025-29 ($0.7 billion lower than status quo).
CCC recommendation		22.7 (-22.4)	Similar to option 1	Similar to option 1	Similar to option 1

Note: All options retain status quo price controls, extended to 2029
All numbers are subject to final QA

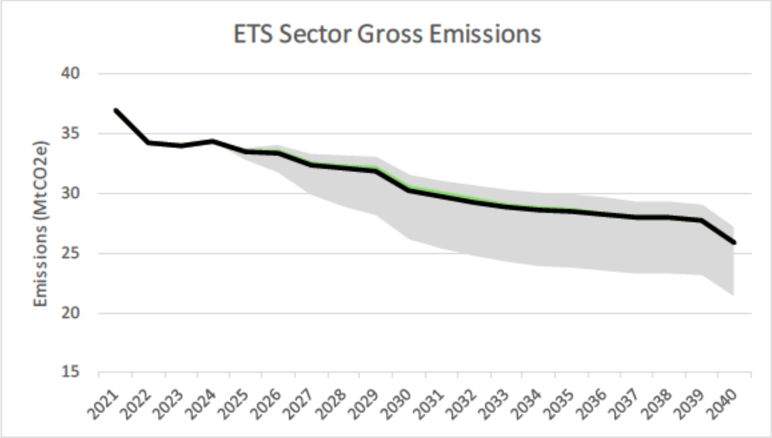
ETS cash proceeds are based on modelling results. The key assumption is that auctions clear in the settings period; there is a risk that they will not if prices rise by less than projected by the model, and this risk is highest under the status quo. The relationship between auction volumes and revenues is not linear.

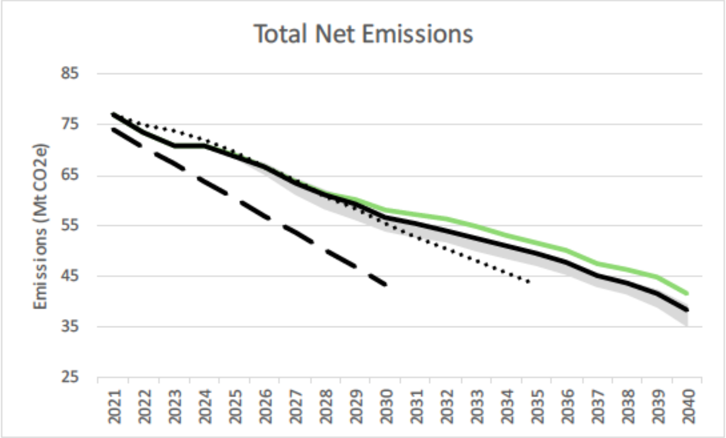
[IN

ETS Model results for full drawdown option

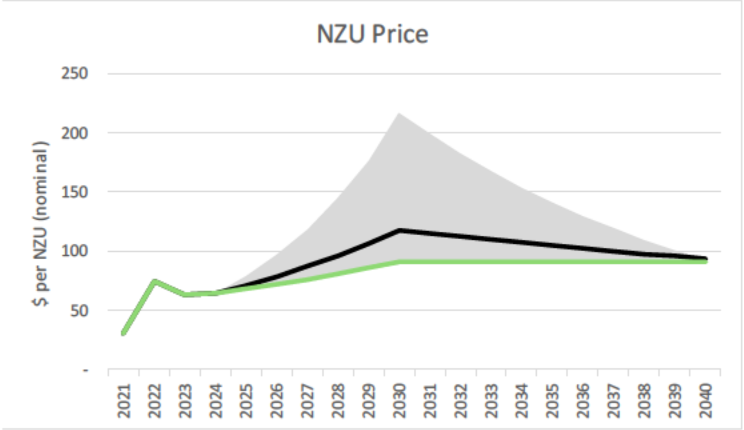
The NZ ETS Market Model estimates supply and demand for NZUs in the NZ ETS under different conditions, and can generate price projections based on supply and demand. The NZ ETS Market Model provides further insights and cross-check whether a given combination of unit settings and price controls are in accordance with emissions budgets, NDCs, and the 2050 target.

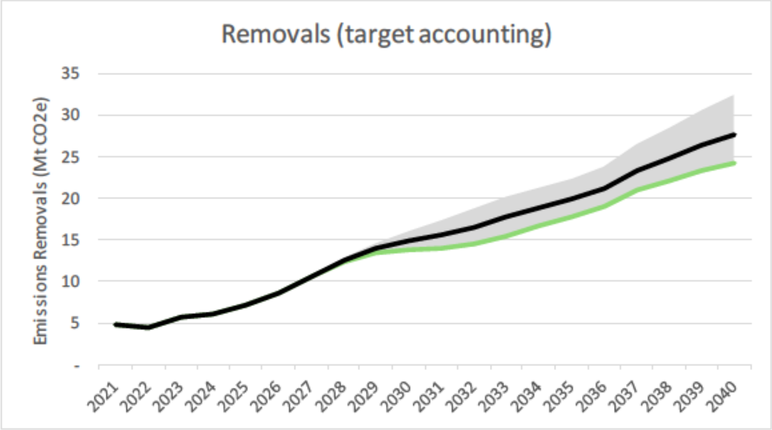
Version: 5
Date: 9/07/2024

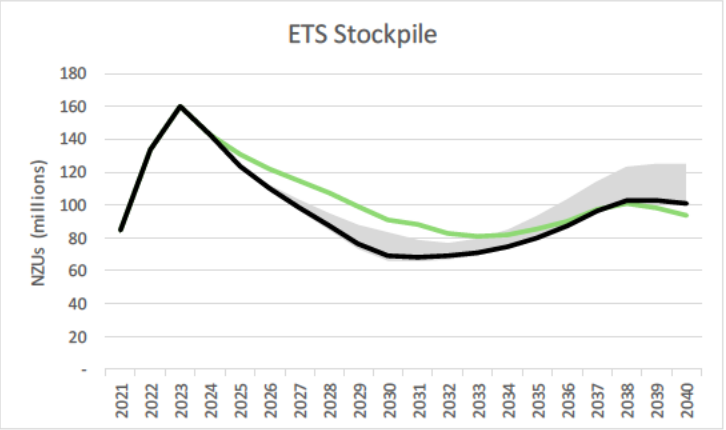




Note: Dotted line is consistent with emission budgets, dashed with NDC







Ministry for the
Environment
Manatū Mō Te Taiao

Sensitive

Office of the Minister of Climate Change

ECO - Cabinet Economic Policy Committee

New Zealand Emissions Trading Scheme unit limits and price control settings for 2025-2029

Proposal

1. I seek Cabinet approval to set the New Zealand Emissions Trading Scheme (NZ ETS) unit limits and auction price controls for the next five years.

Relation to government priorities

2. The proposals in this paper support:

    2.1 The Government's Target 9: New Zealand is on track to meet its 2050 net zero climate change targets, with total net emissions of no more than 290 Mt from 2022 to 2025, and 305 Mt from 2026 to 2030.

    2.2 The coalition agreements between the National Party and coalition partners: restoring confidence and certainty in the NZ ETS.

Executive summary

3. Each year, I am required to update regulations for NZ ETS settings for the next five years. These settings include two parts:

    3.1 volume of units supplied at auction, available by other means, and approved overseas units (unit limits); and

    3.2 price controls for these units available by auction.

4. NZ ETS settings are subject to statutory requirements, including a requirement that settings accord with emissions budgets and targets ("the accordance test"). Decisions on settings will be subject to a high degree of scrutiny. Legal challenge is likely.

5. The NZ ETS market is currently substantially over-supplied as evidenced by the increase in private holdings of New Zealand Units (NZU) over recent years, and the lack of a single auction to fully clear since 2022. This over-supply is referred to by the market as the "surplus". It poses a risk to the achievement of emissions budgets and is placing downwards pressure on NZU prices. Officials have advised that the surplus has increased in size from a central estimate of 49.1M NZUs in 2022 to a central estimate of 67.3 Mt NZUs[1].

6. The Government can manage this risk by auctioning fewer units than we expect to be required for emitters to meet their surrender obligations. This shortfall encourages

[1] Estimate is calculated based on private holdings figures as at December 2023

emitters to draw units from the stockpile to meet surrender obligations, and reduces the risk of emissions budgets being exceeded.

7. Consultation on NZ ETS settings was conducted between 15 May and 14 June 2024. 106 responses were received from a wide range of stakeholders. Submitters, including foresters and energy generators with an interest in renewable electricity, generally agreed with the Ministry for the Environment's estimate of the surplus and supported a tightening of unit limits from current levels to address the oversupply and maintaining price controls at their current levels.

8. Under the status quo, the government is set to auction 45.1 million units between 2025 and 2029. These unit limits are expected to draw approximately 60% of the surplus from the stockpile by 2030.

9. Having considered the responses to the consultation and other evidence, it is my view that status quo unit limits are unlikely to meet the accordance test set in legislation. I am therefore of the view that reducing auction volumes from status quo unit limit settings is required.

10. S9(2)(h) [redacted]

11. There is a judgement about how much these unit limits need to be tightened. A smaller number of auctioned units increases the likelihood of achieving emissions targets, but also increases upward pressure on NZU prices and is likely to reduce total cash receipts from auctions. As such I am presenting two options for consideration by Cabinet:

    11.1 **Option 1** aims to substantially reduce the risk posed by the surplus by seeking to draw down 90% (60.6M units) of the surplus by 2030. This involves reducing auction volumes from status quo settings by 17.9 million units between 2025 and 2029.

    11.2 **Option 2** aims to remove the risk posed by the surplus by seeking to draw down 100% (67.3M units) of the surplus by 2030. This involves reducing auction volumes from status quo settings by 23.9 million units between 2025 and 2029.

12. My recommendation to Cabinet is that Option 2 best aligns with our climate strategy and market-led approach. This option provides a very high probability of achieving emissions budgets and targets due to the removal of the surplus by 2030. It is also likely to best support market confidence in a credible NZ ETS. Option 1 is likely to meet the accordance test, but involves more risk in relation to both legal challenge and market reaction.

13. Differences in the projected cash receipts between options must be considered in light of the fact that projection methodologies are based on current market prices and assume that all ETS auctions clear. Of the last six auctions, five were declined and one only partially cleared. The upwards pressure placed on prices by reducing auction volumes will likely partially offset the volume reduction and make auctions more likely to clear. Therefore, although auction cash receipts under Option 2 are projected to be around $1.6 billion lower over the five-year period (approximately $300 million annually) than under the status quo, the actual net reduction in receipts may be substantially smaller.

14. Auctioning fewer units will likely lead to higher NZU prices (approximately $4 higher than the status quo by 2026, and $15 higher by 2029 under Option 2). However, modelling suggests that both options will have only marginal impacts on the cost of living. Annual CPI inflation is expected to increase by an average of 0.03 percentage points between 2025 and 2029 for a full drawdown of the surplus.

15. I also recommend that status quo price control settings remain fit for purpose at this stage. Amending these settings is likely to undermine market confidence, which may even *reduce* the likelihood of auctions clearing in the near-term. Actions such as dropping the price floor may also increase risk of litigation and depress ETS prices. Responses during consultation strongly supported maintaining the existing price control settings, particularly from the forestry sector.

Background

16. The NZ ETS is a cap-and-trade system based on government-issued NZUs. Emitters in covered sectors must obtain and surrender one NZU per tonne of carbon dioxide or equivalent to the Government.

17. Each year, I am required by the Climate Change Response Act 2002 (the Act) to recommend settings for the next five years in the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020 (the Regulations). These settings are linked to New Zealand's emissions targets through the accordance test set out in sections 30GC (2) and (3) of the Climate Change Response Act.

18. The Climate Change Commission is required to provide annual advice on these NZ ETS settings. The Act requires me to consider the Commission's advice when recommending changes to NZ ETS settings.

S9(2)(h) [redacted]

19. S9(2)(h) [redacted]

20. S9(2)(h) [redacted]

[2] S9(2)(h) [redacted].

21. S9(2)(h) [redacted]

22. S9(2)(h) [redacted]

Summary of consultation

23. Consultation on settings ran from 15 May 2024 to 14 June 2024. Consultation sought feedback on the estimate of the surplus and the associated calculations of unit limits and price control settings, as well as the impact of NZ ETS settings.

24. Submissions generally agreed with the Ministry for the Environment's estimate of the surplus[3], and supported tightening unit limits, reducing the surplus and maintaining the current price control settings.[4] However, there were some differences of view. These are outlined in detail in **Appendix Three**, and considered in the Regulatory Impact Statement.

25. Consultation presented two options on NZ ETS settings price control settings: maintaining the status quo and lowering price control settings (both the auction price floor price and the cost containment reserve price). Submissions overall supported maintaining the status quo price control settings, with submitters noting the importance of the existing price corridor to providing continuity, predictability and confidence in the market. Market commentary at the time noted the risk that lowering the price floor could pose to market credibility, and attributed recent falls in secondary market prices to this uncertainty.

26. My view is that a tightening of unit limits is expected by the market, and required to support the credibility of the ETS. Maintaining the status quo risks a negative market reaction and could lead to further price drops, lowering the chance of auction clearance, and harming the ETS credibility.

Options for NZ ETS settings 2025 - 2029

27. In seeking your agreement to the NZ ETS settings for the next five years I need to make recommendations on the following components: The accordance with New Zealand's Nationally Determined Contribution, accounting for NZ ETS versus non ETS sectors, the price control settings and managing the unit supply. My proposed approach to each of these components is outlined below.

S9(2)(f)(iv) [redacted]

28. S9(2)(f)(iv) [redacted]

Accounting for NZ ETS versus non- ETS emissions

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[3] Note that the assessment of the total size of the surplus has changed slightly since consultation, due to updated data.

[4] Ernst & Young Ltd was also contracted to provide an independent review of the surplus estimate.

29. Officials' analysis suggests that the current demonstration pathway (which sets out the shares of emissions for ETS and non-ETS sectors), and particularly the assumed emissions from non-NZ ETS sectors across EB2, align with interim projections conducted for consultation on ERP2. I am therefore reassured that this pathway is aligned with our current understanding of the Government's strategy, and the shares of effort across different sectors implied in our draft ERP2. I am satisfied that, for the purpose of this year's settings decisions, the ETS and non-ETS shares should be based on the current demonstration pathway.

Price control settings

30. Price control settings provide the Government with a mechanism to help prevent the NZ ETS auction price from being too low or too high. The auction floor price, in particular, acts as an additional safeguard against over-supply, and therefore forms part of the overall risk management the NZ ETS can provide against exceeding targets and budgets.

31. I believe the existing price control settings remain fit for purpose at this stage – the likely market price required to achieve emissions budgets sits within the existing corridor. Loosening settings may also increase risk of litigation.

32. I am therefore recommending that we maintain status quo price control settings, extending them to 2029 subject to updating for inflation projections. All options in this paper take this approach.

Managing unit supply

33. I believe the status quo settings are unlikely to meet the accordance test. This view is consistent with advice from Crown Law and Ministry for the Environment. A reduction in auction volumes is therefore required, with judgement required over how much.

34. I also considered the advice of the Commission. The underlying data since the time their advice was provided has changed. However, their recommended approach aligns best with Option 2.

Options analysis

35. NZUs do not expire and can be banked indefinitely before they are surrendered. The stockpile is made up of NZUs issued in the past but not yet surrendered. Banking is a valuable feature of cap-and-trade systems. It supports risk management (e.g. hedging, forward contracts) and market liquidity.

36. However, in addition to these benefits, banking carries risks. The most relevant of these to NZ ETS settings decisions is the ability to bank units means that control over the timing of banked NZU surrenders – and therefore of emissions – sits with NZU holders, not the Government.

37. The stockpile refers to banked units available to gross emitters. The 'surplus' refers to units besides those held for risk-management (hedging) or forestry harvest liabilities, or units held as long-term investments by owners of pre-1990 forestry, and are therefore more likely to come to market. This excess component poses the greatest risk of enabling emissions to exceed emissions budgets. Reducing the size of this surplus is therefore a key tool for reducing the risk to achievement of emissions budgets.

38. Officials have advised that the surplus has increased in size from a central estimate of 49.1M NZUs in 2022 to a central estimate of 67.3 Mt NZUs[5]. Status quo NZ ETS settings are now consistent with drawing approximately 60% million NZUs from the stockpile by 2030 if net emissions reach the target level.

39. **Appendix One** summarises the key impacts and considerations for each option and the status quo. Modelling central projections show that each option, including the status quo, can achieve emissions budgets 1 and 2.[6] However, there are significant differences in terms of the risk posed by the stockpile.

40. Reduced auction volumes have only a small impact on the modelled central projections of net emissions. This is because it is generally more expensive for firms to further reduce emissions than to fulfil their surrender obligations by using units purchased from the surplus. Settings which allow a surplus to persist create more risk and uncertainty, because these units allow excess emissions during EB2 if accessed and used by emitters. This risk is greater the more of the surplus stockpile is left unaddressed, and affects the assessment of accordance for a given option.

41. Based on this analysis, it is my view that the status quo settings are unlikely to meet accordance test. Option 1 is likely to meet the accordance test but involves more risk (including in relation to successful legal challenge) than Option 2.

42. S9(2)(h) [redacted]

43. Option 2 provides a very high probability of achieving our domestic emissions targets by effectively addressing the risk of over-supply and sends a clear, positive signal about the Government’s intention to manage the NZ ETS in line with emissions targets.

44. Near term impacts on market confidence and pricing are difficult to predict. In general, maintaining the historic and understood approach of aligning settings to eliminate the surplus by 2030 (as per Option 2) is most likely to build market confidence and stability, which improves the likelihood of auctions clearing in the near-term.

45. Considering this analysis, my recommendation to Cabinet is that Option 2 best aligns with our climate strategy and market-led approach.

46. The NZ ETS is limited in its ability to drive achievement of emissions budget 3 (EB3) and the 2050 target. Other policy measures will be needed.

47. As outlined in the attached RIS, officials considered two additional options which I have not included:

    47.1 An option in which unit limits aimed to eliminate 80% of the surplus by 2030. While advice indicated this option was defensible, I considered that this option involved too much legal risk, and risked adverse market reaction.

    47.2 An option in which unit limits were reduced further than in Option 2, to further reduce risk to emissions budgets and support achievement of the NDC. I

[5] Estimate is calculated based on private holdings figures as at December 2023
[6] As with any modelling, these results should be interpreted as providing an indication of the potential impacts and orders of magnitude. All models are subject to a high degree of uncertainty and rely on a range of model specific and other assumptions. Uncertainty levels increase with time horizons.

considered that this option pre-empts Cabinet discussions about our approach to the NDC.

48. If Cabinet wishes to consider another option than presented in the paper, an accordance assessment for that option needs to be carried out before a decision can be made.

Cost-of-living implications

49. Appendix One sets out detailed modelling of the expected impacts on households of the status quo, Option 1 and Option 2.

50. Auctioning fewer units will likely lead to higher NZU prices (approximately $4 higher by 2026 and $15 higher by 2029 under my preferred option compared with the status quo). However, modelling suggests that both proposed options will have only marginal impacts on the cost of living. Annual CPI inflation is expected to increase by an average of 0.03 percentage points between 2025 and 2029 under my preferred option.

Financial implications

51. While NZU auctions produce a cash inflow for the Crown, the newly auctioned NZUs are a liability for the Crown (representing the Crown's obligation to accept NZUs for NZ ETS participants' emission responsibilities). This means that NZ ETS auctions do not immediately impact Crown revenue, despite generating a cash inflow.

52. The table below shows projected cash receipts from NZU auctions across the status quo and options considered in this paper under three different price scenarios.

53. A key assumption is that auctions clear in the settings period. Projected prices for the status quo sit just above the auction floor price, indicating the status quo is at most risk of future auctions not clearing.

54. These projected NZ ETS auction cash proceeds are likely to differ from the forecasts for the Crown's accounts at Economic and Fiscal Updates (EFUs). NZ ETS forecasts are based on prevailing secondary market prices from a set date around the time of forecast finalisation.

Table 2: Projected cash receipts from NZU auctions under different volume scenarios (2025 – 2029, $billion)

	Auction volume option		
NZU price scenario	**Status quo**	**Option 1 (partial drawdown)**	**Option 2 (full drawdown)**
Low (Auction price floor)	3.3	2.0	1.6
Central model projection	3.3	2.1	1.7
High (modelled 95% upper price)	3.5	3.1	2.4

Legislative implications

55. Amendment to the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020 is required to give effect to Cabinet's decisions on unit settings. I seek Cabinet approval to issue drafting instructions to Parliamentary Counsel Office.

56. The amendment regulations need to be published in the New Zealand Gazette by 30 September 2024, so that unit settings are prescribed for each of the next five years.

Impact analysis

Regulatory Impact Statement

57. A quality assurance panel with members from Ministry for the Environment's delegated Regulatory Impact Analysis Team has reviewed the Regulatory Impact Statement. The team assessed this using assessment criteria (complete, convincing, clear & concise and consulted), for all relevant sections of the report. The team considers that all its feedback was addressed and therefore it meets the Quality Assurance criteria.

Climate Implications of Policy Assessment

58. The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirms that the CIPA requirements apply as this proposal will potentially have a significant impact on emissions. A quantitative assessment of emissions impacts was included in Appendix One. The impact of NZ ETS price and unit settings on emissions is also dependant on several other factors such as the impact of non-price policies and individuals' and firms' decision making.

Population implications

59. Higher emissions costs disproportionately impact lower socio-economic groups and Māori are disproportionately over-represented in these groups. Older people are also more vulnerable to price fluctuations overall. Indexation of main benefits and other payments partially offsets some of these higher costs for low income households.

60. Any feedback received on the longer term implications the NZ ETS has on Māori during the consultation on ERP2 will inform my final proposals for ERP2, and where appropriate, analysis and advice relating to the NZ ETS.

Human rights

61. The proposals in this paper are consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Use of external resources

62. External resources were contracted for an independent assessment of the liquid stockpile estimate, methodology and assumptions. Making sure we have the most robust numbers for the liquid stockpile estimate is crucial for this year's setting decisions, balancing the need to maintain market certainty while meeting the overarching goal of accordance. To perform this independent assessment, Ernst & Young Limited (EY) were contracted for two months at a capped cost of $60,000.

Consultation

63. Feedback from public consultation has informed the proposal in this paper.

64. The Treasury, the Ministry of Foreign Affairs and Trade, the Ministry for Primary Industries, the Ministry of Business, Innovation and Employment, the Environmental Protection Authority, the Ministry of Transport, the Ministry of Social Development, Waka Kotahi New Zealand Transport Agency, Te Arawhiti, and Te Puni Kōkiri were

consulted on the content in this paper. The Department of Prime Minister and Cabinet has been informed. Where I received feedback, it has been considered and incorporated as appropriate.

Communications

65. Announcements about the NZ ETS need to be managed carefully to avoid market risks and to ensure that information does not advantage some market participants over others or compromise investments in NZUs or decarbonisation actions.

66. Following established protocols, I will announce Cabinet's decisions on this paper via press release, an email sent to NZ ETS stakeholders and NZ ETS participants, and publication on the Ministry for the Environment's website. This approach will ensure all participants have the information at the same time, ahead of the next auction scheduled for 4 September.

Proactive release

67. I intend to proactively release this paper and associated Cabinet committee papers and minutes within 30 business days of final decisions being confirmed by Cabinet, subject to redaction as appropriate under the Official Information Act 1982.

Recommendations

The Minister of Climate Change recommends that the Committee:

1 **note** that the Minister of Climate Change (Minister) is required by the Climate Change Response Act 2002 to update limit and price settings (unit settings) for New Zealand Units (NZUs) under the New Zealand Emissions Trading Scheme (NZ ETS) so that they continue to cover five calendar years at all times

2 **note** the legal test means the unit limits and price control settings must be considered as a package and in the context of other climate change policies because their effect on unit supply (and ultimately emissions) are interdependent

3 **note** I have considered consultation feedback in formulating options presented below

4 **agree** to maintain the current price control settings, including the cost containment reserve volumes (CCR), with minor changes made to reflect Treasury Budget 2024 inflation forecasts, and extend the price control settings to 2029, as outlined below:

	Adjusted for new inflation forecasts				New
	2025	2026	2027	2028	2029
Auction price floor	$68	$71	$75	$78	$82
CCR Tier 1	$193	$203	$213	$224	$235
CCR Tier 2	$242	$254	$267	$280	$294
CCR Tier 1 volume	2.6	2.3	2.1	1.9	1.7
CCR Tier 2 volume	4.5	4.2	3.8	3.4	3.0
Total CCR volumes	7.1	6.5	5.9	5.3	4.7

5 **agree** to update limits for units under one of the following for 2025-2029 as follows:

Either

5.1 Option 1 - Partial drawdown option

Unit limits (millions)	2025	2026	2027	2028	2029
Base auction volumes	7.4	6.5	5.5	4.4	3.4
Total CCR volumes	7.1	6.5	5.9	5.3	4.7
NZUs available by auction	14.5	13.0	11.4	9.7	8.1
Industrial allocation	6.0	5.7	5.7	5.6	5.5
Approved overseas units	0	0	0	0	0
Overall limit on units	20.5	18.7	17.1	15.3	13.6

Or

5.2 (Recommended) Option 2 - Full drawdown option

Unit limits (millions)	2025	2026	2027	2028	2029
Base auction volumes	6.0	5.2	4.3	3.3	2.4
Total CCR volumes	7.1	6.5	5.9	5.3	4.7
NZUs available by auction	13.1	11.7	10.2	8.6	7.1
Industrial allocation	6.0	5.7	5.7	5.6	5.5
Approved overseas units	0	0	0	0	0
Overall limit on units	19.1	17.4	15.9	14.2	12.6

6 **note** that if Cabinet wishes to consider an option other than presented in **recommendation 5**, the new option will need to be assessed for accordance with emissions budgets and targets.

7 **note** that there is ongoing effort to understand the exact size of the surplus of NZUs, and that this will be taken into account in considering ETS settings in future years.

8 **authorise** the Minister to issue drafting instructions to the Parliamentary Counsel Office (PCO) to amend the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020.

9 **authorise** the Minister to further clarify and develop policy matters relating to the amendments recommended above, in a manner not inconsistent with Cabinet decisions.

Authorised for lodgement

Hon Simon Watts

Minister of Climate Change

Appendix One

Options and estimated impact for settings 2025-2029

	Total auction volumes (million NZUs, 2025-2029)	2025 Auction Volume (million NZUs)	Summary of accordance	Net emission Impacts	Summary of price impacts (household and fiscal implications)[1]
Status quo	45.1	12.6	**Unlikely to meet accordance test.** The status quo allows for a large portion of the surplus (approximately 40%) to remain in place by 2030, assuming net emissions are at the target level. This surplus could either allow excess emissions during EB2, if these units are accessed and surrendered by emitters, and/or carry a large surplus forward into EB3.	**Central estimate of total net emissions (Mt CO_2-e)** **EB1 (290)**: 284.1 **EB2 (305)**: 303.6 **EB3 (240)**: 256.9	Modelling projects NZU prices to rise to around $71 by 2026 and $82 by 2029. At a price of $71, additional household expenditure caused by emissions pricing is about $570 per household per annum (or about 0.7% of household gross income) and at a price of $82, about $600 per household per annum. Assuming auctions clear, theoretical NZ ETS cash proceeds are projected at about $3.3 billion for 2025-2029.
Option 1 - Partial drawdown	27.2 (-17.9 from status quo)	7.4	**Likely to meet accordance test, with some risk.** This option increases the chances of achieving emissions targets by additionally reducing the surplus so that a smaller portion (10%) remains in place by 2030, assuming net emissions are at the target level. This remaining surplus could still either allow excess emissions during EB2, if these units are accessed and surrendered by emitters, and/or carry a surplus forward into EB3.	**Central estimate of total net emissions (Mt CO_2-e)** **EB1 (290)**: 284.1 **EB2 (305)**: 303.2 **EB3 (240)**: 255.0	Modelling projects NZU prices to rise to around $74 by 2026 and $90 by 2029. Compared with the status quo, this is expected to increase CPI inflation by 0.02 percentage points per annum between 2025 and 2029, resulting in an increase in annual household expenditure caused by emissions pricing by about $20 in 2026 and $60 by 2029. Assuming auctions clear, NZ ETS cash proceeds are projected at about $2.1 billion for 2025-29 ($1.2 billion lower than status quo).
Option 2 - Full drawdown	21.2 (-23.9 from status quo)	6.0	**Most likely to meet accordance test.** This option is more likely to meet emissions targets than the Status Quo and Option 1 because it reduces auction volumes to a level that would eliminate the estimated surplus within the EB2 period, assuming net emissions are at the target level.	**Central estimate of total net emissions (Mt CO_2-e)** **EB1 (290)**: 284.1 **EB2 (305)**: 302.9 **EB3 (240)**: 253.8	Modelling projects NZU prices to rise to around $75 in 2026 and $96 by 2029. Compared with the status quo, this is expected to increase CPI inflation by 0.03 percentage points per annum between 2025 and 2029, resulting in an increase in annual household expenditure caused by emissions pricing by about $40 in 2026 and $100 by 2029. Assuming auctions clear, NZ ETS cash proceeds are projected at about $1.7 billion for 2025-29 ($1.6 billion lower than status quo).
Climate Change Commission recommended volumes	22.7 (-22.4 from status quo)	5.9	The underlying data since the time the Climate Change Commission advice was provided has changed. However, their recommended approach (elimination of surplus by 2030) aligns best with Option 2.		

[1] Any presumed loss of revenue must be considered alongside the fact forecast revenue assumes all ETS auctions clear. In practice, five out of the last six auctions have failed to clear, with the remaining auction only partially clearing.

	Submitters include	Total number of submitters	Assessing potential over-supply: Should the surplus stockpile drawdown rate change to reflect the increased estimate (from 49 million to 68 million), resulting in tighter unit supply?	Assessing potential over-supply: Do you agree with the Commission's methodology and estimate of the surplus stockpile?	Further adjustment: Should the minimum adjustment approach be taken (to align with the latest Greenhouse Gas Inventory), or should unit limits be further tightened to reflect unanticipated emissions reductions (NZ Steel deal)?	Price Controls: Should price controls be lowered; and should cost containment reserve (CCR) volumes be increased to reflect surplus reduction?	Accounting for ETS vs non-ETS emissions: Should non-NZ ETS sectors (mainly agriculture) continue to cover the same share of effort towards meeting emissions budgets as in previous years (based on the first emissions reduction plan)
Energy	*Meridian* *Transpower* *Genesis Energy* *Mercury NZ* S9(2)(ba)(i) *Contact Energy* *Energy Resources Aotearoa* *Greymouth Gas* *Methanex* *Z Energy* *Strattera*	12	Four agree with applying the new surplus drawdown. Energy generators with an interest in renewable electricity generally support tightening unit supply. Three submitters feel there should be no change to the surplus reduction despite the updated estimate. These were predominantly energy stakeholders with fossil fuel interests. The rest did not respond to this issue or their position was unclear.	Three submitters agree with the Commission's methodology and support addressing the surplus stockpile. Transpower agrees the surplus stockpile needs to be addressed but recommends an independent analysis is carried out to verify Commission data on surplus estimates. Three submitters disagree with the Commission's surplus methodology. Some recommend the CCC's surplus estimate be verified, believing the estimate is overstated. Others cite a more continuous approach is needed to address surplus's that arise. For example, progressing parallel policies or reducing the surplus in line with the sinking cap.	One submitter agrees with further adjustments for the likes of NZ Steel, as further tightening supports NZ's NDC targets. Most of these submitters did not support making this adjustment. While Meridian does not support the further adjustment option, they noted further tightening should be investigated with urgency as part of the Government's approach to the NZ ETS, and would support it as part of structural changes to the NZ ETS. Two went further by suggesting no change should be made at all (not even to take into account of the most recent emissions data from the 2024 Greenhouse Gas Inventory). They stated there are parallel policies that can be progressed and further tightening unit limits would muddy policy signals.	There was some support (6) to maintain the current price control triggers, citing regulatory certainty. Meridian note that lowering the price floor would likely come at direct cost to our emissions reduction ambitions, while affecting the market confidence of the NZ ETS. Three of those who responded support lowering the price floor, one noting trigger prices should be set at a 'more reasonable and sustainable level' (Methanex) and another stating that the price floor should be removed or materially reduced to ensure efficient market price discovery (Greymouth Gas). Of those who responded, there was also support (4) for increasing the CCR volume. Respectively submitters suggest: - adding unsold CCR volumes back into the pool of available units - an increased CCR volume provides protection against expected high prices, and - increased CCR volumes would better support the functioning of the NZ ETS "in the absence of thorough analysis of liquidity". Three submitters support maintaining the current CCR volume, while four others did not respond to the issue.	Four agree with the status quo approach for allocating emissions budgets. Transpower did not directly respond to the question, but in their submission propose a strong level of ambition on gross emissions reductions for emissions budgets. One submitter was undecided and one disagreed. The rest did not respond to this issue. The submitter who disagreed noted that the status quo approach is based on sectoral targets of the previous government (i.e. for agriculture sector).
Other industry	*Whakatane Mill Ltd* S9(2)(ba)(i) *Dextera Limited* *Waikato Regional Council* S9(2)(ba)(i) *Corporate Nominees Limited*	11	Most 'other industry' submitters (10) support applying the surplus stockpile drawdown to reflect the new surplus estimate. One disagreed with addressing the surplus stockpile entirely, noting that banked units reduce price volatility, and help with managing future liabilities.	Five agree with the Commission's methodology. One submitter felt that the surplus estimate from the Commission provides a clear, data driven view of current market dynamics. The rest did not respond to this issue, or their position was unclear.	Three submitters support further tightening to reflect unanticipated emissions reductions, citing that this option best accords with emissions budgets and targets. Most submitters in this category (9) however do not support further tightening. General sentiment conveys the preference for more certainty.	Nearly all submitters who responded in this category (10) supported maintaining the current price control triggers, citing stability and predictability for market participants. Similarly, nearly all supported maintaining the current CCR volume; commenting on the need for market stability.	Seven of the industry submitters agree with the status quo approach for allocating emissions budgets. One submitter recommends periodic reassessment of sector allocations in response to real time emissions data and reported technological improvements resulting in emissions reductions.

	Submitters include	Total number of submitters	Assessing potential over-supply: Should the surplus stockpile drawdown rate change to reflect the increased estimate (from 49 million to 68 million), resulting in tighter unit supply?	Assessing potential over-supply: Do you agree with the Commission's methodology and estimate of the surplus stockpile?	Further adjustment: Should the minimum adjustment approach be taken (to align with the latest Greenhouse Gas Inventory), or should unit limits be further tightened to reflect unanticipated emissions reductions (NZ Steel deal)?	Price Controls: Should price controls be lowered; and should cost containment reserve (CCR) volumes be increased to reflect surplus reduction?	Accounting for ETS vs non-ETS emissions: Should non-NZ ETS sectors (mainly agriculture) continue to cover the same share of effort towards meeting emissions budgets as in previous years (based on the first emissions reduction plan)
	(and more)					One submitter supported increasing the CCR volume, and noted they would like to see alternative methods for reducing the surplus which may change the way CCR volumes are calculated.	Three submitters disagree with the approach for allocating emissions budgets, noting emissions they felt were being left out, while one felt uncertain about the benefits. One submitter noted: 'the only fair way forward is to bring all sectors into the ETS or discard the ETS altogether'.
Forestry	S9(2)(ba)(i)	26	Of the forestry submitters who responded, 10 support applying the surplus stockpile drawdown. Two submitters feel there should be no change to the surplus reduction despite the updated estimate.	Most submitters did not respond to this issue. Three disagree with the Commission's methodology, and one agrees.	There were mixed views on this question. Seven of those who answered supported making this further adjustment. However, five did not. The general sentiment is that supply should not continue to outstrip demand. In this sector, there were calls for market stability.	Most of those who responded (13) supported maintaining the current price control triggers. Two submitters' preferences were unclear, although one strongly disagreed with lowering the price floor, saying that the option proposed has undermined market confidence. Similarly, many of those who responded (11) were supportive of maintaining the current CCR volume. More than half (15) of submitters did not respond to this issue.	More than half of this sector did not answer this question or were unsure. Those who responded (6) agree with the status quo approach for allocating emissions budgets.
NGOs	*Tax Payers Union* *Lawyers for Climate Action*	12	Most submitters who responded (8) support applying the surplus stockpile drawdown. One submitter disagrees, citing concern for the estimated unit flow for forestry. The rest did not respond to this issue.	Four agree with methodology, one disagrees.	Some submitters (5) in this category supported further tightening unit limits. "Domestic investment toward meeting future NDC as win-win-win" (Forest and Bird). Others (3) did not support this further adjustment and preferred a minimum adjustment option in line with GHG inventory changes. The Tax payers union saying that the minimum adjustment would allow the market to find the least-cost abatement path. The rest did not respond to this issue.	Half of submitters in this category(6) supported maintaining the current price control triggers. The rest (5) did not respond or were uncertain ETA NZ, talked to diminishing investor confidence resulting from the lowering of the price triggers, with multiple market players becoming "reluctant to engage in NZU transactions, or invest in forestry and decarbonisation technologies". Similarly, there was support from those who responded (7) for maintaining the current CCR volume. The rest (5) did not respond.	Most submitters (7) did not respond to this issue. Four did agree with the status quo approach for allocating emissions budgets. The submitter who disagreed with the calculations expressed concern about agriculture remaining outside the ETS.

	Submitters include	Total number of submitters	Assessing potential over-supply: Should the surplus stockpile drawdown rate change to reflect the increased estimate (from 49 million to 68 million), resulting in tighter unit supply?	Assessing potential over-supply: Do you agree with the Commission's methodology and estimate of the surplus stockpile?	Further adjustment: Should the minimum adjustment approach be taken (to align with the latest Greenhouse Gas Inventory), or should unit limits be further tightened to reflect unanticipated emissions reductions (NZ Steel deal)?	Price Controls: Should price controls be lowered; and should cost containment reserve (CCR) volumes be increased to reflect surplus reduction?	Accounting for ETS vs non-ETS emissions: Should non-NZ ETS sectors (mainly agriculture) continue to cover the same share of effort towards meeting emissions budgets as in previous years (based on the first emissions reduction plan)
Individual/other		37	Most submitters (26) support applying the surplus stockpile drawdown, and therefore tightening unit supply. Two submitters disagree there is a need to address the surplus stockpile.	Some (13) agree with the Commissions methodology. A few felt unsure whether they agree, and others did not respond to this issue.	Most submitters (23) supported further tightening unit limits to reflect unanticipated emissions reductions. Others (8) did not support this further adjustment and preferred a minimum adjustment option in line with GHG inventory changes. Two submitters disagree with any change.	There was a high level of support (29) to maintain the current price control triggers amongst this group of submitters. Many submitters advocated for prices not being allowed to reduce in order to strengthen the ETS's ability to reduce gross and net emissions. One felt the price floor should be lowered. Similarly, there was significant support (18) for maintaining the current CCR volume, "To provide some level of certainty to market participants." (individual). Two submitters supported increasing the CCR volume. The rest (17) did not respond to this issue.	Some submitters (8) in this category agree with the status quo approach for allocating emissions budgets. Some others (6) did not agree, and the rest did not respond to this issue. Market expert Dr Christina Hood disagreed with the calculations of the emissions budget share, as it was based on sectoral targets for the agriculture sector that this government has not agreed to.
Agriculture/ Horticulture	*Fonterra, Hort NZ*	2	Fonterra did not specifically respond to any consultation questions. Instead, they provided general comments about the importance of maintaining long-term policy stability to restore confidence.				

Regulatory Impact Statement: 2024 update to New Zealand Emissions Trading Scheme limits and price control settings for units

Coversheet

Purpose of Document	
Decision sought:	*Cabinet approval for the 2024 annual update to New Zealand Emissions Trading Scheme limits and price control settings for units*
Advising agencies:	*Ministry for the Environment*
Proposing Ministers:	*Hon Simon Watts, Minister of Climate Change*
Date finalised:	*7 August 2024*

Problem Definition

NZ ETS unit limits and auction price control settings are prescribed in the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020. Both unit limits and price control settings form a package of 'NZ ETS settings' and are required to be reviewed and updated every year to ensure accordance with emissions budgets and targets. A fifth year is also required to be added to the regulations (2029 in this case). Under the status quo for this year, there is a significant risk emissions budgets and targets are not met due to the increase in the estimate of the surplus – see figure 1 on page 7 for detail.

This annual process provides the Government the ability to address any issues that arise for a particular year, and to ensure that NZ ETS settings stay on track to be in accordance with emissions budgets and the Nationally Determined Contribution under the Paris Agreement (NDC), and the 2050 target (target).

Unit limits include:

- a limit on the units (NZUs) available by auction
- a limit on approved overseas units – currently zero
- free units issued through industrial allocation and negotiated greenhouse gas agreements
- a reserve number of units available only if a trigger price is reached at auction.

The price control settings for units are:

- auction price floor – the price below which the Government will not sell units at auction (price floor)
- cost containment reserve (CCR) trigger price(s) – the price, or prices, at which additional units will be released if an auction's interim clearing price reaches or exceeds this level (trigger prices)

- CCR volume(s) – the number of units that will be released if the trigger price is reached.

Four key issues arose this year for updating NZ ETS settings:

- Should unit limits be further tightened to account for unanticipated emissions reductions when the emissions budgets were set?
- Should unit limits be tightened to lock in the lower-than-expected emissions in non-ETS sectors?
- How could the surplus stockpile be reduced in light of the significant increase in estimate?
- Could auction price controls be lowered while staying on track to accord with emissions budgets and targets?

These issues relate to the final option packages for settings this year and are discussed in detail on pages 27-29 of this RIS.

Executive Summary

Within the legal framework of the Climate Change Response Act 2002 (the Act), auction settings are reviewed every year to ensure the NZ ETS is working as well as it can to support climate change targets, and to provide certainty for the next five years. Unit limit settings help ‘cap’ the supply of units into the NZ ETS over time. By limiting the number of units, the Government uses the NZ ETS to help keep emissions in line with New Zealand’s targets. Choices for unit limits and price controls, together, form an option package for NZ ETS settings. NZ ETS settings (unit limits and price control, considered together, in the context of broader climate change policies) must accord with emissions budgets.

We follow a seven-step methodology to calculate unit limits. This methodology has been in place since 2022 and is well-understood by market participants.

Unit limits

The first step sets out the overall cap of permitted emissions (across the whole of economy) able to achieve the emissions budgets and targets. The second step allocates a portion of these emissions to the NZ ETS sectors. We then adjust the unit volumes by taking into account industrial allocation, surplus stockpile reduction, international units (which is zero). The last step is to make any technical adjustments (intended to ensure accuracy in calculating emissions in the NZ ETS).

We consulted on options for these steps and outlined the key issues. Overall, submitters support tightening unit limits in light of the significant increase in surplus stockpile.

Price control settings

Auction price control settings help manage the unit price in auctions from being too high (which may unduly affect households and the economy) or lower than needed to meet emissions budgets and targets. The auction floor price prevents additional units being sold if the market is so well supplied that auctions fail to clear. The higher guardrails are the

cost containment reserve (CCR) trigger prices. When the CCR is triggered, more units are released, reducing the risk of the unit price rising too high.

We consulted on two options for NZ ETS price control settings: maintaining and extending price control settings for one year (the status quo) and lowering price control settings (both the auction price floor and the cost containment reserve prices). Submissions overall support maintaining the status quo price control settings. Many submissions noted that the auction price floor provides the only signal about future prices. Lowering price control settings was seen as destabilising the market and increasing uncertainty. Very few submissions support lowering price control settings.

Key issues and choices for unit limits and price control settings this year

The table below outlines the steps in the methodology where key issues affect the final options package. Steps that did not require decisions on key issues are not listed, ie steps 3, 4 and 6. The table also includes the key issues for the price control settings.

Table 1: Key issues and preferred options

Steps	Key issues	Choices/preferred options
Step 1 – Align with emission targets	The Greenhouse Gas Inventory (Inventory) is updated every year to provide a more up to date basis for calculating emissions. The current NZ ETS settings is not aligned with the latest Inventory update in 2024. An opportunity to further reduce unit limits to account for unanticipated emissions reductions from the NZ Steel electric arc furnace.	There are two options. Option 2 scores more highly against our core criteria because it provides additional benefits in terms of meeting emissions budgets and targets. However, this involves increasingly higher costs on businesses and households. **Option 1**: Adjust to align with the latest Inventory update. **Option 2**: In addition to aligning with the latest Inventory update, further reduce auction volume to account for unanticipated emissions reduction when the emissions budgets were set.
Step 2 – Allocate emissions budgets to NZ ETS and non-NZ ETS sectors	Currently, emissions allocated to the NZ ETS are set based on a target pathway implicitly adopted by the Government via sector sub-targets through the first emissions reduction plan (ERP1). We consulted on allocating emissions based on emissions projections because at the time, projections of emissions from non-ETS sectors (in particular, agriculture) were higher than the target pathway. However, more recent projections show that emissions from non-ETS sectors are slightly *lower* than the target level across EB2.	The preferred option is the status quo approach, i.e. using the NZ ETS/non-ETS split based on the sector sub-targets as, based on current information, the target pathway continues to reflect our understanding of this Government's strategy and approach.
Step 5 – Set the surplus reduction volume	There has been a significant increase in the surplus estimate, meaning the current surplus reduction efforts (status quo draw down rate) could exceed emissions budgets. A different draw down rate is needed to reflect the increase in the surplus estimate. The issue this year is how quickly the surplus should be drawn down to manage the risk to achieving emissions budgets and	The preferred option is to draw down 100% of the current estimate of surplus to zero by 2030, to remove the risk it poses to the achievement of emissions budgets.

	targets: either to draw down a portion (we considered either 80% or 90% to test the viability of this option) of the current surplus by 2030, or draw down 100% of the current surplus by 2030.	
Price control settings	We consulted on options to lower price control settings and increase CCR volume to reflect step 5 surplus drawdown. Since consultation, additional analysis has suggested the price control settings (auction floor price and CCR trigger prices) remain fit for purpose.	The preferred option is to makes no change to price control settings (both price settings and CCR volumes).

Options for NZ ETS settings are informed by the above key choices

The combination of these key choices informs the options the RIS presents. The key differences that inform the three different options are:

- Choice on step 1: whether to make the adjustment for unanticipated emissions reductions.
- Choice on step 5: by how much should the surplus stockpile be drawn down (we considered 80%, 90% and 100%).

The key choices are assessed against the criteria below that align with the mandatory considerations for updating unit settings as prescribed in the Act and are more fully explained in Table 1 on page 9. Noting that the last two criteria apply to price control settings only:

- Likelihood of incentivising (net) emissions reductions
- Support for proper functioning of the NZ ETS
- Support for consistency of NZU prices with the level and trajectory of international emissions prices
- Management of overall costs to the economy and households.

Three options are detailed below. The Cabinet paper only presents option 1 (90% drawn down on surplus estimate) and option 2.

- **Option 1**: draw down a partial portion of current estimate of the surplus stockpile by 2030.
- **Option 2 (the Cabinet paper's recommended option):** draw down 100% of the current estimate of the surplus stockpile by 2030.
- **Option 3**: In addition to option 2, further tighten unit limits by adjusting for unanticipated emissions reduction from when the emissions budgets were set.

For full details of these options, as well as their impacts, see table 8 on page 26.

These options are assessed against objectives prescribed by the Act which require that unit settings must accord with New Zealand's emissions budgets and targets and are referred to in this RIS as the 'accordance test' (Refer paragraphs 16 – 18 on page 8).

All three options are consistent with statutory obligations, and are assessed to meet the accordance test, with varying degrees of risk.

In the Ministry's view, options which remove the surplus stockpile by 2030 (Options 2 and 3) are preferred. These options best manage the risk to the achievement of targets and budgets and thereby support market confidence in the credibility of the ETS.

Option 2 involves lower costs for households and businesses, at least in the short to medium term, and would therefore likely better align with the Government's preferred "least-cost" strategy for achieving the second emissions budget as outlined in the draft second emissions reduction plan (ERP2).

Option 3 provides additional benefits in terms of meeting emissions budgets, in particular the third emissions budget, and therefore scores more highly against our core criteria (as above), but involves corresponding higher costs on businesses and households for each NZU additionally removed. Whether those costs are justified should be considered against the relative costs of other measures, which is being considered as part of ERP2.

Limitations and Constraints on Analysis

Uncertainty exists around the surplus estimate, which has led to the analysis being limited by available data sources. Because of the uncertainty around the size of the surplus estimate, and the fact it is a point-in-time estimate that can change significantly from year to year, an adaptive management approach needs to be used. This is built into the process because NZ ETS settings are reassessed annually. Significant changes to the estimate can be addressed in future annual NZ ETS settings updates.

Responsible Manager(s)

Kate Whitwell

Manager

ETS Policy, Markets Unit, Climate Change Mitigation and Resource Efficiency

Ministry for the Environment

8 August 2024

Quality Assurance (completed by QA panel)

Reviewing Agency:	Ministry for the Environment
Panel Assessment & Comment:	A quality assurance panel with members from Ministry for the Environment's delegated Regulatory Impact Analysis Team has reviewed the Regulatory Impact Statement. The team assessed this using assessment criteria (complete, convincing, clear & concise and consulted), for all relevant sections of the report. The team considers that all its feedback was addressed and therefore it meets the Quality Assurance criteria.

Section 1: Diagnosing the policy problem

What is the context behind the policy problem and how is the status quo expected to develop?

Overview of NZ ETS

1. The NZ ETS is the Government's key tool to help New Zealand meet its:
    - NDCs
    - 2050 target: net zero greenhouse gas emissions (except biogenic methane) and a 24 to 47 per cent reduction in biogenic methane
    - emissions budgets: a set of descending interim targets to reach the 2050 target.

2. The NZ ETS supports emissions reductions by:
    - requiring emitters to measure and report on their emissions
    - pricing emissions and removals
    - requiring businesses to surrender one 'emissions unit' (unit) to the Government for each tonne of emissions they are responsible for under the NZ ETS
    - limiting the number of units supplied into the scheme through auctioning and industrial allocation.

3. The Government sets and reduces the number of units supplied into the scheme over time, apart from units supplied for removal activities. This limits the total volume of net emissions that can be emitted by participants in the scheme, in line with New Zealand's targets.

4. Businesses that participate in the NZ ETS can buy and sell units from each other. The price for units reflects supply and demand in the scheme. This price signal allows businesses to make economically efficient choices about how to reduce emissions and increase removals.

Annual process for unit limits and price control settings

5. Under the Act, NZ ETS unit limits and price control settings for the next five years are made through an annual update process to the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020 (the Regulations).

6. NZ ETS settings must be updated annually to ensure they remain in accordance with emissions budgets and targets, and that NZ ETS settings are put in place to cover the next five years. This annual process also provides an opportunity for any arising issue to be addressed.

The Climate Change Commission has provided advice on NZ ETS unit settings

7. The Climate Change Commission (Commission) is legally required to give annual advice on NZ ETS unit settings. The Minister of Climate Change (Minister) must consider the Commission's advice when recommending updates to settings. If there are any differences between the recommendations of the Commission and those made by the Minister, the Minister must table a report in Parliament to explain the reasons.

8. The Commission's advice on settings was published in March 2024. The two main changes the Commission has recommended this year are:

- significantly reducing the auction volumes for 2025 to 2029 from the volumes that are currently in regulations
- adjusting the first two years of NZ ETS unit limit settings (2025 and 2026).

The government consulted on NZ ETS unit limits and price control settings

12. Consultation on NZ ETS settings ran from 15 May to 14 June 2024. In total, 106 submissions were received from experts, NGOs, businesses, and individuals. Submissions generally support reducing unit limits for the next five years, consistent with the Commission's recommendations, and maintaining price control settings, largely in line with the Commission's recommendations.

The status quo NZ ETS settings, if continued, risk exceeding emissions budgets and targets

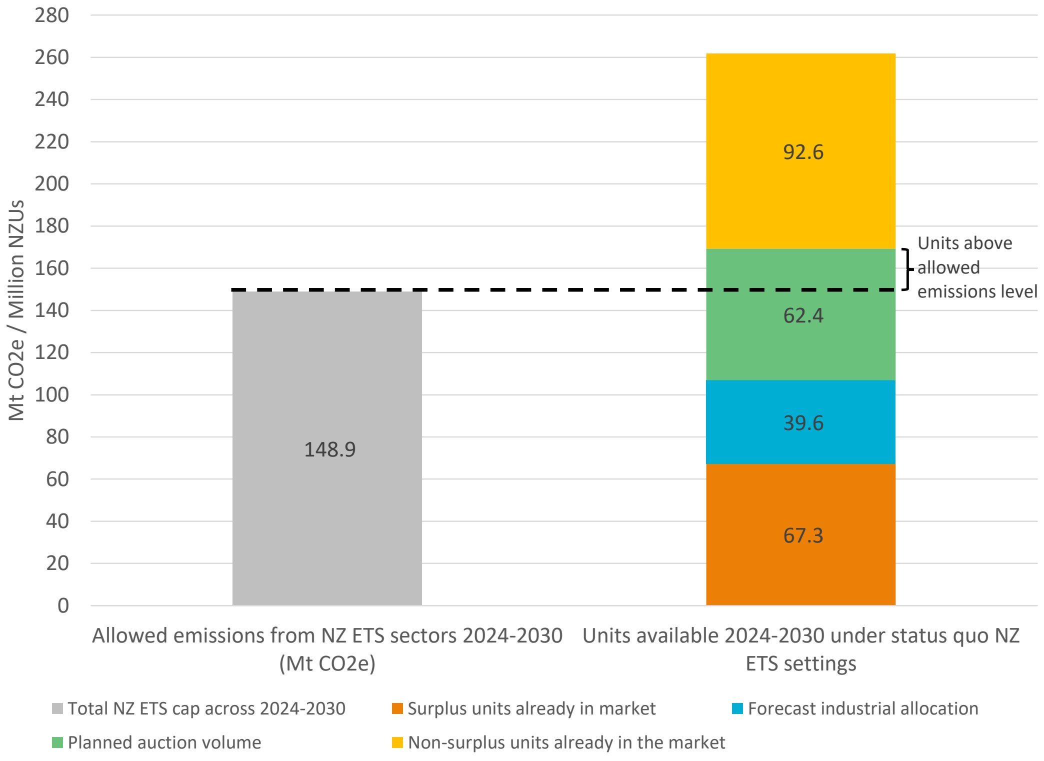
13. We have detailed below under each key issue (in each section) the risk that the status quo poses to meeting emissions budgets and targets. We have also assessed the status quo unit limits and price control settings together as a package to highlight the problem with the current NZ ETS settings.

12. Modelling central projections show that the status quo can achieve emissions budgets 1 and 2.[1] However, under the status quo there is a significant risk posed by the stockpile. Settings which allow a surplus to persist create more risk and uncertainty, because these units allow excess emissions during EB2 if accessed and used by emitters. This risk is greater the more of the surplus is left unaddressed.

13. Figure 1 shows that the units available under status quo settings would allow a surplus to persist into 2030, which could allow excess emissions during EB2 if accessed and used by emitters.

[1] As with any modelling, these results should be interpreted as providing an indication of the potential impacts and orders of magnitude. All models are subject to a high degree of uncertainty, which typically increases the further out in time they attempt to model and rely on a range of model specific and other assumptions.

Figure 1: Assessment of allowed emissions from NZ ETS sectors



14. Figure 1 includes 92.6 million NZUs in the stockpile that we have assessed to be not surplus (see step 5 under section 3). Our assessment is that these are unlikely to come to market; however, this assessment is dependent on many factors, including price expectations.
15. Currently, under existing policy settings, the only way to reduce the risk that the surplus poses to emissions budgets is by reducing the volume of units made available in government auctions via NZ ETS settings.

What is the policy problem or opportunity?

16. NZ ETS unit limits and price control settings need to be updated annually to ensure they are fit-for-purpose to assist New Zealand in meeting its emissions budgets and climate change targets. They also need to be extended to cover an additional year to meet the requirement that there must always be 5 years of settings in place.

17. As outlined above on page 2, there are four key issues for this year's settings decisions which inform the option packages presented in section 5 on page 25. These key issues are addressed in detail in the relevant section of this RIS below.

What objectives are sought in relation to the policy problem?

18. The objectives are prescribed by the Act which requires that unit settings must accord with New Zealand's:

- 2050 target, which is:
  - net zero emissions of all greenhouse gas emissions other than biogenic methane by 2050

- 24 to 47 per cent reduction below 2017 biogenic methane emissions by 2050, including 10 per cent reduction below 2017 biogenic methane emissions by 2030

- emissions budgets, which are stepping stones along the path to the 2050 target
- the first NDC, which sets a target of a 50 per cent reduction of net emissions below the gross 2005 level by 2030.

19. If the unit settings are not strictly in accordance with the budgets and targets, the Minister must justify the discrepancy in line with the criteria prescribed in the Act.[2] Importantly, the Act also never allows for anything less than “strict accordance” with the 2050 target.

20. We refer to this as the ‘accordance test’ in this RIS.

Meeting the NDC

21. One of the objectives of NZ ETS settings decisions is to align settings decisions with the NDC. However, NZ ETS settings are unable to be in strict accordance with the NDC, as the gap between the NDC and emissions budgets[3] is larger than the forecast auction volume under the status quo. In other words, all else equal, even not auctioning any units until 2030 would still not be sufficient to fill the NDC gap. The relevant legal requirement therefore is that NZ ETS settings must be in general accordance with the NDC.

22. We have provided options for NZ ETS settings this year outlined in the RIS, underpinned by the core assumption that the Government (in the absence of action or statements to the contrary) intends to meet the NDC, as per New Zealand’s submission on the first NDC under the Paris Agreement. This submission and previous Cabinet decisions [CAB-21-MIN-0434 refers] provided the evidence base for general accordance last year.

23. This RIS also notes opportunities to do more to slightly over-achieve on domestic emissions budgets, and narrow the NDC gap, as further set out in section 3 (step 1 – unit limits).

Section 2: Deciding upon an option to address the policy problem

What criteria will be used to compare options to the status quo?

24. The criteria used to assess the options are described in table 1 below. They broadly align with the factors in section 30GC of the Act (see **Appendix One**).

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[2] In summary these are: New Zealand’s projected emissions trends for the next 5 years (both NZ ETS and non-NZ ETS sectors); the proper functioning of the NZ ETS; any relevant international obligations, instruments, or contracts to purchase ‘offshore mitigation’; the predicted availability and cost of ways to meet New Zealand’s climate targets; the Climate Change Commission’s advice; any other relevant matters; and (in relation to price control settings only) the impact of emissions prices on households and the economy, and international emissions prices.

[3] The 2030 NDC is calculated differently to the emissions budgets. Emissions budgets are stepping stones to reach the 2050 target, whereas the NDC is calculated against a 2005 reference year and emissions in 2030.

Table 1: Criteria for options analysis of limits and price control settings for units

Criteria	Description
Likelihood of incentivising emissions reductions	The NZ ETS must accord with New Zealand's emissions budgets, the NDC, and 2050 target, which all require either gross emissions reductions or increased emissions removals. Accordingly, settings should support emissions reductions and removals. The NZ ETS supports gross emissions reductions by providing a price signal to incentivise the uptake of low-emissions technology, energy efficiency measures and other emissions reductions opportunities. The NZ ETS drives emission removals by providing a price signal that rewards certain removal activities, such as afforestation.
Support the proper functioning of the NZ ETS	The NZ ETS should operate in a transparent and durable manner that allows participants to form expectations about supply and demand to support investment in domestic emissions abatement. The restrictions on how settings are updated allow changes to be made in response to new information, while maintaining regulatory predictability. Options that undermine this standard approach rate negatively in this criterion. This criterion also includes NZ ETS participants being able to attain and surrender units to meet NZ ETS obligations. Ensuring the NZ ETS is functioning properly supports actions in emission reductions and removals, as well as the role of the NZ ETS in meeting emissions budgets and targets.
Support consistency of unit prices with the level and trajectory of international emissions prices **	There are two reasons for considering the level and trajectory of international emissions prices. First, that international emissions prices provide a comparison of New Zealand's contribution to the global effort towards addressing climate change, notwithstanding fundamental differences exist between individual emission pricing schemes. Secondly, that offshore mitigation could be needed to meet emissions reduction targets in addition to reducing emissions domestically.
Manages overall costs to the economy and households **	Settings manage the costs imposed by the NZ ETS on the economy, on households, and on different sectors and regions.

*** these criteria are considered for price control settings only.*

25. Assessment of each option against the criteria is given a rating outlined in the key below:

Key for assessing options against the status quo	
++	much better than the status quo
+	better than the status quo
0	about the same as the status quo
-	worse than the status quo
- -	much worse than the status quo

What scope will options be considered within?

26. Because of the legal requirement (the accordance test), an option package will have two components – choice for unit limits *and* price control settings. Therefore, the scope within which options will be considered contains interventions to address the key issues which arose this year, for unit limits as well as price control settings.

27. The methodology for calculating unit limits is out of scope. It was developed in 2020 for the NZ ETS limits for units. The Commission has also used this methodology for all its advice on NZ ETS unit limit settings. We consider there is no reason to change the sequential set of calculations, as the process remains the appropriate way to determine these limits.

What options are being considered?

28. We have considered three option packages. These comprise different combinations of choices for unit limits and price control settings. Therefore, we have first discussed unit limits in section 4, and price control settings in section 5.

29. We then present the options and analysis of these options in section 5.

Section 3: Limits for units

30. The limits for units that are prescribed in regulations are:
    - a limit on the units available by auction: annual auction volume + volume available within the CCR
    - a limit on approved overseas units
    - an overall limit on units: which consists of units available by auction and by other means, as well as approved overseas units.

31. A methodology for calculating the annual auction volumes was first developed in 2020, and the same broad approach has been used both by the government and by the Commission in its 2022 and 2023 advice to the Minister.

32. The methodology for calculating the auction volumes uses the following calculation steps:

    1) Align with climate change targets

    2) Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors

    3) Make technical adjustments

4) Account for industrial allocation volumes

5) Set the reduction volume to address the unit surplus

6) Set the approved overseas unit limit

7) Calculate the base auction volumes.

33. As highlighted above in section 1, under the problem definition, the key issues relate to step 1, step 2, and step 5. Choices under these steps will inform the final option packages (unit limits and price control settings), which are detailed in section 5.

34. The remaining steps (steps 3, 4, and 6) are mechanical updates. This RIS details the reasons for these updates for clarity.

Step 1: Align with climate change targets

Context

35. Step 1 calculates the overall amount of permitted emissions (across the whole of economy) able to achieve the emissions budgets and targets. It does this by converting domestic emissions budgets into annual caps for the next five years.

Problem definition

The Greenhouse Gas Inventory updates affect how emissions are calculated

36. The Inventory is updated every year. Since the last annual NZ ETS settings in 2023, the Inventory has been updated through its 2023 and 2024 annual updates. While this year's update reflects better data and information for calculating historical emissions (rather than actual emissions reductions), it also affects how emissions are calculated when aligning with the climate change targets, and therefore the annual caps on national emissions.

37. This is relevant for the NDC budget, which is calculated using the 2005 and 2030 reference years (the NDC target is to reduce net greenhouse gas emissions by 30 per cent below gross 2005 levels by 2030).

38. The 2023 NZ ETS settings annual update did not update step 1 to take Inventory changes into account because at the time the 2022 Inventory was still the most up to date Inventory.

39. This is not the case for 2024. Since 2023 settings decisions, the Inventory has been updated twice (the 2023 and 2024 updates). Therefore, while we consulted on the option of not applying the most recent Inventory updates (referred to as the status quo option in the consultation document), we now consider this option unviable. This would mean using an out-of-date Inventory (the 2022 updates) to calculate this step, which does not provide a robust evidence base for accordance assessment.

40. Updating step 1 in line with Inventory changes is therefore the status quo approach option in this RIS. We referred to this as the minimum option in the consultation document.

NZ Steel deal highlights the opportunity to further adjust unit limits to help meet the NDC and provide assurance for/reduce risk of meeting emissions budgets and targets

41. As highlighted in the Commission's advice and the consultation document, there is an opportunity for step 1 to be adjusted differently to the status quo approach and set a precedent for how step 1 is adjusted in future NZ ETS settings processes.

42. The New Zealand Steel electric furnace decarbonisation project was finalised in 2023. Once the new electric furnace becomes operational in 2026, NZ Steel and its coal and fuel suppliers will reduce their emissions by 1Mt. These emission reductions were not anticipated when emissions budgets were set in 2022 and therefore are not reflected in the cap on units in the NZ ETS.

43. Not accounting for these unanticipated emission reductions can result in additional emissions by other NZ ETS participant(s) (as the emissions budgets serve as the national cap on emissions). This displacement of emissions reductions by one NZ ETS sector or participant, with emissions increases by another NZ ETS sector or participant, which can take place over time under a capped system such as the NZ ETS, is often referred to as the 'waterbed effect'.

44. The waterbed effect occurs because unanticipated emissions reductions by an NZ ETS participant/sector, reduce demand for units, leading to a reduction in unit price expectations. This, in turn, may incentivise other NZ ETS participants/sectors to increase their emissions over time or, more likely, reduce their emissions more slowly than otherwise planned. All else being equal, the amount of emissions increase could, over time, be closely equivalent to the amount of the unanticipated emissions reductions.

45. Under current NZ ETS settings, the units these participants hold for future liabilities for the 1Mt of annual emissions that had been planned will result in an increase in surplus units (as they would have been allocated for by the emissions budgets). While this surplus can be addressed under Step 5 of the calculation for unit auctions, additional surplus units create, as well as add to, the risk the surplus poses to emissions budgets and targets.

~~46.~~ Tightening unit limits in Step 1 to account for these unanticipated emission reductions, instead of the units creating additional surplus, would provide additional assurance for lowering the risk of meeting the emissions budgets and targets. It also presents an opportunity to attempt to over-achieve on domestic emissions budgets, by "locking in" the unanticipated emissions reductions and preventing other emitters' emissions rising in response. As we noted in the consultation document and was highlighted by the Commission, this would have the effect of reducing the gap in meeting the NDC.

What are the options?

47. Drawing from the analysis above, after having ruled out doing nothing as a viable option, there are two options under this step:
    - **Option 1: status quo approach**: align national emissions cap with the updated Inventory (the 2024 Inventory)
    - **Option 2: in addition to option 1**, also further tighten units to account for unanticipated emission reductions

48. We note that for option 2, the only source of unanticipated emissions reduction we have identified is the New Zealand Steel decarbonisation project, which is expected to reduce

emissions by 1Mt annually from the start of 2026. Consultation has not identified any other source of unanticipated emission reduction.

49. Adjustments under option 2 therefore comprise an annual reduction of 1 million units from 2026 to 2029. (We note that the final unit limits for this will include adjustments under the other steps of the methodology for calculating unit limits.) Adjustments are made in line with the timing of unanticipated emissions reductions to best provide for market certainty and predictability.

50. The two options are analysed below.

51. We have attached the framework of option 2 as **Appendix Two**, to provide clarity and certainty of how unit limits could be adjusted under step 1 for future years.

Table 2: Options analysis for step 1

Criteria	Option One – Status quo approach	Option Two – In addition to option 1, also further tighten unit limits to account for unanticipated emissions reductions
Likelihood of incentivising emissions reductions	**0** Applying the 2024 Inventory changes to the 2025-2029 settings period has the effect of aiming to slightly over-achieve emissions budgets for this year's NZ ETS settings updates. This may be negated by future inventory updates, which can have the effect of increasing historic emissions.	**+ +** A reduction in the supply to market under this option will increase market prices and therefore incentivises greater emission reduction and removals. Modelling suggests the effect on net emissions is more significant in EB3 (-2.4Mt compared to Option One) than EB1 (-0.1Mt) or EB2 (-0.7Mt).
Support the proper functioning of the NZ ETS	**0** Settings would be updated to respond to new information (the Inventory change).	**0 / -** Reduced supply under this option could result in units being drawn from the non-surplus stockpile. There is a risk that this impacts liquidity and the ability of participants to obtain and hedge units for compliance needs. However, this risk is considered low given the size of the adjustment (one million units per year) relative to the estimated size of the non-surplus stockpile (92.6 million units).
Overall assessment	**0**	**+ + / +**

Preferred option

52. The Ministry does not have a preferred option. Both options are consistent with statutory obligations. Option One involves lower costs for households and businesses, at least in

the short to medium term, and therefore is likely better aligned to the Government's preferred "least-cost" strategy for achieving the second emissions budget as outlined in the draft second emissions reduction plan (ERP2).

53. Option Two provides additional benefits in terms of meeting emissions budgets, in particular the third emissions budget, and therefore scores more highly against our core criteria (as above), but involves increasingly higher costs on businesses and households for each NZU additionally removed.

54. Whether those costs are justified should be considered against the relative costs of other measures, which is being considered as part of ERP2.

Consultation feedback

55. Submitters' support was spread across the options, with most supporting the option to adjust the national cap downwards for the NZ Steel abatement. Submitters suggested this would assist in meeting emission targets and reduce the overall costs of meeting the NDC.

56. We consulted on whether the Government should also adjust NZ ETS settings to manage the impact of non-ETS policies such as NZ Steel's new electric arc furnace.

57. We received substantial feedback that could be considered when designing a framework to consider the treatment of non-ETS policies – this feedback is attached as **Appendix 2**.

58. To support market confidence, the development and adoption of such a framework would need to be progressed carefully, with further input from market participants, the Commission, and other stakeholders. This is something MfE intend to further develop, to support future decisions on NZ ETS settings.

Step 2: Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors

Context

59. This step allocates emissions budgets between sectors that the NZ ETS covers and those that it does not. It recognises that emissions and removals outside of the NZ ETS will already account for a portion of the emissions budget.

Problem definition

60. In previous settings decisions, this step followed the approach in the first emissions reduction plan (ERP1), which split emissions budgets for NZ ETS and non-ETS sectors based on a target pathway implicitly adopted by the Government via sector sub-targets (so there is a set number for both). This is the status quo option and has been the approach used in previous settings decisions.

61. At the time of consultation, projections of emissions from non-ETS sectors, in particular agriculture, were *higher* than target pathway levels due to methodological and policy changes. This means decisions on NZ ETS settings using the previous approach risked exceeding emissions budgets.

62. Therefore, we sought feedback on alternative approaches, and consulted on another option (option 2 referred to below), which is allocating emissions based on emissions projections under current and proposed policy settings.

63. However, more recent emissions projections conducted to support consultation on ERP2 show that emissions in the non-NZ ETS sectors are now expected to be very slightly *lower* than sector sub-targets across EB2. This means the risk that prompted consulting on alternative approaches no longer applies. Based on our best current information, the target pathway used previously continues to reflect our current understanding of this Government's strategy and approach.

64. The approach to the ETS/non-ETS spilt will need to be revisited next year to reflect updated information arising from final decisions on ERP2, as well as the methane target review.

What are the options?

65. There are two options, as noted above:
    - **Option 1**: status quo approach: allocate emissions in the NZ ETS using sector sub-targets from emissions budget 1 (EB1)
    - **Option 2**: allocate emissions in the NZ ETS based on the emissions projections

66. Under option 2, the share available to NZ ETS sectors would change over time as these emissions projections change. This option would use the NZ ETS to deliver emissions abatement for non-NZ ETS sectors: if non-NZ ETS emissions do not decline in line with the assumed pathway, the reduction required for the NZ ETS sectors would change.

67. Option 2 essentially treats emissions inside and outside the NZ ETS as interchangeable, under one overall constraint provided by the emissions budgets. It has the effect of making the NZ ETS an emissions reduction backstop for the rest of the economy.

Table 3: Options analysis for step 2

Criteria	Option 1: Status quo approach	Option 2: Projection based approach
Likelihood of incentivising emissions reductions	**0** Reducing unit limits in line with NZ ETS/non-NZ ETS share would encourage emissions reduction. Has the effect of over-achievement of current emission budget, which improves NDC and EB3 accordance.	**+ / 0** If projections show non-NZ ETS emissions are lower than their share of the emission budget, this option will 'lock in' those emissions reductions in the NZ ETS.
Support the proper functioning of the NZ ETS	**0** Well understood by the market. Not expected to shift significantly, which contributes to market certainty and predictability.	**- -** Creates risks and uncertainties: If projections show non-NZ ETS emissions are *higher* than their share of the emission budget, this option will reduce auction volumes compared to option 1. It also means NZ ETS participants make up for the reduced achievement of non-NZ ETS participants. 90% of biogenic methane emissions are outside the NZ ETS. The NZ ETS cannot achieve the 2030 biogenic methane target, nor can it compensate for insufficient reductions in agricultural biogenic methane. Adjusting the emissions allocated in the NZ ETS each year according to new projections may also undermine market certainty and predictability.
Overall assessment	**0**	**-**

Preferred option

68. Option 1 is the Ministry's preferred option, and is the recommended option in the Cabinet paper. As compared to option 2, it continues the approach that is currently understood by the market.

69. In contrast, as highlighted above, option 2 carries risks and uncertainties. It worsens accordance with emissions budget 3 due to the additional NZUs available for auction. Adjusting the emissions allocated in the NZ ETS each year according to new projections may also undermine market certainty and predictability.

Consultation feedback

70. A small number of submitters across various sectors support accounting for emissions from non-ETS sectors when allocating emissions to the NZ ETS. However, as noted above, the rationale for exploring a different approach no longer applies. Furthermore, we have identified the risks and uncertainties (detailed above) and therefore we do not prefer option 2.

Step 3: Technical adjustments

71. As this is a mechanical step, only one option was considered.

72. Emissions reported into the NZ ETS for covered sectors are intended to align with emissions reported in New Zealand's Inventory as New Zealand uses Inventory data to report progress towards targets. Any accounting misalignment could mean too many, or too few, emission units are supplied into the market. This could risk over- or under-achieving those targets.

73. The Commission has identified that the differences observed between coal and steel production in the Inventory and the NZ ETS no longer persisted in 2021 emissions. It considers this primarily to be due to a previous technical error in emission reporting that has now been resolved by the Government. The Commission also observed that a discrepancy within liquid fossil fuel (LFF) emissions may be related to the classification of Liquid Petroleum Gas (LPG). It is classified as an LFF in the Inventory but as stationary energy within the NZ ETS.

74. We agree with applying these changes to step 3 this year.

Step 4: Account for industrial free allocation

75. As this is also a mechanical step, only one option was considered.

76. The Government provides free allocation to businesses undertaking activities that are emissions-intensive and trade-exposed. These units use up part of the emissions budget allocated to the NZ ETS and reduce the number of units that the Government can sell at auction.

77. The Commission re-forecasts industrial allocation volumes every year for the upcoming five years. This forecast is based on the existing allocative baselines and production levels of eligible activities for the next five years.

78. For this year, the Commission's forecast of expected industrial free allocation now totals 26.4 million units over the period 2025-2029, approximately 25% of the total emissions volume allocated to NZ ETS sectors.

79. In our calculation, we have made minor adjustments to incorporate latest information, including expected changes as part of regulatory updates, resulting in a revised estimate of 28.5 million units to be allocated for industrial free allocation over the period 2025-2029.[4] Cabinet decisions on allocation changes will be made later this year. If those decisions vary materially from our current assumptions, this can be corrected in the annual update to NZ ETS settings next year.

Step 5: Set the reduction volume to address the unit surplus

Context

80. Units do not expire and can be banked indefinitely before they are surrendered. Previous settings have led to a large accumulation of units held in private accounts

[4] Adjustments applied (compared to the Commission) were 0.29M in 2024 (note this change is captured in the Step 5b discrepancy adjustment), 0.07M in 2025 and then 0.69M per annum from 2026 onwards.

(known as the stockpile). These are units issued in the past but not yet surrendered for liabilities. Many of these units are banked for future liabilities, allowing participants to manage their future obligations. It also provides liquidity to the market.

81. The volume of the stockpile presents a risk to achieving the emissions budgets, because NZ ETS participants can use it to meet their surrender obligations rather than reducing emissions in line with the NZ ETS cap.

82. A portion of the units held in private accounts are considered unlikely to come to market as they are held against future forestry harvest or forestry land use change liabilities (i.e. post 1989 forest, pre 1990 forest, or are being used to hedge future surrender liabilities by non-foresters).

83. The remainder is termed as 'surplus'. This is the excess component (i.e. units that are not held for a particular purpose) of the stockpile. This surplus poses the greatest risk of enabling emissions to exceed emissions budgets.

84. This step determines how much the surplus should reduce by.

Problem definition

85. There has been a significant increase in the surplus estimate. Although our estimate of the surplus (67.3M units) is slightly smaller than the Commission's estimate (68.0M units), this is higher than the status quo (49M units). Our change compared to the Commission's estimate is due to the use of more recent data – namely the 2024 demonstration path and the December 2023 total stockpile volume.

86. The surplus can be considered as a market over-supply. It puts downward pressure on unit prices, and is evidenced by successive auctions not clearing in 2023 and in June 2024, and the March 2024 auction partially clearing at floor price.

87. We have used the same methodology to estimate the surplus since 2022, and this is also used by the Commission (refer **Appendix Three)**. It involves estimating the volumes of three types of units that are unlikely to be available to the market and subtracting that amount from the total stockpile.

88. The Government can encourage faster use of the units in the surplus by managing the number of units it sells in auctions. Status quo NZ ETS settings are now consistent with drawing down about 60% of the surplus by 2030. This creates a risk that emissions budgets could be exceeded, given the increase in size of the surplus.

What are the options?

89. As noted above, under the **status quo option** there has been a significant increase in the surplus estimate this year.

90. We have considered two additional options:
    - **Option 1**: aims to substantially reduce the risk posed by the surplus by seeking to draw down a portion of the surplus by 2030. We have tested drawing down 80% and 90% of the current surplus estimate, to reflect the inherent uncertainty in the estimate and the behaviour of holders.
    - **Option 2**: aims to remove the risk posed by the surplus by seeking to draw down 100% of the surplus (67.3M units) down by 2030.

Options analysis for step 5

Table 4: Options analysis

Criteria	Status quo	Option 1: Draw down a portion of surplus	Option 2: Draw down the surplus by 100% by 2030
Likelihood of incentivising (net) emissions reductions	**0** The status quo will result in excess supply in the market, negatively impacting prices and incentivises emissions reduction. This will be exacerbated by negative market reaction from this option.	+ Reduces supply to market, thereby increasing prices and incentives. Substantially reduces the risk posed by the surplus. There is a risk that the residual surplus is used by emitters rather than reducing emissions. There is also the risk of a potential market reaction as this inconsistent with the historic approach of reducing the surplus to zero by 2030, which could have a dampening effect on prices.	+ + Reduces supply to market, thereby increasing prices and incentives. Reduces the risk the surplus poses.
Support proper functioning of the NZ ETS	**0** Unlikely to have impact on proper functioning insofar as this is measured by ability for participants to source emission units for compliance, due to continuation of oversupply.	**0/-** Unlikely to impact proper functioning if the assessment of the surplus is correct, as participants will still be able to attain units for hedging and compliance needs. However, if this assessment is incorrect, there is a risk that reduced supply could result in units being drawn from the non-surplus, impacting liquidity and the ability of participants to obtain and hedge units for compliance needs.	**0/-** Same as option 1, however there is a slightly increased risk (although still low) to liquidity for this option due to the full draw down of the surplus by 2030.
Overall assessment	0	+	++

Preferred option for step 5

91. The recommended option is option 2.

92. Option 2 is more likely to incentivise emission reductions now and in future years because it reduces auction volumes to a level that would remove the estimated surplus within the EB2 period assuming net emissions at the target level. Units would be left in the surplus by 2030 only if net emissions were below the target level.

93. Option 1 also reduces the risk posed by the stockpile. However, compared with Option 2, a slower drawdown rate has a greater risk of not incentivising required emission reductions and removals for emissions targets because it could result in lower emission unit prices and negatively affect market confidence.

94. For Option 1, while we have tested values of both 80% and 90% surplus drawdown, the two values differ in terms of the risk they pose to achievement of emissions budgets due to the size of the remaining surplus, with a higher volume of units remaining equating to a higher risk to achievement.

95. Both options involve updating the first two years of unit limits. The important advantage of this approach is that smoother adjustments to auction volumes support market certainty and functioning. If the first two years remained at status quo unit limits then this would result in a very steep drop in auction volumes from 2027. Updating the first two years is an approach that was supported by the majority of submissions.

96. The Act specifies the requirements for updating the first two years of settings. We consider that the requirements are met for two reasons:
    - The settings can be adjusted if units were sold at the minimum price in the year the amendments to NZ ETS settings are made (s30GB(5)(a)(ii)), as occurred in the March auction this year.
    - The new surplus estimate is a significant increase on the previous estimate. Continuing with the status quo underestimates the surplus and creates risk to the accordance of NZ ETS settings with emission targets. In our view, this change is a special circumstance and significantly impacts the proper functioning of the NZ ETS (s30GB(5)(b)(i), s30GC(5)(b)).

Consultation feedback

97. We consulted on the status quo option, and different approaches to drawing down the 100% of the surplus by 2030. We did not consult on drawing down a portion of the surplus as an option.

98. The majority of submitters supported drawing down 100% of the current surplus by 2030. Some submitters preferred a slower drawdown for reasons for meeting their compliance needs.

99. A small number of submitters from the forestry sector felt there should be no change to the surplus despite the updated surplus estimate, while one disagreed with increasing the drawdown rate, due to concern for the estimated unit flow for forestry. However, the majority of forestry submitters supported increasing the drawdown rate.

Step 6: Set overseas unit limits

100. There are currently no overseas units approved for use in the NZ ETS. Therefore, the approved overseas unit limit is zero.

Step 7: Overall unit limits

101. Following the key choices highlighted in step 1, step 2, and step 5, there are three combinations of the overall unit limits outlined in table 5 below. Note all three options include the status quo option for step 2.

Table 5: Step 7 options:

	Description	Total auction volumes 2025 – 2029 (millions NZUs)
Status quo	No change – extend to 2029	45.1
Option 1 – Partial drawdown	Draw down a portion of current surplus estimate (80% or 90%) by 2030 Update auction volume for all years	33.8 (80% drawn down, -11.3 from status quo) to 27.2 (90% drawn down, -17.9 from status quo)
Option 2 – Full drawdown	Draw down the surplus by 100% by 2030 Update auction volume for all years	21.2 (-23.9)
Option 3 – Full drawdown and additional adjustment	In addition to option 2, further tighten unit limits to account for unanticipated emissions reduction (option 2 in step 1, the NZ Steel deal)	16.9 (-28.2)

Section 4: Price control settings and cost containment reserve

Price control settings

Context

102. Auction price controls provide the Government with tools to manage the supply of units. Auction price controls include the:

1) auction price floor (price floor) – the price below which the Government will not sell units at auction (the price control). It stays at a prescribed value for each auction in a year.

2) cost containment reserve (CCR) trigger price(s) – the price or prices at which additional units will be released if an auction's interim clearing price reaches or exceeds this level (the trigger price).

3) CCR volume(s) – the number of units that will be released if the trigger price is reached.

103. The price floor minimises the risks of the unit price at auction being inconsistent with the prices necessary to meet emissions budgets and targets. The price floor is the lower price control setting of the auction price corridor; however, it is not a 'hard' price floor as the secondary market price can fall below it (as is currently the case).

104. The CCR helps manage the risk of extremely high prices in the NZ ETS from shocks and unforeseen events. It functions by releasing reserve volume into an auction where

prescribed prices have been met. The volume of the CCR needs to be large enough to enable it to perform its function of mitigating against auction prices that are too high.

How we approached price control settings

105. All the auction price floor and CCR trigger price options have been adjusted for inflation using the most recent inflation figures from Treasury's Budget Economic and Fiscal Update 2024.[5] The inflation adjustment avoids the effectiveness of settings being eroded over time in real terms. This is consistent with the considerations in section 30GC(6)(c) of the Act and is supported by the advice of the Commission.[6]

106. We used the NZ ETS Market model to test the minimum price needed to incentivise sufficient NZ ETS sector emission reductions to meet the emissions budgets. Modelling the different unit supply options in the market model also provides insights on the CCR trigger price. This modelling result is attached as **Appendix Four**.

Analysis and preferred option

107. Modelling shows that the auction floor price as set in current regulations ($64 today, rising to $79 by 2028) is fit for purpose and at levels consistent with its intended role. While the modelling suggests marginal changes could be made, the auction floor price still needs to increase over time and to similar levels to current regulations to incentivise sufficient emission reductions to meet the emissions budgets. Lowering price control settings risks undermining market confidence and impacting on the likelihood of future auctions clearing in the near term. Therefore, maintaining the status quo price floor settings is preferred, and no other option is presented or analysed in this RIS.

108. Similarly, the modelling supports retaining the status quo CCR trigger prices. In the modelling undertaken of the different options, projected prices did not exceed the current trigger prices in any of the scenarios tested (see Figure 1 in **Appendix Four**), including in the more extreme sensitivity tests. The only scenario where prices neared the trigger price levels was in a situation of zero auction volumes, at which point price controls are no longer relevant. This suggests that the trigger price is sufficiently high that it will not unduly influence price discovery in the market[7] and that it remains above the levels needed to encourage abatement and removals.

109. For these reasons, maintaining the current price control settings and adjusting for forecast inflation is the preferred option.

Consultation feedback

110. A majority of all submitters who expressed a preferred option for price control trigger prices, supported extending the status quo.

111. Most submitters suggested maintaining the current price control settings is essential to providing certainty, stability and confidence in the NZ ETS. Some note that lowering the price floor would not be conducive to the strong incentive needed to reduce emissions and drive decarbonisation investment. One submitter noted that it would be inconsistent

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[5] Budget Economic and Fiscal Update 2024 (treasury.govt.nz) see *Table 1.1 Economic Forecasts*

[6] 2023-advice-on-NZ-ETS-unit-limit-and-price-control-settings.pdf (climatecommission.govt.nz) page 48

[7] Prior to 2023, the substantially lower cost containment reserve trigger price acted as a "magnet" in the secondary market, in the absence of other price signals.

with meeting emissions reduction obligations. Some foresters said even putting forward the option of lowering the price floor has caused adverse effects on the market, both fiscal and confidence wise.

112. The very few submitters who support lowering the price floor primarily come from the energy sector. One submitter noted trigger prices should be set at a 'more reasonable and sustainable level' and another stated that the price floor should be removed or materially reduced to ensure efficient market price discovery.

113. As outlined above in our analysis, the current price control settings remain fit for purpose, therefore we do not consider lowering price control settings is needed.

Cost containment reserve volume

Context

114. In its 2022 and 2023 recommendations on NZ ETS settings, the Commission recommended that the CCR volume should be equal to the surplus reduction volume for each year. If the CCR was triggered and fully sold, there would be no units supplied above the overall limit on units and the surplus would not change.

115. This year, the Commission recommended maintaining the volume of the CCR for 2025–28 as set in 2023, plus an extension to 2029, despite the increase in the Commission's surplus reduction volume. Decoupling CCR volume from surplus reduction represents a change of methodology to previous years where the volume in the CCR was adjusted with changes in the surplus estimate.

Option analysis for CCR volume

Table 6: CCR volume options

	Option One – Maintain the current CCR volume	Option Two – Increase CCR volume to reflect surplus reduction
Likelihood of incentivising emissions reductions	0	- If the CCR is triggered, there is increased risk that the surplus is maintained.
Support the proper functioning of the NZ ETS	0	- The surplus undermines the effectiveness of the NZ ETS.
Support consistency of unit prices with the level and trajectory of international emissions prices	0	0
Manage overall costs to the economy and households	0	+ More units in the CCR could provide increased protection against higher prices if tier 2 is triggered.
Overall assessment	0	-

Preferred option

116. Option 1 is the Ministry's preferred option.

117. We consulted on options for the size of the CCR. Options for the size of the CCR are either maintaining the status quo volume of the CCR or increasing it to align with the amount of the surplus drawn down each year. The latter option would increase the risk the NZ ETS settings do not accord with emission targets as more volume would be added to the market compared to the status quo.

Table 7: CCR volumes

	Adjust for new inflation forecasts			New	
	2025	**2026**	**2027**	**2028**	**2029**
Auction price floor	$68	$71	$75	$78	$82
CCR Tier 1	$193	$203	$213	$224	$235
CCR Tier 2	$242	$254	$267	$280	$294
CCR Tier 1 volume	2.6	2.3	2.1	1.9	1.7
CCR Tier 2 volume	4.5	4.2	3.8	3.4	3.0
Total CCR volumes	7.1	6.5	5.9	5.3	4.7

Consultation feedback

118. Of those submitters who expressed a preferred option for the CCR volume, the majority supported maintaining the status quo. A few submitters supported increasing the CCR volume to reflect surplus reduction. Most of these submitters are from the energy sector and feel that this option provides protection against upward price movements.

119. As discussed above, increasing the CCR volume would increase the overall liquid stockpile volume in the NZ ETS. This would add to the issue of surplus in the stockpile volume, which undermines accordance with emissions budgets and targets.

Section 5: Option packages

120. Because this RIS prefers no change to step 2 and price control settings, the key differences that inform the three different options are:
- Choice on step 1: whether to make the adjustment for unanticipated emissions reductions
- Choice on step 5: should the surplus be drawn down in full or only partially (we considered drawing down 80% and 90% of the current estimate of surplus)

121. Drawing from these key choices, there are three options detailed in table 8 below:
- **Option 1**: aims to substantially reduce the risk posed by the surplus by seeking to draw down a portion of the current estimate of the surplus by 2030.The table below includes drawdown of both 80% and 90%. The Cabinet paper only presents this option as drawing down 90% of the current surplus estimate.

- **Option 2** aims to remove the risk posed by the surplus by seeking to draw down 100% of the current estimate of the surplus out by 2030.
- **Option 3**: in addition to option 2, further tighten unit limits by making adjustments to account for unanticipated emissions reduction from when the emissions budgets were set.

122. We have included the detailed impact analysis of all options considered for completeness. The Cabinet paper presents two of these options, option 1 (drawing down by 90%) and option 2.

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Table 8: Options and estimated impact for settings 2025-2029

Option	Summary of accordance	Summary of modelling and net emissions impacts[8]	Summary of price impacts (household and fiscal implications)
Status quo	**Unlikely to meet accordance test.** The status quo allows for a large portion of the surplus (approximately 40%) to remain in place by 2030, assuming net emissions are at the target level. This surplus could either allow excess emissions during EB2, if these units are accessed and surrendered by emitters, and/or carry a large surplus forward into EB3	Modelling indicates this option meets EB2 (with proposed ERP2 policies) but not EB3, and retains a significant stockpile risk to budget accordance. **Central estimate of total net emissions (Mt CO_2-e)** **EB1 (290)** 284.1 **EB2 (305)** 303.6 **EB3 (240)** 256.9	Modelling projects NZU prices to rise to around $71 by 2026 and $82 by 2029. At a price of $71, additional household expenditure caused by emissions pricing is about $570 per household (or about 0.7% of household gross income) and at a price of $82, about $600 per household. Assuming auctions clear, NZ ETS cash proceeds are projected at about $3.3 billion for 2025-2029.
Option 1	**Could meet accordance test, with some risk** This option increases the chances of achieving emissions targets by additionally reducing the surplus so that a smaller portion (20% for 80% drawdown, and 10% for 90% drawdown) remains in place by 2030, assuming net emissions are at the target level. This remaining surplus could still either allow excess emissions during EB2, if these units are accessed and surrendered by emitters, and/or carry a surplus forward into EB3. The assessment of accordance for this option changes depending on the rate of drawdown. An option that draws down the surplus by 90% poses less risk to the achievement of emissions budgets, in particular EB2. It leaves 6.7 M units in the surplus in 2030 (based on the central surplus estimate). This option retains some ability to use adaptive management to reduce auction volumes over the EB2 or EB3 period if it appears that the remaining 10% surplus volume is likely to come to market. This level of draw down is therefore likely to meet the accordance test. Drawing down 80% of the stockpile leaves 14.3 M units in the surplus. This is more than the estimate of auction volume remaining (12.3 M NZUs) so there is unlikely to be any headroom in EB2 and EB3 to manage this down if needed. This level of draw down could meet the accordance test, but there is more risk with this approach.	Modelling indicates this option meets EB2 (with proposed ERP2 policies) but not EB3, and retains a stockpile risk to budget accordance. **Central estimate of total net emissions (Mt CO_2-e)** **EB1 (290)** 284.1 **EB2 (305)** 303.2 (90% draw down) – 303.3 (80% draw down) **EB3 (240)** 255.0 (90% draw down) – 255.5 (80% draw down)	Modelling projects NZU prices to rise to around $73 (80% draw down) - $74 (90% draw down) by 2026 and $88 (80% draw down) - $90 (90% draw down) by 2029. Compared to the status quo, this is expected to increase CPI inflation by 0.01 (80% draw down) - 0.02 (90% draw down) percentage points per annum between 2025 and 2029, resulting in an increase in annual household expenditure caused by emissions pricing by about $20 in 2026 and $50 (80% draw down) - $60 (90% draw down) by 2029. Assuming auctions clear, NZ ETS cash proceeds are projected at about $2.5-2.6 (80% draw down), or $2.0-2.1 billion (90% draw down) for 2025-29 ($0.7-$0.8 billion to $1.2- $1.3 billion lower than status quo, respectively).
Option 2	**Likely to meet accordance test.** This option is more likely to meet emissions targets than Option 1 because it reduces auction volumes to a level that would remove the estimated surplus within the EB2 period, assuming net emissions are at the target level.	Modelling indicates this option meets EB2 (with proposed ERP2 policies) but not EB3. Stockpile risk to budget accordance is minimised. **Total net emissions (Mt CO_2-e)** **EB1 (290)** 284.1 **EB2 (305)** 302.9 **EB3 (240)** 253.8	Modelling projects NZU prices to rise to around $75 in 2026 and $96 by 2029. Compared to the status quo, this is expected to increase CPI inflation by 0.03 percentage points per annum between 2025 and 2029, resulting in an increase in annual household expenditure caused by emissions pricing by about $40 in 2026 and $100 by 2029. Assuming auctions clear, NZ ETS cash proceeds are projected at about $1.6-1.7 billion for 2025-29 ($1.6 – $1.7 billion lower than status quo).
Option 3	**Most likely to meet accordance tests.** As per full drawdown option, with the additional reduction in auction volumes compared to option 2 increasing the probability that emissions budgets will be met.	Including the NZ Steel adjustment increases the likelihood of achieving EB3 (and increases the buffer for EB2). **Total net emissions (Mt CO_2-e)** **EB1 (290)** 284.0 **EB2 (305)** 302.3 **EB3 (240)** 251.5	Modelling projects NZU prices to rise to around $110 by 2029. Compared to the status quo, this is expected to increase CPI inflation by 0.05% per annum between 2025 and 2029, resulting in an increase in household expenditure caused by emissions pricing by about $180 by 2029. Assuming auctions clear, NZ ETS cash proceeds are projected at about $1.3-1.5 billion for 2025-29 ($1.8-2.1 billion lower than status quo).

[8] See Appendix Four for details on the modelling approach and key assumptions.

What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

123. All three options meet the objective (i.e. the accordance test) and are consistent with statutory obligations, with varying degrees of risk.

124. Option 1 could meet the objective (i.e. the accordance test). Assuming 90% drawdown, this option is likely to meet the accordance test. An 80% drawdown approach could meet the accordance test, but there is more risk with this approach. Both option 2 and option 3 are likely to meet the accordance test.

125. In the Ministry's view, options which remove the surplus by 2030 (Options 2 and 3) are preferred. These options best manage the risk to the achievement of targets and budgets and thereby support market confidence in the credibility of the ETS.

126. Option 2 involves lower costs for households and businesses, at least in the short to medium term, and would therefore likely better align with the Government's preferred "least-cost" strategy for achieving the second emissions budget as outlined in the draft second emissions reduction plan (ERP2).

127. Option 3 provides additional benefits in terms of meeting emissions budgets, in particular the third emissions budget, and therefore scores more highly against our core criteria (as above), but involves corresponding higher costs on businesses and households for each NZU additionally removed. Whether those costs are justified should be considered against the relative costs of other measures, which is being considered as part of ERP2.

Table 9: Option 2 - Full drawdown

Unit limits (millions)	2025	2026	2027	2028	2029
NZUs available by auction	13.1	11.7	10.2	8.6	7.1
Approved overseas units	0	0	0	0	0
Overall limit on units	19.1	17.4	15.9	14.2	12.6
	Adjust for new inflation forecasts				New
	2025	2026	2027	2028	2029
Auction price floor	$68	$71	$75	$78	$82
CCR Tier 1	$193	$203	$213	$224	$235
CCR Tier 2	$242	$254	$267	$280	$294
CCR Tier 2 volume	4.5	4.2	3.8	3.4	3.0
Total CCR volumes	7.1	6.5	5.9	5.3	4.7

Table 10: Option 3 - Full drawdown and NZ Steel adjustment

Unit limits (millions)	2025	2026	2027	2028	2029
NZUs available by auction	12.5	10.7	9.2	7.7	6.3
Approved overseas units	0	0	0	0	0
	Adjust for new inflation forecasts				New
	2025	2026	2027	2028	2029
Auction price floor	$68	$71	$75	$78	$82

CCR Tier 1	$193	$203	$213	$224	$235
CCR Tier 2	$242	$254	$267	$280	$294
CCR Tier 1 volume	2.6	2.3	2.1	1.9	1.7
CCR Tier 2 volume	4.5	4.2	3.8	3.4	3.0
Total CCR volumes	7.1	6.5	5.9	5.3	4.7

What are the marginal costs and benefits of the option?

Table 11: Marginal costs and benefits

Affected groups	Benefits	Costs	Overall impact assessment
Emitting firms subject to NZ ETS obligations	Increased certainty on the direction of future emissions prices for investment decisions.	Higher costs for firms to meet surrender obligations. This may be mitigated by the extent to which firms have hedged their forward obligations, and by the extent to which these additional costs can be passed on to households (see households row below).	The short-term response to relatively higher NZU prices is likely to be fairly inelastic and result in limited additional emission reductions relative to the status quo. Over longer timeframes, relatively higher NZ ETS prices would increase the incentive for firms to invest in emissions reduction actions.
Firms that receive industrial allocation of NZUs (additional to firm impacts above)	Relatively higher prices nominally increase the value of units provided to firms by industrial allocation.	As above for the residual surrender obligations these firm face after industrial allocation is accounted for.	At emissions prices over $100 there is increased risk that industrial allocation is no longer effective in preventing emissions leakage for some activities. A rising NZU price increases the likelihood of this occurring.
Other NZ ETS participants	Relatively higher prices would increase the financial value of stockpiled units, both those held for hedging purposes and the liquid stockpile.		
Landowners (eg, foresters and farmers)	Returns to foresters are closely linked to NZ ETS prices, with relatively higher prices likely to lead to higher returns. Higher returns on forestry land also increases the option value of farming and other land that is suitable for forestry use	Increase in land use for exotic carbon forestry has the potential for unintended impacts on the environment, rural communities, and regional economies. Increased cost to landowners of deforestation due to increased price.	In the short term, gradually reducing unit limits is likely to marginally increase the rate of afforestation and farm conversions, subject to existing capacity constraints (eg, labour, seedling supplies) and relevant policy decisions (such as restrictions on converting productive farmland). Likely to lower net emissions from increased removals, although these will not be realised for several years. Increased afforestation now may lead to greater downward pressure on prices in the 2030s when

Affected groups	Benefits	Costs	Overall impact assessment
	(regardless of whether this option is exercised).		these forestry units enter the market in material volumes.
Households	Benefits associated with emissions reductions and achieving emissions budgets, the NDC, and the 2050 target.	The impacts of emission prices on households are regressive, and relatively higher NZ ETS prices will likely increase these impacts. The mitigating factors will be the extent to which businesses pass on additional costs, and the extent to which households are able to change their consumption patterns in response. Most of the impact on households is via fuel and electricity prices.	A $10 increase in NZU prices is estimated to increase annual household expenditure on emissions costs by about $84 (in 2024 dollars) for the average household ($1.61 per week).[9] For lower income households, the increase is estimated at $44–48 per annum, while for higher income households it is estimated at $120–140.
Wider economy	Relatively higher prices are likely to induce greater emissions reductions and removals, although in both cases these are likely to take time to materialise. Higher prices are likely to increase the incentives for firms to invest in emissions reduction technologies or changes to processes.	Relatively higher NZ ETS prices are likely to marginally increase inflationary pressures, although we judge this highly unlikely to influence the trajectory of monetary policy. The majority of the impact on households is via fuel prices, which are passed through by retailers quickly and impact mostly on tradables inflation. The remaining impact on households is via electricity prices and indirect impacts on other goods (including food), where firms may have less ability to pass through costs quickly and therefore these costs may marginally reduce firm profitability instead.	A $10 increase in NZU prices is estimated to contribute to a 0.1% increase in inflation as measured by the Consumer Price Index, largely due to higher fuel and electricity prices.[9] Investment in emissions reductions technologies and processes may be productivity enhancing. However these investments may be at the expense of other productivity enhancing investments firms could make (the opportunity cost). The net impact on productivity and economic capacity is difficult to determine but is likely to be quite small from this change alone.

9 This assumes 100 per cent and instantaneous pass through of NZ ETS costs to households and does not account for behaviour change. Therefore, this is an upper bound estimate of the impact.

Section 6: Delivering an option

How will the new arrangements be implemented?

128. Updates to NZ ETS unit settings will be made under the existing regulatory framework. Schedule 3 of the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020 will be updated to reflect the new settings.

129. The amendment regulations will be published in the New Zealand Gazette in September 2024, to take effect from 1 January 2025.

How will the new arrangements be monitored, evaluated, and reviewed?

130. Agencies will closely monitor the impacts of NZ ETS unit settings. The Ministry for the Environment routinely tracks the price of units and informs the Minister of this, as well as the flow of units within the NZ ETS and the secondary market. It also measures and reports domestic emissions annually. This will be used to assess the impact of the NZ ETS under the proposed settings.

131. Agencies will continue to update and refine emissions projections that will be used for future emissions budgets and informing unit limit and price control settings. The broader economic impacts of the proposed NZ ETS settings will be monitored and assessed by an array of Government agencies, and public and private institutions.

132. The legislated coordinated decision-making process in the Act includes provision to review the NZ ETS settings under certain circumstances. The Government is obliged to review the settings if the price controls are used, such as if the CCR is triggered.

133. The Commission will continue to have a role monitoring and reviewing unit limits and price controls settings. Under section 5ZOA of the Act, the Commission must recommend to the Minister limits and price control settings, including any desirable emissions price path, each time regulation updates are required.

Appendix One: Considerations for determining unit limits and price control settings

1. 1. As described above, the Act requires that the limits and price control settings are in accordance with the NDC, the emissions budgets, and the 2050 target.

2. Section 30GC of the Act also provides relevant factors for determining settings. These relevant factors can also justify settings that do not strictly accord with these emissions targets.

3. The relevant factors are provided in table 1 below. The table also explains how the factors have been considered in our analysis. Some of the relevant factors have been used to derive criteria to evaluate how these options compare with the status quo. These criteria are provided in table 2.

Table 1: Mandatory considerations for determining unit limits and price control settings

Matters in section 30GC of the Climate Change Response Act 2002	Comments
The Minister must be satisfied that the limits and price control settings are in accordance with: (a) the emissions budget and the nationally determined contribution (b) the 2050 target.	The NZ ETS must accord with New Zealand's emissions budgets, the NDC, and 2050 target, which all require either gross emissions reductions or increased emissions removals. Accordingly, settings should support emissions reductions and removals. The NZ ETS supports gross emissions reductions by providing a price signal to incentivise the uptake of low-emissions technology, energy efficiency measures, and other emissions reductions opportunities. The NZ ETS drives emission removals by providing a price signal that rewards removal activities such as afforestation. Due to the risk the stockpile creates to the achievement of emissions budgets, options that risk continuation of the stockpile will rate negatively on this criterion.
Matters the Minister must consider	
Projected trends in greenhouse gas emissions, including both emissions covered by the NZ ETS and those that are not covered.	This is considered when determining the unit limits as an input to emissions inside and outside the NZ ETS.
The proper functioning of the NZ ETS.	The NZ ETS should operate in a transparent and durable manner that allows participants to form expectations about supply and demand to support investment in domestic emissions abatement. The restrictions on how settings are updated allow changes to be made in response to new information, while maintaining regulatory

	predictability. Options that undermine this standard approach rate negatively in this criterion. This criterion also includes NZ ETS participants being able to attain and surrender NZUs to meet NZ ETS obligations. Ensuring the NZ ETS is functioning properly supports actions in emission reductions and removals, as well as the role of the NZ ETS in meeting emissions budgets and targets.
International climate change obligations and contracts New Zealand may have for accessing offshore mitigation from other carbon markets.	New Zealand has no current instruments or contracts with other jurisdictions to access emissions reductions in their carbon markets.
The forecast availability and costs of ways to reduce greenhouse gas emissions that may be needed for New Zealand to meet its emissions reduction targets.	This is derived from the policies and measures in the emissions reduction plan and is considered when the unit limits are calculated in step 1 and step 2.
The recommendations made by the Climate Change Commission (the Commission) under section 5ZOA of the Act.	The Commission's recommendations are included among the options considered for all NZ ETS unit settings decisions.
Any other matters that the Minister considers relevant	We have included one additional matters the Minister may consider relevant when considering this advice. This is the impact on price. This is because potential impact on NZU price may affect abatement efforts and therefore likelihood of achieving emissions budgets and targets.
Additional matters the Minister must consider in analysing price control settings	
The impact of emissions prices on households and the economy.	Settings manage the costs imposed by the NZ ETS on the economy, on households, and on different sectors and regions.
The level and trajectory of international emissions prices (including price controls in linked markets).	There are two reasons for considering the level and trajectory of international emissions prices. First, that international emissions prices provide a comparison of New Zealand's contribution to the global effort towards addressing climate change, notwithstanding fundamental differences exist between individual emission pricing schemes. Secondly, that offshore mitigation could be needed to meet emissions reduction targets in addition to reducing emissions domestically.
Relevant matters in section 30GC of the Climate Change Response Act 2002	**Criteria that reflect this matter**
Inflation.	All price control options have been adjusted for forecast inflation.

	Inflationary impacts of the NZU price are considered in the criterion 'the impact of emissions prices on households and the economy above'.

Table 2: Criteria for options analysis of limit and price control settings for units

Criteria	Description
Likelihood of incentivising emissions reductions	The NZ ETS supports gross emissions reductions by incentivising the uptake of low-emissions technology, energy efficiency measures, and other abatement opportunities as quickly as real-world supply constraints allow. It does this by providing a strong and stable price signal to incentivise gross emissions reductions. The NZ ETS drives levels of removals sufficient to help meet our climate change goals in the short-to-medium term and to provide a sink for hard-to-abate emissions in the longer term. It does this by providing a strong and stable price signal that rewards removal activities. Due to the risk the stockpile creates to the achievement of emissions budgets, options that are more likely to reduce the stockpile will rate more highly on this criterion.
Support the proper functioning of the NZ ETS	Settings should allow the NZ ETS to function as an efficient and effective market. The NZ ETS should operate in a transparent and durable manner that allows participants to form expectations about supply and demand to support investment in cost-effective opportunities for domestic emissions abatement. The restrictions on how settings are updated allow changes to be made in response to new information, while maintaining regulatory predictability. Options that undermine this standard approach rate negatively in this criterion. It also includes NZ ETS participants being able to attain and surrender NZUs to meet NZ ETS obligations.
Support consistency of NZU prices with the level and trajectory of international emissions prices **	NZ ETS settings should support efforts to allow access to offshore mitigation, including keeping NZU prices in line with international prices.
Manages overall costs to the economy and households **	The costs imposed by the NZ ETS on the economy, household, different sectors, regions, and the government are broadly acceptable. Additional costs imposed by the NZ ETS on vulnerable groups and communities are mitigated as much as possible through NZ ETS settings and companion policies. Changes to revenue earned by the government from NZ ETS auctions enable continued support for these companion policies.

** these criteria are considered for price control settings only.

Appendix Two: Consultation feedback on adjusting for emission reductions that were unanticipated when the emissions budgets were set

1. Submitters suggested a range of criteria for unanticipated emissions reductions.

2. One submitter suggests only adjusting for unanticipated emissions that are the result of government policies and investments, not private decisions in response to the NZ ETS and other market forces, to avoid the risk of market manipulation and possible disincentives for future action where market participants believe these might influence future unit limits.

3. Two other submitters suggested relatively broad criteria including:

   - any identifiable, significant non-ETS reduction that otherwise would have resulted in those NZUs being sought from the ETS market
   - also covering reductions resulting from firm closures.

4. Two submitters suggested the effect on overall emissions must be certain and easily measurable.

5. One submitter suggested only adjusting where economic activity remains constant at a lower level of pollution.

6. One submitter suggested setting a threshold of around 80 percent likelihood that the unanticipated reduction would take place, before reducing auction units.

7. One submitter suggested a significant reduction in the cap should be made for 2025 with a moderated easing for 2026.

Appendix Three: Estimating surplus stockpile

Estimating the surplus

1. The method for estimating surplus is well-established and has been used both by the Ministry and the Commission.

2. This method involves first estimating the total number of units held in private accounts (the total stockpile). This varies throughout the year due to:

   - Annual non-forestry unit surrenders – due by 31 May
   - Industrial allocation – applications due by end of 30 April and processed as received
   - Quarterly auctions (including CCR units when/if triggered)
   - Surrenders and allocations for foresters – many of these occur at the end of multi-year mandatory emissions report periods (MERPs), or annually if foresters opt to voluntarily report

3. The estimate of surplus used in this analysis is based on the size of the stockpile at the end of December 2023. This is considered the most appropriate value to use as it is most consistent with the NZ ETS settings architecture, where auction volumes and price control settings updates apply from the beginning of a calendar year. This is different to the surplus estimate used by the Commission in their report, which was based on information available as of 30 September 2023.[10] The Commission's technical annex encouraged the Government to use December data to underpin its decisions, as it would reflect the outcome of the December auction (which did not clear).

4. Once the size of the stockpile is estimated, then units that are likely not to be surplus (unlikely to come to market) can be estimated and subtracted from the stockpile. Officials developed an approach for this estimate in 2021 by categorising units based on their expected future use. This approach has been used by the Commission and refined each year.

5. The categories are:

   - **Units held for post-1989 forest harvest liabilities**: Owners of forests planted after 1989 receive NZUs for the carbon stored in their forests. However, when the forest is harvested, they must surrender a large proportion of these units back to the Government. This means that forestry participants need to hold a large number of units in advance of harvesting their forests.

   - **Pre-1990 forest allocations held long term**: Pre-1990 units were originally allocated to owners of forests planted before 1990 as partial compensation for the restriction the NZ ETS put on their ability to change land-use units held for post-1989 forest harvest liabilities.

   - **Units held for hedging by market participants**: It is common practice for NZ ETS participants to hold NZUs to cover a proportion of their compliance obligation over a

[10] Refer to Climate Change Commission "Advice on NZ ETS unit limits and price control settings for 2025-2029- Technical Annex 1: Unit limit settings" February 2024

certain period in advance to manage their exposure to NZU price risk. This is a legitimate form of market risk management known as hedging, and it is important for the stable operation of the market.

6. There are significant uncertainties involved in this estimation. We have considered other ways for assessing the non-surplus units and have engaged independent consultants to test the approach. We have further tested the Commission's categorisation and support this approach as the most appropriate categorisation with the information currently available.

7. We have engaged Ernst & Young to interrogate the categorisation further. They have not raised any major issues, but have identified opportunities for future potential enhancements to the methods and assumptions that could improve the accuracy of the surplus estimate and reduce uncertainty for future updates. These changes need to be further worked through with other government agencies and potentially engagement with relevant parties before changes are made.

8. We have developed low, central and high estimates of each non-surplus category, and the estimated total surplus (as shown in Table 1 below). These are based on the following key assumptions:

Units held for hedging

9. Previous estimates of the hedge volume are determined based on the sector, as participants have different opportunities to pass on NZ ETS price changes. The Commission's central assumptions by sectors are:
   - Liquid fossil fuel participants on average have a hedge profile that drops from 100% to 0% over one year forward given their ability to rapidly pass on NZ ETS price changes, i.e. at any one time these participants are likely to hold units equating to 50% of their annual liabilities.
   - Stationary energy participants on average have a hedge profile that drops from 100% to 0% over three years forward, to reflect that they often set prices with customers using relatively long-term contracts.
   - IPPU and synthetic greenhouse gas (SGG) participants on average have a hedge profile that drops from 100% to 0% over three years forward, but with a more steeply dropping profile in year three compared to stationary energy. From engagement feedback we understand businesses in this sector fix prices in advance to a lesser extent than stationary energy.
   - Waste participants on average hedge a full year in advance, as landfills generally set their prices on an annual basis.
10. The low, central and high scenarios of hedging profiles reflect that:
    - Different industries have different hedging practices due to their ability to pass through costs to their consumers, and how they manage financial risks and the possibility of facing significant penalties if their surrender requirements are not met.
    - Several large emitters in the stationary energy and IPPU sector (which might be expected to have extensive hedging practices) are in practice hedged to a large extent by the industrial free allocation they receive.
11. We have undertaken a limited exercise to compare the emissions reported by several large emitters against the ETS hedging position recorded in their public annual financial reports. Overall, these insights appear broadly consistent with the patterns assumed in the previous section for the different types of participants.

P-90 units held long-term

12. This is based on historic trends. Note the assessment of P90 units by both us and the Commission has changed significantly from last year. In last year's (2023) analysis, P90

units were thought to be highly illiquid, which therefore reduced the size of the surplus estimate. The more recent evidence used by MfE and the Commission suggest that the P90 units are more liquid, or rather more likely to be transferred to other accounts where they might be then surplus, than we previously thought.

P-89 units held for harvest liabilities

13. The Commission worked with MPI to develop a forestry model to estimate the number of units held for P89 forest liabilities. This model was updated at the end of December 2023 and released publicly in May 2024. There are a number of key variables used in this assessment:
    - The assumed "low risk" carbon level (minimum low risk units based on a forest portfolio of a single age class; maximum low risk units based on a forest portfolio of all ages; and central low risk units based on 85% of the maximum).
    - Rotation length of Pinus radiata (28, 29, 30 & 31 years)
    - The percentage of forests registered in the NZ ETS planted between 1990-2018 that will be harvested (70%, 80%, 90%).
14. We have tested these assumptions with MPI, who agree with the assumptions used.
15. The Commission used the P89 hedge estimate for the 2022 calendar year, which was then the closest estimate to the mid-2023 total stockpile data they were using. Because the forestry model looks at the accumulation of units allocated and surrendered to date, it will not yet be affected by the drop off in afforestation rates that is expected to occur in 2024 and 2025.

Table 1: Estimates of units held and surplus estimate

Total units held in private accounts (stockpile) as of 31 December 2023		159.9	
	Low estimate	Central estimate	High estimate
P89 NZUs held for future harvest liabilities	65.0	58.0	51.0
P90 NZUs held long-term	12.5	7.0	3.9
NZUs held for hedging	35.7	27.7	19.4
Total surplus	46.8	67.3	85.6

16. The central estimate of the surplus is used for the purposes of further analysis. There is a large uncertainty range between the estimates as shown in **Table 1** above. The annual update to NZ ETS settings means that if it appears that the central estimate of the surplus is incorrect, it can be updated through the annual settings process, speeding up or slowing down the reduction in response to market dynamics and new information.

Appendix Four: Modelling of options in the NZ ETS Market Model

1. This appendix sets out the key modelling assumptions that underpin the results in table 8 of Section 5, as well as some additional modelling results and sensitivity analysis.

Model description

2. The NZ ETS Market Model estimates supply and demand for NZUs in the NZ ETS under different conditions and can generate price projections based on supply and demand.[11] The model provides further insights and can help cross-check whether a given combination of unit settings and price controls is sufficient to achieve emissions budgets, NDCs, and the 2050 target. As with any modelling, these results should be interpreted as providing an indication of the potential impacts and orders of magnitude. For the avoidance of doubt, these modelling results are not the accordance test, although they can help inform it.

3. All models are subject to a high degree of uncertainty, which typically increases the further out in time they attempt to model and rely on a range of model specific and other assumptions. Two particularly important assumptions, which have a large influence on the output of the analysis, are the assumptions we make around the behaviour of holders of stockpiled units and foresters' responsiveness to NZ ETS prices. These are discussed further below.

4. The model operates in two broad ways. One involves external or exogenous assumptions for price, emission reductions and forestry removals. The other way estimates emission reductions and removals, and the flow of units in and out of the stockpile, internally (endogenously) in the model using equations that relate these changes to different prices. It sets an objective for the market (minimising the stockpile by 2050 while meeting demand every year) and uses price to optimise relative to that objective. This latter mode of operation is most applicable to testing ETS unit and price control settings.

5. The ETS Market Model takes a different approach to the Commission's analysis. The Market Model is focussed on understanding the dynamics of the market, including under different settings, and does not explicitly consider the ETS cap (although the cap is implied by the auction volumes and industrial allocation). The Commission's analysis focuses on what size the ETS cap and auction volumes need to be to align with budgets.

Key modelling assumptions

Baseline emissions

6. NZU baseline demand is based on a "zero price" run of the model used to produce the ERP2 interim projections (the Emissions in New Zealand model, or ENZ). It incorporates 2024 GHG inventory data and policy changes since 1 July 2023 but does not include new

[11] Review of the New Zealand Emissions Trading Scheme: Summary of modelling | Ministry for the Environment

policies proposed under ERP2. See ERP2 Technical Annex for further information on the interim projections.[12]

7. ETS sector gross emissions are calculated as total gross emissions, less agricultural sector emissions (from the ENZ run) and other non-ETS sector emissions (based on the Commissions updated demonstration path data).

8. A further adjustment is made to ETS sector gross emissions on top of this to account for assumed wind-down of large single emitters, specifically Methanex dropping to 50% output from 2030 and shutting down from 2040. NZ Steel Electric Arc Furnace is captured in the ENZ run directly (and whether to adjust the ETS cap in response is a separate (policy) issue). These industry assumptions are consistent with IA and ERP2 assumptions.

ETS Prices

9. Unless otherwise stated, prices are endogenously determined in the model by estimating the constant price change over time that prevents a shortfall in supply occurring in any one year and minimises the surplus supply over demand over time. More specifically, there is an imposed assumption that prices will rise until a fixed point in time (unless otherwise stated, 2030) at the constant rate, and then fall at half that constant rate until it reaches $50 (the mid-point of the range MPI estimates for the price needed to generate a reasonable return on forestry). This broadly reflects the same market dynamics assumed in the ERP2 price assumption[13], while allowing for different unit supply settings to determine the peak in price.

10. The aggregate demand response in the model is derived from ENZ. It is an autoregressive function that incorporates both a change element (response to annual price changes) and a momentum element (longer run impacts e.g. investment type impacts).

11. To test sensitivity and to construct error ranges, the standard errors of the coefficients are used. This applies either +/- one standard error (for smaller changes in responsiveness) or using the 95% confidence intervals (i.e. +/- 1.96 standard error). The 95% confidence intervals are generally used in the sensitivity analysis later in this appendix.

Forestry units and afforestation

12. Unless otherwise stated, forestry response to ETS prices uses the “Manley Low” specification. This is a simplified version of the function developed by Manley that relates afforestation to ETS prices, log prices, land prices, and other key factors.[14] The “Low” specification has performed reasonably well at explaining recent afforestation rates. Using a conservative function also partly mitigates some of the concerns over how well the Manley function performs for prices above historical ranges.

13. In addition to the Manley model, afforestation for 2024 to 2030 has been set based on the central afforestation forecast from MPI. This is on the basis that short-term afforestation rates face real-world constraints (such as seedling supply, workforce constraints and land

[12] Ministry for the Environment. (2024). *New Zealand’s second emissions reduction plan (2026–30): Technical annex to the discussion document.* Wellington: Ministry for the Environment.

[13] Ibid, p14

[14] Manley B. (2021). Afforestation Economic Modelling Final Report. MPI Technical Paper No: 2022/02

availability) that limits price responsiveness. Longer-term, the model uses the Manley approach to allow afforestation to respond to price signals that are different from those embedded in MPI's projections. Some constraints have been placed on these afforestation rates to reflect recent downward revisions by MPI to the amount of land thought available and suitable for afforestation.

14. The Government's proposed restrictions on conversion of productive farmland into forestry have not been included as the policy is still under development and the magnitude of impacts on afforestation rates (if any) are not clear at this stage.

15. Only units deemed "low risk" are released into the market as a source for offsetting emissions. Low risk units are mostly those units generated by forests under average accounting and by permanent forests.

Stockpile

16. The latest available data from the EPA was used to derive estimates of the surplus (liquid) and total stockpile at 67M NZUs and 160M NZUs, respectively, as of December 2023. See appendix three for further details on the surplus estimate.

17. The model assumes that liquid stockpile NZUs are drawn down first.

18. The remaining outstanding units (the "other stockpile") is modelled generally with a relatively low liquidity of 15% - meaning a maximum of 15% of the other stockpile can be used in any year if there are no surplus units available and a supply shortfall still exists. Units are also added to the "other stockpile" over time in proportion to afforestation rates and the need to cover a growing future harvest liability over time.

Government Supply

19. Auction volumes are varied based on the different options being tested (see Section 3: Limits for units for details), plus the "for visibility" calculations for 2030 to 2035. For current settings, auction volumes from 2029 to 2035 are based on the "for visibility" calculations by the Commission. This means in some scenarios auction volumes increase briefly in 2031/32 once the surplus reduction factor ceases.

20. Price controls are expressed in "real" terms i.e. converted into 2023 dollars. Because the price control settings were left unchanged apart from updates to inflation forecasts the price controls are the same across the different scenarios. See Section 4: Price control settings and cost containment reserve for further details.

21. Industrial allocation volumes have been updated to reflect the latest forecasts.

Accordance with Emissions Budgets

22. The NZ ETS Market Model was not designed to estimate total net emissions; its focus is on net emissions covered by the NZ ETS.

23. However, the projections from the model can be combined with other information to make a high-level projection of total net emissions. This can help with assessing whether a given combination of unit and price control settings are in accordance with emissions budgets. Two additional sources of information/assumptions are needed:

    - **An estimate of emissions outside of the NZ ETS (mostly agriculture).**
      We use the interim ENZ projections to estimate non-ETS sector emissions, in line with the baseline NZU demand step outlined earlier. The other option would be to use

2023 official projections (which do not include policy changes or the 2024 inventory data).

- **A conversion of 'low risk' forestry NZUs to total 'target' accounting removals.** Not all emissions removals are within the NZ ETS and the accounting treatment for some forestry units differs between the NZ ETS and 'target' accounting used for emissions budgets. This means the NZ ETS Market Model projections of 'low risk' forestry NZUs underestimate removals that contribute towards emissions budgets. To adjust for this, an estimate of total removals is made by scaling up projected NZ ETS 'low risk' forestry units. The scaling factor has been set by comparing MPI's ETS 'low risk' forestry removals projections with total removals projections (which are calculated with consistent information).

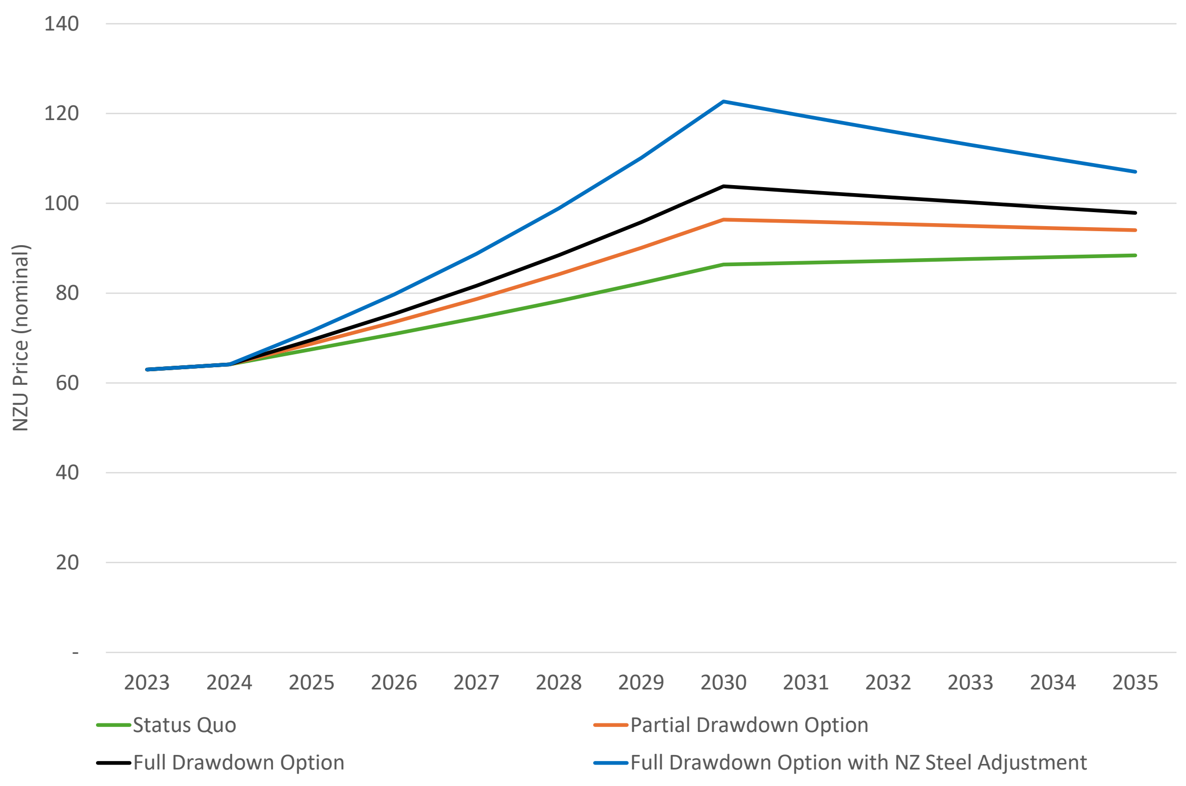
24. Net emissions are calculated as the total demand for NZUs (i.e., gross emissions in NZ ETS sectors) plus non-ETS sector emissions, less total removals.

25. Note, these point estimates are subject to a high degree of uncertainty and will be communicated within ranges constructed from sensitivity analysis based on the price responsiveness ranges.

Modelling results

26. Figure 1 shows the central projection for nominal NZU prices across the four options considered in this RIS. Options with the highest auction volumes had lowest price peak, and vice versa – under the status quo, the projected NZU price peak was about $86 compared to $123 under Option 4 (Full drawdown with NZ Steel adjustment).

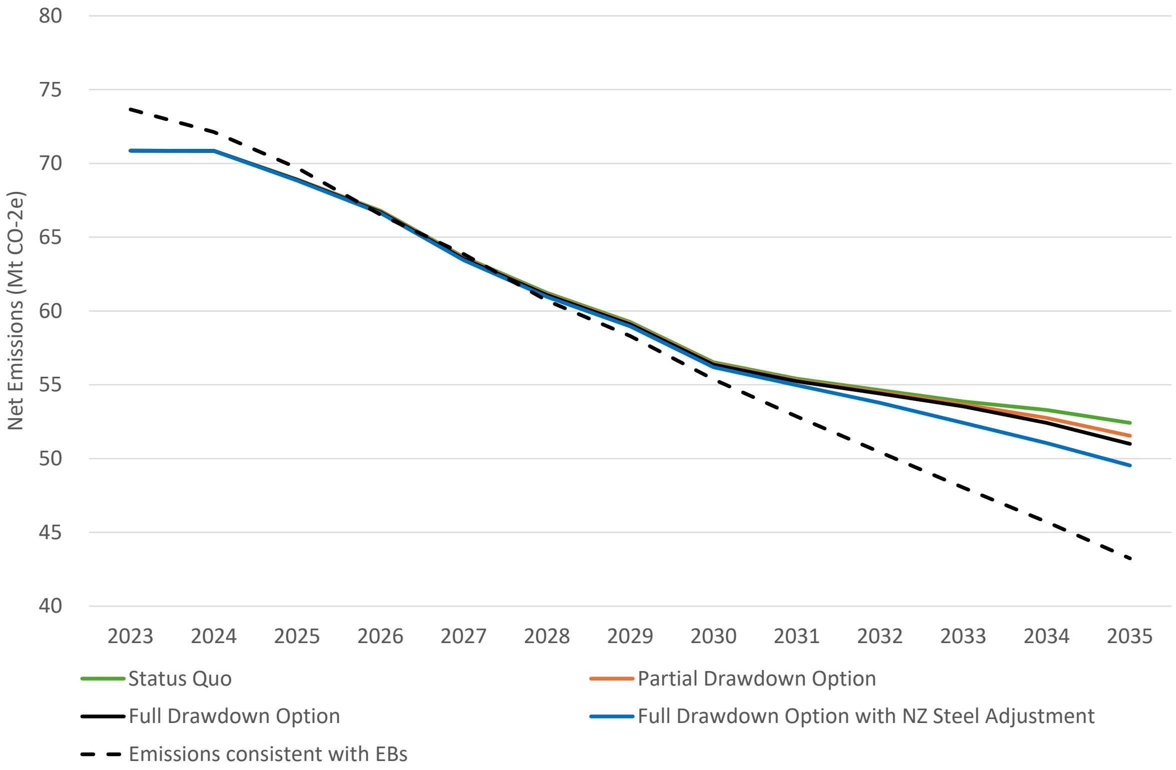
Figure 1 Projected NZU prices under different options



27. Despite the diverging prices, there is little difference in net emissions over the next decade between the options. This reflects that actions that can reduce net emissions (such as afforestation or adopting emissions reduction technology) take time to implement, and so are not very responsive to price in the short term. Finally, around half of New Zealand's emissions are outside of the ETS, so are not influenced by NZU price changes.

28. Starting from the early 2030s larger differences in projected net emissions are observed, with larger reductions under options with higher NZU prices. This is shown in Figure 2. As noted elsewhere, by emissions budget three ETS sectors' share of overall net emissions is small. Because non-ETS emissions, primarily from agriculture, are held constant in this analysis there is relatively small differences between the different scenarios.

Figure 2 Projected net emissions under different options



Sensitivity analysis

29. In addition to the approach of testing price responsiveness and constructing error ranges by applying +/- one standard error and 95% confidence intervals, sensitivity testing was also conducted by changing key variables in the ETS Supply Demand model, namely:

- The 2024 starting price
- The calendar year the ETS price peaks
- 2024 auction volumes
- Other stockpile liquidity.

30. Changing some of these key variables have a moderate impact on projected ETS prices – particularly the 2024 starting price and the year ETS price peaks. Bringing forward the peak resulted in a higher peak price, as did lowering the 2024 starting price. This is because a higher rate-of-change is required to balance NZU supply and demand across 2024 to 2050 (either because the NZU price is starting from a lower point, or because there is a shorter timeframe until prices peak).

31. Setting 2024 auction volumes to low (3 Mt) also had a moderate impact on ETS prices, particularly for the options with lower total auction volumes (i.e. options 3 and 4).

32. Increasing the other stockpile liquidity tended to reduce projected ETS prices – as a higher stockpile liquidity means that stockpile is more likely to be able to balance NZU supply and demand without large increases in price. Similarly, reducing the stockpile liquidity tended to increase projected prices.

33. It should be noted that this testing did not find projected prices much below the central projection for the status quo. This is because the projected prices for that option are

already close to the auction price floor, which acts to support prices from dropping below that level.

34. While changing these key variables could result in moderately large changes to ETS prices, these changes did not result in significant changes to projected emissions over EB1 or EB2 (and, to a lesser extent, EB3). This is because, as noted above, gross emissions and forestry removals are not particularly price sensitive in the short term – so changes in the ETS price pathway do not result in large changes in short-term emissions.

35. Over longer time periods, larger differences in projected emissions were observed – as net emissions are more price responsive over the medium and long run. However, this does not impact the analysis and conclusions set out in this RIS.

Cabinet Business Committee

Minute of Decision

New Zealand Emissions Trading Scheme: Unit Limits and Price Control Settings for 2025-2029

Portfolio **Climate Change**

On 12 August 2024, the Cabinet Business Committee:

1 **noted** that the Minister of Climate Change (the Minister) is required by the Climate Change Response Act 2002 to update limit and price settings (unit settings) for New Zealand Units (NZUs) under the New Zealand Emissions Trading Scheme (NZ ETS) so that they continue to cover five calendar years at all times;

2 **noted** that the legal test means that the unit limits and price control settings must be considered as a package and in the context of other climate change policies, because their effect on unit supply (and ultimately emissions) are interdependent;

3 **noted** that the Minister has considered consultation feedback in formulating the options presented below;

4 **agreed** to maintain the current price control settings, including the cost containment reserve volumes (CCR), with minor changes made to reflect Treasury Budget 2024 inflation forecasts, and extend the price control settings to 2029, as outlined below:

	Adjusted for new inflation forecasts				New
	2025	**2026**	**2027**	**2028**	**2029**
Auction price floor	$68	$71	$75	$78	$82
CCR Tier 1	$193	$203	$213	$224	$235
CCR Tier 2	$242	$254	$267	$280	$294
CCR Tier 1 volume	2.6	2.3	2.1	1.9	1.7
CCR Tier 2 volume	4.5	4.2	3.8	3.4	3.0
Total CCR volumes	7.1	6.5	5.9	5.3	4.7

5 **agreed** to update limits for units for 2025-2029 as follows:

Unit limits (millions)	**2025**	**2026**	**2027**	**2028**	**2029**
Base auction volumes	6.0	5.2	4.3	3.3	2.4
Total CCR volumes	7.1	6.5	5.9	5.3	4.7
NZUs available by auction	13.1	11.7	10.2	8.6	7.1
Industrial allocation	6.0	5.7	5.7	5.6	5.5
Approved overseas units	0	0	0	0	0
Overall limit on units	19.1	17.4	15.9	14.2	12.6

6 **noted** that there is ongoing effort to understand the exact size of the surplus of NZUs, and that this will be taken into account in considering ETS settings in future years;

7 **authorised** the Minister to issue drafting instructions to the Parliamentary Counsel Office to amend the Climate Change (Auctions, Limits, and Price Controls for Units) Regulations 2020;

8 **authorised** the Minister to further clarify and develop policy matters relating to the amendments under CBC-24-MIN-0083 above, in a manner not inconsistent with Cabinet decisions.

Jenny Vickers
Committee Secretary

Present:
Rt Hon Christopher Luxon (Chair)
Hon David Seymour
Hon Nicola Willis
Hon Brooke van Velden
Hon Chris Bishop
Hon Dr Shane Reti
Hon Simeon Brown
Hon Erica Stanford
Hon Paul Goldsmith
Hon Matt Doocey
Hon Simon Watts

Officials present from:
Office of the Prime Minister
Department of the Prime Minister and Cabinet