He Pou a Rangi
Climate Change Commission

Advice on
NZ ETS unit limits and price control settings for 2024-2028

March 2023

This advice is required under section 5ZOA of the Climate Change Response Act 2002.

Disclosure statement

As anticipated by the appointment criteria, the Climate Change Commissioners come from varying fields such as adaptation, agriculture, economics, te ao Māori and the Māori-Crown relationship. While a number of board members continue to hold roles within these fields, our advice is independent and evidence-based. The Commission operates under its Interests Policy, which is derived from the Crown Entities Act. You can read more about our board members on the Climate Change Commission website. The Commission regularly updates and publishes on its website a register of relevant board interests.

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Chair's Message

The decisions the Government makes now on climate policy will have consequences for the future.

This summer we have seen a series of devastating weather events that have destroyed homes and livelihoods, and lives lost. Cyclone Gabrielle brought a scale of destruction that will take years to recover from. The science is clear that warmer temperatures driven by global greenhouse gas emissions will lead to these types of events becoming more frequent and more extreme.

The impacts of climate change on the people of Aotearoa New Zealand are front of mind in the work of He Pou a Rangi Climate Change Commission – on both adapting to climate change and reducing emissions.

Emissions pricing can be a powerful tool for emissions reduction.

The price of emissions must reward producers, consumers and investors making choices that reduce emissions in line with emissions budgets and targets. The price of products and services produced with high emissions must be able to change relative to other prices in the economy to influence and reflect business practices, new technologies and consumer behaviour.

We developed our 2023 New Zealand Emissions Trading Scheme (NZ ETS) unit limits and price control settings advice to ensure the settings through 2028 align with the intent of the Government's emissions budgets and its emissions reduction plan, and take into account evidence about the emissions prices needed to meet our emissions reduction goals.

The Commission has raised concerns since 2021 about the impact the current structure of the NZ ETS may have on the pathway to achieving our targets in years to come. Even in this context, we strongly advise aligning the ambition of NZ ETS settings with emissions budgets and targets, and supporting proper functioning of the market. The market needs confidence in the NZ ETS to make investments aligned with this ambition. Price discovery by market participants helps inform regulators and equally emissions prices reflect participants' assessment of likely policy impacts.

While neither pricing alone nor relying on regulations alone is likely to deliver the outcomes New Zealand is seeking, there are clear choices available to the Government.

If the Government chooses to adjust the settings in line with our advice, the NZ ETS will play a strong role in aligning emissions with emissions budgets.

If Government chooses to constrain price discovery, the NZ ETS will play a weaker role and the Government – now and in the future – is more likely to need to adjust the emissions reduction plan to include further regulations and other policies to drive emissions reductions and ensure budgets will be met.

If the Government expects the NZ ETS to contribute significantly to the abatement needed for budgets and targets, the NZ ETS must be given the room to do so.

> *While neither pricing alone nor relying on regulations alone is likely to deliver the outcomes New Zealand is seeking, there are clear choices available to the Government.*

Weakening decisions on NZ ETS settings and climate policy in general during times of adverse economic conditions, which climate change is only likely to exacerbate, is not sustainable in the long run and will greatly compromise our chance of meeting the climate change targets set out in the Act.

The economic impacts of any climate policies need to be well managed to ensure we are driving an equitable transition. The Government needs to use its current suite of tools to manage economic impacts so the NZ ETS can best play its part in assisting Aotearoa New Zealand to achieve its statutory targets and emissions budgets.

The Commission has also consistently advised the Government that to enable a fair, inclusive, and equitable transition, it must put in place comprehensive climate policies that uphold the principles of Te Tiriti o Waitangi/The Treaty of Waitangi.

As part of this the Government must ensure, in a manner consistent with Te Tiriti principles, that Iwi/Māori can participate equitably in the NZ ETS, protect their taonga, and exercise rangatiratanga. It is also important that operationally the NZ ETS does not compound historic grievances for Iwi/Māori. Put simply, the NZ ETS should work for Iwi/Māori.

Our 2023 advice on NZ ETS unit limits and price control settings builds on the robust approach we used in our advice last year.

We have assessed the implications of the Government's 2022 decisions on NZ ETS settings, which reflected our 2022 NZ ETS advice only in part. Since these decisions the market has weakened considerably, with the price of NZUs dropping over the past months. This trend continued with the 15 March auction being declined as bids did not meet the confidential reserve price, which ensures the Government does not sell units significantly below their price on the secondary market.

This advice recommends further adjustments to NZ ETS unit supply and price control settings to bring the scheme back on path to meet emissions budgets. Without such action, Aotearoa New Zealand risks failing to meet its emission budgets – or experiencing a more severe price adjustment in the future.

If the Government decides not to accept any particular recommendation in the Commission's advice, it does not automatically rule out consideration of the others. However, some recommendations' elements have been carefully developed together. For example, Cost Containment Reserve (CCR) volumes are contingent on CCR trigger prices with a two-tier structure and the auction reserve price is contingent on the CCR trigger price. Where elements have been carefully developed together, arbitrary selections could have unintended consequences.

Getting the settings right is largely a technical process, but it is critical to achieving our climate goals. The Commission understands decisions on settings are for the Government of the day. Over time the consequences of those decisions will drive emissions outcomes and impact our future advice.

Dr Rod Carr, Chair
20 March 2023

Te Karere a Te Tumu

Ko ngā whakatau a te Kāwanatanga ki te wā nei, arā ki ngā tukanga taiao, ka whai pānga ā ngā rā kei tua.

I tēnei raumati kua kitea e tātou tētahi horonga huarere nui, ka mutu, kua patua ngā papakāinga me ngā whānau, arā hoki te matenga o te tangata. Ko tā Huripari Gabrielle he whānui tōna patunga, ā, ka roa hoki tōna whakatikahanga. Mārama katoa ana ngā kōrero pūtaiao, arā o te pikinga paemahana a ngā rehunga whakamahana i te ao. Ka piki ko tēnei momo, ā, ka piki hoki ōna karawhiunga me tōna tūkinotanga.

Ko te whiunga o te huringa āhuarangi ki ngā iwi o Aotearoa te matuatanga o ngā whakaaro, ki ngā mahi hoki a te komihana āhuarangi nei o He Pou a Rangi. Arā ki ngā kaupapa e rua o te whakatika i te huringa āhuarangi me te whakaheke tukuwaro.

Ko te utu tukuwaro, ka noho hei tino taonga ki te whakaheke i ngā tukuwaro.

Me whakamana te utu tukuwaro i ngā ahuwhenua, ngā kaihokohoko me ngā kaiwhakarato, inā tō rātou tūtohu ki te whakaheke tukuwaro, ki tā te tahua tukuwaro me ngā ahunga. Ko te utu whai hua me te whai a ngā ratonga ki ngā tukuwaro nui, me whai waahi atu ki ngā whakawhitinga e tauritea ana ki ngā utu ōhanga hei whakaawe, hei whakawhere hoki i ngā tikanga pakihi, i ngā hangarau hou me ngā waiaro hokohoko.

I whakawhanaketia tō mātou kupu akiaki ki ngā herenga hokohoko me ngā ritenga taura-utu mā te Kaupapa Hokohoko Tukunga o Aotearoa (NZ ETS) mō 2023, e pūmau ai ngā whakaritenga 2028 ki te takune a te Kāwanatanga ki ōna tahua me tōna mahere whakaheke tukuwaro, ā, he whai whakaaro ki ngā kōrero taunaki kei ngā utu tukuwaro mō te whakatutuki i a tātou ahunga whakaheke tukuwaro.

Mai anō i a 2021 he rite tonu te Komihana hiki i ngā take mō te whakawhiunga a ngā hanganga o nāianei a NZ ETS ki te huarahi whāia a tātou ahunga ā ngā tau e haere mai nei. I konei tonu, e akiaki marika ana mātou kia hāngai te awhero a NZ ETS me ōna herenga tahua tukuwaro, ōna ahunga hoki me ōna herenga tautoko ki te mākete. Me manawa titikaha te mākete inā rā te NZ ETS mahi whakarato ki tōna awhero. Ko te taunaha utu a ngā hunga mākete he homai kōrero ki ngā ture, ā, he rite hoki te tauaro ki ngā utu tukuwaro me tā ngā hunga mākete aromatawai i ngā tūpono whakawhiu a ēnā tukanga.

Ahakoa kāhore te utu anake, kāhore nei i te whakapūmau i ngā tukanga anake, te whakataki rānei i ngā hua o tā Aotearoa e whai nei, kei reira ngā tūtohu matua e wātea ana ki te Kāwanatanga.

Ki te whai wāhi atu te Kāwanatanga ki te whakarerekē i ngā whakaritenga ki tā tātou kupu akiaki, ka kaha ake tā NZ ETS haepapa ki te whakahāngai i ngā tukuwaro ki ngā tahua tukuwaro.

Ki te tūtohu tonutia e te Kāwanatanga te whakahiwi i te tōmene utu, ka heke te kaha o te haepapa a NZ ETS me te Kāwanatanga – ināia tonu nei, ā ngā rā kei tua hoki – ā, ka piki te tūpono kia panoni te mahere whakaheke tukuwaro ki ētahi ture anō, ki ētahi atu tukanga hoki e kōkiri ai te whakaheke tukuwaro, hei whakatutuki hoki i ngā tahua.

Inā rā te hiahia a te Kāwanatanga kia eke a NZ ETS ki te whakapau kaha ki te mahi-whakaheke mā ngā tahua me ngā ahunga, me wātea ai a NZ ETS ki te mahi i tēnei momo mahi.

> *Ahakoa kāhore te utu anake, kāhore nei i te whakapūmau i ngā tukanga anake, te whakataki rānei i ngā hua o tā Aotearoa e whai nei, kei reira ngā tūtohu matua e wātea ana ki te Kāwanatanga.*

Ki te heke te kaha o ngā whakatau ki ngā whakaritenga NZ ETS me te tukanga āhuarangi ki ngā wā e taratara ana ngā herenga ōhanga, inā hoki te huringa āhuarangi ka raruraru ai, kāhore tonu e tika ana ki te oranga tonutanga, ka mutu, ka raru rawatia tā tātou tūpono o te whakatutuki i ngā āhunga āhuarangi kei te Ture.

Ko ngā whakawhiu ōhanga kei ngā tukanga āhuarangi me eke ōna whakahaere e tika ai te terenga ki tētahi whakawhitianga tautika. Me anga te Kāwanatanga ki te whakamahi i ōna rauemi maha mō te whakahaere i ngā whakawhiu ōhanga, e taea ai e NZ ETS te whakahaere i āna mahi hei ākina tā Aotearoa whakatutuki i ana ahunga hei tā te ture me ngā tahua tukuwaro.

He rite tonu tā te Komihana āki i te Kāwanatanga mō te whakatenatena i tētahi whakawhitianga tautika, tautini, taurite hoki, ā, me whakatū ētahi tino tukanga āhuarangi e hiki ai ngā mātāpono kei Te Tiriti o Waitangi.

O roto i ngā mahi whakapūmau a te Kāwanatanga, e ai tā ngā mātāpono o Te Tiriti, e āhei rā a Ngāi Māori te uru tika atu ki a NZ ETS, ki te tiaki i ōna taonga me te whai i tōna rangatiratanga. He mea nui hoki kia kaua te whakamahinga a NZ ETS e whakatenatena i ngā take raupatu o mua ki a Ngāi Māori. Otirā, me hāngai a NZ ETS ki a Ngāi Māori.

Ko tō tātou kupu akiaki ki ngā herenga hokohoko me ngā ritenga taura-utu a NZ ETS mō 2023, he whakawhanake i tā tātou ahunga matua kei tō tātou kupu akiaki i tērā tau.

Kua aromatawai e mātou ngā whiunga o ngā whakatau a te Kāwanatanga mō 2022 ki ngā whakaritenga NZ ETS. Nā konā te rite ki tētahi wāhanga anake o tā mātou kupu akiaki NZ ETS mō 2022. Nā ēnei whakatau, i heke rawatia te kaha o te mākete, ā, ko te utu NZU he heke i ngā marama kua hori. Haere tonu ana tēnei āhuatanga i te whakakorenga o te mākete ki te 15 o Maehe, nātemea anō, kāore ngā kaihoko i hipa i te utu tauraro-muna. Arā, te āki a te Kāwanatanga kia kaua e hekea rawatia te utu ki ngā tauhokohoko kei te mākete tuarua.

Ko tēnei kupu akiaki he whakahau kia panoni anō ngā whakaritenga utu wātea me te herenga hoko, kia hoki atu ki te ara e tutuki ai ngā tahua tukuwaro. Mēnā kua kore tēnei, ka kore pea a Aotearoa e tutuki i āna tahua tukuwaro – ā, ka rongo rānei tētahi tino panonitanga utu ā ngā rā kei tua.

Mēnā rā ka whakatau te Kāwanatanga kia kaua e whakaae ki tētahi whakahau a te Komihana, ehara i te mea ka whakahē weto noa ētahi atu o ngā whakahau. Heoi anō, ko ētahi āhuatanga kei ngā whakahau he kotahi tonu tōna whakawhanaketanga mai. Hei tauira iho, ko ngā kohinga ki ngā Utu Here Tauraro (CCR) he noho i te turupana i ngā utu o te hanga reanga-rua, ā, ko te utu mākete tauraro he noho ki te utu turupana CCR.

He herenga tukanga nui, nā reira, me tika rawa ōna whakaritenga, ka mutu, he tino mahi te tutukihanga o ngā ahunga āhuarangi. E mārama ana te Komihana kei te Kāwanatanga o te wā ngā whakatau ki ngā whakaritenga. Nā te takahanga o te wā ka rongo i te whiunga o ēnā whakatau, arā ngā hua tukuwaro me te pānga ki ā tātou kupu akiaki ā te wā.

Tākuta Rod Carr
Te Tumu

Executive summary

As part of the Climate Change Commission's responsibilities under the Climate Change Response Act 2002, we are required to provide the Government with annual advice on the unit limits and price control settings for the New Zealand Emissions Trading Scheme (NZ ETS) across a five-year window.

This year's advice reflects new data that has emerged, updates to our approach, and the impacts of the Government's decisions on the NZ ETS settings in 2022. Our recommended adjustments to settings are designed to help bring the NZ ETS back on the path to meeting national emissions reduction targets. Without such action, Aotearoa New Zealand risks failing to meet its climate goals or potentially facing higher emissions-related costs in the future.

The NZ ETS settings are currently at risk of being out of step with Aotearoa New Zealand's emissions budgets, the Nationally Determined Contribution (NDC) and the 2050 target to lowering global emissions reductions under the Paris Agreement. In an emissions trading scheme, it is not possible to keep in line with an emissions reduction target while also maintaining tight control of prices. The Government's 2022 NZ ETS settings decisions increased the likelihood that extra New Zealand Unit (NZU) volumes would come to market and add to the existing surplus. Each of these units would be surrendered in place of emission reductions in the future, taking Aotearoa New Zealand further from its emissions targets.

In its first emissions reduction plan, the Government committed to aligning the NZ ETS settings with emissions budgets. If the Government sets price controls that keep emissions prices at lower levels, it will need to impose other regulations or policies to compensate for an NZ ETS that does not play a substantial role in lowering emissions.

> *Our recommended adjustments to settings are designed to help bring the NZ ETS back on the path to meeting national emissions reduction targets.*

The Commission acknowledges that we are providing this advice in the aftermath of Cyclone Gabrielle, which brought devastation to many communities across Aotearoa New Zealand, and tragically caused the death of 11 people. It is still too early to fully understand the impacts this event will have on the NZ ETS, in terms of emissions or its operation, but it has created uncertainties. The immediate priority for government agencies and responders is to support the lives and wellbeing of impacted communities. Consistent with our mandate, we will continue to monitor the situation as it unfolds and reflect any new information or lessons from Cyclone Gabrielle in our future advice to the Government, including on the NZ ETS.

What happens next

Providing this advice is one step within a wider process for updating the NZ ETS regulations. The Government will consider our advice and run a public consultation on proposals, which we understand will be led by the Ministry for the Environment on behalf of the Minister of Climate Change in the second quarter of 2023.

The Government must make decisions on NZ ETS unit limits and price control settings in time for the regulations to be updated by 30 September. The new settings will come into force on 1 January 2024. We expect to provide our next advice on this topic, relating to 2025-2029, in the first quarter of 2024.

The current role and operation of the NZ ETS

The NZ ETS is an important tool in the Government's strategy to reduce emissions. Putting a price on emissions, which in turn raises the price of emissions-intensive activities and goods, encourages participants to make different choices and innovate to find low emissions alternatives.

Our recommendations on unit volumes and price control settings are based on analysis of what is required to meet emissions reduction goals and on the matters we are required to consider under the Act.

To remain in line with emissions reduction targets, it is important to consider the NZ ETS as a system, with each limit or setting contributing to a broader market environment. This is especially true with price controls – changing either the auction reserve or cost containment reserve price triggers materially shifts the nature of the price corridor and impacts the appropriate associated unit volumes. We have therefore developed our advice as a cohesive package and have noted in this report how conclusions and recommendations correspond with one another to help the Government avoid unintended consequences as it makes its decisions.

Government needs to make decisions on the long-term objectives of the NZ ETS

As with our 2022 NZ ETS settings advice, this advice reflects that the Government has not yet clarified some of its goals for the NZ ETS.

Our advice is informed by the Government's statements in its emissions reduction plan that it seeks gross emissions reductions as well as forestry removals to meet targets. However, the NZ ETS is not currently set up to deliver that outcome, as it does not distinguish between the two. This is a major source of uncertainty and confusion for the market and will make reducing gross emissions more risky and likely more costly.

Government needs to clarify its intentions for meeting emissions budgets, in particular whether it wants gross emissions reductions or to deliver them mostly through removals by driving afforestation. If Government wants to ensure gross emissions reductions occur, the NZ ETS must be amended to ensure forestry removals do not displace them.

Any amendment should involve partnership with Iwi/Māori to ensure decisions uphold the principles of Te Tiriti o Waitangi/The Treaty of Waitangi, avoid exacerbating historic grievances, and do not unintentionally disadvantage Iwi/Māori.

In its emissions reduction plan, the Government also stated that significant offshore mitigation is likely required to meet the NDC (Nationally Determined Contribution). However, it has not yet approved any overseas units (units from another country's ETS or other foreign mechanism) and has provided no clarity as to when or how it will access offshore mitigation. The absence of this information has created significant uncertainty for market participants and for the Commission as we have prepared this advice. Once this information is available, our future advice could materially change.

Engagement

Engagement is an important component of quality advice on the NZ ETS. Our 2023 advice has been informed by engagement with Iwi/Māori-collectives, companies and individuals from different sectors including compliance participants, intermediaries, members of bodies with an interest in the NZ ETS, and environmental organisations. This enabled us to hear insights, test ideas and enhance our understanding of the NZ ETS market and of market participants' and other stakeholders' concerns.

Several key themes emerged from our engagement, including that:

- we are on the right track with our work, with several stakeholders telling us they felt the Commission's approach to analysis and the methodology used to inform our 2022 advice was robust
- forestry is responding strongly to NZ ETS incentives but is a key source of uncertainty in the market
- an approach to engagement that is better aligned with tikanga Māori will strengthen the Commission's ability to reflect the diversity of Iwi/Māori perspectives, needs, and aspirations in relation to the role and operation of the NZ ETS.

Some of what we heard about the NZ ETS, for example views on the role of emissions pricing in achieving a balance between reducing gross emissions while increasing long-term carbon sinks, sits outside of the scope of this advice. We expect to address these concerns in our upcoming advice to the Government on the policy direction of its second emissions reduction plan.

Moving towards a fair, inclusive, and equitable NZ ETS

Our analysis from our first advice on emissions budgets, *Ināia tonu nei* showed that the transition to a low emissions society can be economically achievable and socially acceptable. To achieve this, the transition must be well-paced, well-planned, well-signalled, and co-designed.

In this advice we consider how the NZ ETS can align with achieving the emissions budgets, the NDC and the 2050 target while supporting a fair, equitable, and inclusive transition. This includes considering the scale and distribution of potential impacts from a changing emissions price and the Government's responsibility to give effect to the principles of Te Tiriti o Waitangi/ The Treaty of Waitangi.

Iwi/Māori relationships to the NZ ETS

The Commission has emphasised that the Government needs to ensure an equitable transition for Iwi/Māori. Through our engagement with Iwi/Māori we heard that there is currently no Te Tiriti analysis underpinning the NZ ETS, a gap which needs to be addressed. We have also heard that historic disruptions to Māori land ownership and assets impact the way different Iwi/Māori-collectives can participate in the NZ ETS.

Government needs to work with Iwi/Māori to better understand and address how the design of the NZ ETS compounds historic issues. The Government should also support Māori-led approaches to better understand and address any negative NZ ETS impacts on the Māori economy, and to identify options that better enable Māori to participate in the NZ ETS equitably and in a way consistent with their aspirations and values.

As part of this the Government must ensure, in a manner consistent with Te Tiriti o Waitangi/The Treaty of Waitangi principles, that it partners with Iwi/Māori in shaping the role the NZ ETS plays in Aotearoa New Zealand's climate change mitigation strategy.

Addressing inequitable impacts

The NZ ETS has an important role to play in encouraging and incentivising low emissions investments and innovation. In many cases, low emissions investments made now will more than pay for themselves in the medium to long-term.

For the NZ ETS to be effective in reducing emissions, the relative price of emissions-intensive activities, products, and services must increase in a manner that encourages innovation and behaviour change. This will reward producers, consumers, and investors making choices that reduce emissions and make high emissions activities less and less profitable. Most costs related to the NZ ETS will fall as individuals and businesses transition towards lower emitting choices and are no longer noticeably impacted by emissions prices. However, in the short-term, there may be some who have less access to lower-emissions alternatives.

The Commission recognises that increases in emissions prices are experienced differently by different households, businesses, and communities. It is therefore important that Government implement policies designed to address any potentially inequitable impacts of emissions prices, for example through its anticipated *Equitable Transition Strategy*.

While that strategy remains in development, there are multiple options for how such targeted support could be provided using levers and funding sources already available to Government. Recent initiatives like the COVID-19 support payments and half-price public transport show that Government can act fast to counter cost of living impacts. These types of targeted, responsive initiatives can serve as a bridge leading to a long-term approach.

A fair, inclusive, and equitable transition means that issues of social and economic equity and tackling climate change must be pursued in parallel. One set of issues cannot be used to justify inaction in the other. In line with our previous NZ ETS settings advice, we conclude the price control settings are not the appropriate tool for addressing domestic distributional impacts or other equity considerations in the transition, as the Government can act on climate change and manage impacts to households or businesses through policies outside the NZ ETS.

Unit limits

The Commission is required to advise the Government on three categories of unit limits for the NZ ETS: a limit on units available by auction; a limit on approved overseas units available for use; and an overall limit on units. The purpose of these limits is to cap the emissions allowed by the NZ ETS in accordance with Aotearoa New Zealand's emissions budgets, the NDC and the 2050 target.

Each year we extend our recommended settings out a further year and review the existing regulated settings. To ensure participants have reliable forward information, the Act only allows for the first two years of settings to be changed under specific conditions, like the triggering of price controls or a *force majeure* event. As these conditions have not occurred, we have only advised changes to existing regulations from 2026.

We have followed a seven-step process to determine our recommended unit limits.

Determining unit limits

Step 1: Accord unit limits with emissions budgets, the NDC and the 2050 target

Our first step is to align our advice with Government's emissions budgets, the NDC and the 2050 target. Our previous advice remains that until approved overseas units are available, unit limits should be set in line with the Government's emissions budgets, which are the stepping-stones to the 2050 target and the intended domestic contribution to the NDC. This approach recognises that while approved overseas units remain unavailable, the offshore mitigation required to meet the NDC cannot be delivered by the NZ ETS.

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

Allocating the emissions budget involves determining what portion of the total emissions budget volume will be used up by emissions from sectors currently outside the NZ ETS (like agriculture), and what portion is therefore available for NZ ETS sectors.

Since our previous advice, there has been an increase of ~229,000ha of post-1989 forest registered into the NZ ETS, a jump of approximately 69%. This affects unit limits as it changes our estimations of emissions and removals by forests inside versus outside the NZ ETS, altering our calculations for allocating the emissions budgets between NZ ETS participants and non-participants. As there are now more emissions removals in the NZ ETS, we have updated our previous calculations in Step 2 to reduce the net emissions allocation given to NZ ETS sectors.

Step 3: Technical adjustments

Technical adjustments account for any differences between past emissions estimates in the NZ ETS and actual levels from the national Greenhouse Gas Inventory (the GHG Inventory) and Aotearoa New Zealand's target accounting. In 2022 we identified differences between the GHG Inventory and emissions reported in the NZ ETS and advised that they be accounted for through a technical adjustment. As the quantity and direction of the differences is known, and no other technical adjustments have been identified in 2023, our advice from 2022 remains the same.

Step 4: Account for industrial free allocation

Industrial free allocation refers to the NZUs provided by the Government for free to entities whose activities are both emissions-intensive and trade-exposed (EITE). These units use up part of the emissions budget available to the NZ ETS and reduce the total amount of NZUs that the Government can sell at auction.

While our method has not changed, we have updated our advice from 2022 due to new data on industrial free allocation that has become available.

Step 5: Set the unit surplus reduction volume

Of the 144 million NZUs in the NZ ETS[1], we estimate around 49 million are surplus units (the volume of units that risk enabling emissions to exceed emissions budgets). Our approach is to reduce auction volumes in a manner consistent with reducing this base surplus to zero by 2030, and to include a new sub-step which helps to resolve surplus discrepancies.

This results in a lower auction volume in future years than in last year's advice. While we are confident in our method for estimating surplus units, we will continue to monitor the estimated surplus over time and update our advice based on new data as it arises.

Step 6: Setting the approved overseas unit limit

As discussed in Step 1, there are currently no approved overseas units in Aotearoa New Zealand. As there are currently no approved overseas units in the NZ ETS, and no clarity as to when they will be available, we calculated the limit on approved overseas units as zero.

Step 7: Calculate the auction volume and assess risks

To arrive at our final advice on unit limits for the 2024-2028 period, we must combine the outcomes of our analysis in Steps 1 to 6 and assess the sensitivity and risks associated with these results.

We are also including in our final calculations a new sub-step that adjusts for any cost containment reserve (CCR) units released in 2023. While the March auction did not clear, there remains a possibility that a release of units from the CCR at the June auction could occur. This event would increase the surplus units in the market, further increasing risks that the NZ ETS will allow emissions above emissions budgets.

1. Calculated as of June 2022

We have shown an example of how the Government can account for these CCR releases through the proposed new Sub-step 7a, where we reduce the number of units auctioned into the market in the future.

Our proposed auction volumes can be found in the next section.

Proposed auction volumes

Our application of this seven-step process and the restriction from advising changes in 2024 and 2025 results in the following proposed annual auction volumes:

	Fixed and cannot be changed		Updated recommendations			
Million units	2024	2025	2026	2027	2028	Total
Planned NZU annual auction volumes	17.1	15.3	8.5	7.1	5.2	53.2

These proposed annual auction volumes are part of what informs the Commission's recommendation for the limit on NZUs available by auction (the annual auction volume plus the CCR volume) and the overall unit limit (the annual auction volume plus the CCR volume, projected free allocation, and approved overseas units).

Price control settings

The price controls in the NZ ETS are the cost containment reserve and the auction reserve price. The purpose of these controls is to manage the risk of the NZU price at auction being out of line with what is necessary to meet emissions budgets. They are not intended to guide or set the price of units at auction.

Cost containment reserve

The cost containment reserve (CCR) is a supply of NZUs that become available for sale if the auction clearing price meets or exceeds a specified trigger price or prices. While the cost containment reserve is intended to be used only rarely, it has been triggered in three out of the last seven auctions.

The Commission has considered concerns that the CCR could anchor price expectations or create a 'magnet effect' that would drive prices up to the CCR price triggers. We are unable to determine conclusively whether the CCR trigger price is having an anchoring effect on NZU prices.

However, since the Government's last decisions on the NZ ETS setting in 2022, the Commission has continued our engagement with market participants. Based on this engagement and market research, it is the Commission's view that the combined influences of signals from the Government about its commitment to climate action, additional information about the costs of decarbonisation, regulatory uncertainty, and price increases in international emissions trading schemes are what led to the shift in market expectations about future prices, rather than a significant price anchoring or 'magnet effect' by itself.

Our advice has also been informed by new information from the market, which was not available when Government made it 2022 decisions. Since December 2022, the market has weakened considerably. This trend has continued through to the 15 March auction which was declined due to bids not meeting the confidential reserve price, which ensures the Government does not sell units significantly below their price on the secondary market.

Our advice is that significantly higher trigger prices are justified to put them well outside where the market may need to operate to be consistent with meeting emissions budgets. We judge it unlikely that any potential magnet effect would be sufficiently strong to cause prices to rise to that level. However, we will continue to actively monitor NZU prices as part of our annual NZ ETS settings advice and to build our insights regarding market behaviour, including market expectations and the potential impact of price anchoring.

We also continue to propose that the CCR has two tiers of trigger prices. With two trigger price tiers, the risk of any potential magnet effect will be further reduced, as will the risk of adding significantly to the existing surplus, as any release of reserve units will be staggered. The two tiers of trigger prices and reserve volumes will therefore help manage both the risk of prices going above what is considered necessary to meet emissions budgets and the risk to meeting emissions budgets should additional units be released.

Auction reserve price

The auction reserve price (ARP) is the price below which the Government will not sell units at auction. It is closely interrelated with the cost containment reserve (CCR) trigger price, and we advise against making decisions on either setting in isolation.

The ARP has never been triggered. Prices at auction have been well above the ARP since its introduction, and the only auctions declined to date have been due to the confidential reserve price not being met. While the current settings are not known to have caused any issues to the functioning of the NZ ETS, it is likely the ARP is currently set too low to adequately address risks around potential market oversupply. We therefore recommend the price be increased to align with the minimum NZU price path compatible with achieving emissions budgets in line with the Government's sector sub-targets.

Recommendations

Our recommendations for the unit limits and price control settings, reflecting the restriction from advising changes in 2024 and 2025, are:

	Fixed and cannot be changed		Updated recommendations		
Million units	**2024**	**2025**	**2026**	**2027**	**2028**
Limit on the New Zealand units available by auction[2]	24.8	22.5	15	13	10.6
Limit on the approved overseas units used	0	0	0	0	0
Overall limit[3]	31.1	28.8	21.2	19.1	16.6

	Fixed and cannot be changed		Updated recommendations			
Cost containment reserve	**2024**	**2025**	**2026**	**2027**	**2028**	**Total**
Tier 1						
Trigger price, including inflation	$91.61	$103.24	$205.00	$215.00	$226.00	
Reserve volume (millions)	7.7	7.1	2.3	2.1	1.9	21.1
Tier 2						
Trigger price, including inflation	NA	NA	$ 256.00	$ 269.00	$ 282.00	
Reserve volume (millions)	NA	NA	4.2	3.8	3.4	11.4
Total reserve volume	**7.7**	**7.1**	**6.5**	**5.9**	**5.3**	**32.5**

	Fixed and cannot be changed		Updated recommendations		
	2024	**2025**	**2026**	**2027**	**2028**
Auction reserve price	$35.90	$38.67	$72.00	$75.00	$79.00

Unit volume figures are rounded to one decimal place and columns may not sum due to rounding.

2. This includes cost containment reserve volumes.
3. The overall limit includes the units available by auction, approved overseas units, and forecast industrial free allocation.

Te Whakarākei Matua

Nā roto i ngā haepapa a Te Komihana o He Pou a Rangi, ō raro i Te Ture Whakautu Āhuarangi 2002 (Te Ture), me tuku e mātou ki te Kāwanatanga tētahi kupu akiaki ā tau ki ngā herenga hokohoko me ngā ritenga taura-utu mā te Kaupapa Hokohoko Tukunga o Aotearoa (NZ ETS) ki tētahi matapihi rima tau.

Ko te kupu akiaki o te tau he pēra i ngā raraunga hou kua maea mai, ngā whakahou ki tō mātou kaupapa, me ngā whakawhiunga a te Kāwanatanga whakatau i ngā whakaritenga NZ ETS mō 2022. Ko tā tātou whakahou hei panoni i ngā whakaritenga he mea tautoko i a NZ ETS kia hoki mai ki te ara e tutuki ai ngā ahunga whakaheke tukuwaro ā-motu. Ki te kore tēnei momo mahi, ka tūraru a Aotearoa ki te tutuki i ngā whāinga āhuarangi, māna, ka piki pea te utu ki ngā tukuwaro ā ngā ra kei tua.

Ko ngā whakaritenga NZ ETS, ko tōna tūraru he kore i hāngai ki ngā tahua tukuwaro o Aotearoa, arā te ahunga 2025, arā ko Te Takoha Ā Motu (NDC) mō te whakaheke i ngā tukuwaro o te ao, o raro i te Kawenata o Parī. I roto i tētahi kaupapa hokohoko tukunga, ehara i te mea kua kore e taea te whakahāngai i tētahi ahunga whakaheke tukuwaro nōna e whakahaere nei i ētahi herenga itaita ki ngā utu. Ko ngā whakatau ki ngā whakaritenga NZ ETS a te Kāwanatanga, koirā te whakapiki i te tūpono ki ngā āpitihana kohinga Mata Tukuwaro (NZU) ka tae ki te mākete me te tāpiri ki ngā tuhene o nāianei. Kei ia o ēnei mata tonu ka unu ki te whakaheke tukuwaro ā ngā rā kei tua, nā whai anō te tawhiti atu o Aotearoa i ana ahunga tukuwaro.

Ki tōna mahere whakaheke tukuwaro tuatahi, i momori te Kāwanatanga kia hāngai ngā whakaritenga NZ ETS ki ngā tahua tukuwaro. Ki te whakaritea e te Kāwanatanga kia tau ana ritenga taura-utu me te whakapūmau kia iti ngā utu tukuwaro, me anga ki te whakatū ture, tukanga rānei hei utu i tētahi NZ ETS kāhore i te whai tūranga nui ki te whakaheke tukuwaro.

E tūtohua ana e te Komihana tōna kupu akiaki nā runga i te whakawhiu nui o Huripari Gabrielle, arā te parekura nui i ngā hapori maha huri i Aotearoa, nā whai anō te rirohanga nui i mate ai te 11 tāngata. He moata tonu te mōhio tūturu ki ngā whakawhiunga o tēnei parekura me tōna pānga ki te NZ ETS, mō te taha ki ngā tukuwaro me tōna whakahaere rānei, otirā, kua ara mai ētahi kumukumu. Ko te aronga ohotata mā ngā ratonga kāwanatanga me ngā kaiurupare he tautoko i te ao me te oranga o ngā hapori kua pākia kinotia. E ai ki tō mātou mana, ka ngana tonu ki te arotake i tēnei āhuatanga, i ā te pūpū mai o ngā take me te arotake i ngā kōrero hou, i ngā akoranga hou rānei mō Huripari Gabriel ki roto tonu i ā tātou kupu akiaki hou ki te Kāwanatanga me NZ ETS.

Kei mua kei te aroaro

He whakarite kupu akiaki i tēnei mahinga tuatahi ki tētahi whakahuihuinga whānui, mō te taha whakahou i ngā ture NZ ETS. Ka whakatauria e te Kāwanatanga tō mātou kupu akiaki me te whakahaere i ngā whakahuihuinga hapori ki ngā tono, me tā mātou e mōhio nei, ka ārahina e Te Manatū Taiao, mā te Minita Take Āhuarangi hei te wāhanga tuatoru o te tau 2023.

Me whakatau te Kāwanatanga ngā herenga hokohoko me ngā ritenga taura-utu NZ ETS mō ngā whakataunga ture me ōna whakahou mō mua i te 30 o Hepetema. Ko ngā whakaritenga hou ka whakatūria mō te 1 o Hanuere 2024. E tūmanakohia ana ka rite tō mātou kupu akiaki ki tēnei take, mō te tau 2025-2029, hei te wāhanga tuatahi o 2024.

Te haepapa o te wā me te whakahaerenga o NZ ETS

He rauemi whai mana a NZ ETS ki te rautaki whakaheke tukuwaro a te Kāwanatanga. Mā te tohu i te utu ki ngā tukuwaro, nā whai anō te pikinga o ngā utu ki ngā tino kaupapa me ngā hua tukuwaro, he mea whakatenatena i te hunga ka uru kia tini tōna tūtohuatanga me te whai ara auaha maha hei whakaheke i te tukuwaro.

Ko ō mātou whakahau ki ngā kohinga utu me ngā whakaritenga taura-utu he whanake mai i te aromatawai o ngā mea hei tutuki i ngā whāinga whakaheke tukuwaro me ngā take e tika ana ki tā te Ture i kī ai.

E noho tonu ai ki ngā ahunga whakaheke tukuwaro, he mea hirahira kia pūnaha te noho o NZ ETS. Kia noho ia herenga me ia whakaritenga rānei ki tētahi taiao mākete whānui. He tika rawa tēnei i ngā taura-utu – e panoni nei i ngā utu mākete tauraro, i ngā taumau herenga utu rānei hei whatanuku hoki i te āhua o te tatau utu, arā ko ngā whakawhiu ki ngā kōhinga tauhokohoko. Nā reira, kua whanaketia e mātou tētahi kupu akiaki hei piringa kōrero me te tuhituhi ake ki tēnei rīpoata he pēhea te whakatau me te whakahau kōrero ki a rāua anō hei āki i te Kāwanatanga kia kaupare i ngā whakawhiu kāhore i matapaetia, i roto i āna whakatau.

Me whakatau te Kāwanatanga ngā ahunga pae tawhiti o NZ ETS

He pēnei i te kupu akiaki ki ngā ritenga NZ ETS 2022, ko tā tēnei kupu akiaki he kōrero ki te Kāwanatanga, mōna, kāhore i āta whakamārama i ana ahunga ki te NZ ETS.

E ākina ana tō mātou kupu i tā te Kāwanatanga whakatau i tana mahere whakaheke tukuwaro kei te rapu i ngā tau whakaheke tukuwaro me te poro rākau, kia ea i ngā ahunga. Engari, kāhore anō a NZ ETS kia rite ki te tutuki i tēnei whāinga, nātemea, kāhore i te mārama ngā mea e rua nei. I konei te tino pūtake o te maunawenawe me te pōrearea ki te mākete, ā, ka piki te tūraru, arā pea te pikinga o ngā utu hoki ki te whakaheke i te tau tukuwaro.

Me mārama te whakatare a te Kāwanatanga ki te tutuki i āna tahua tukuwaro, ā, mēnā rā e hiahia ana ki ngā tau whakaheke tukuwaro, ki te whakatutuki rānei mā te poro rākau me te mahi whakatō rākau. Mēnā e hiahia ana te Kāwanatanga kia whai i te tau whakaheke tukuwaro me panoni te NZ ETS kia kaua rā te poronga rākau e whakararu i a ia anō.

Ko ia āmenehana me whai waahi mai ki te whakakotahi i te iwi Māori, e pūmau ai ngā whakatau i ngā mātāpono o Te Tiriti o Waitangi, te kaupare hoki i ngā raupatu o nehe, ā, kia kaua hoki e whakatare ki te whakapōrearea i a Ngāi Māori.

I roto i tōna mahere whakaheke tukuwaro, nā te Kāwanatanga anō i whakatauria ko ngā whakatikahanga tūraru ki tāwahi he eke ki tā te NDC i kī ai. Engari, kāhore anō kia whakaaetia ngā tauhokohoko o tāwahi (ngā tauhokohoko o tētahi atu whenua i tōna anō ETS, i tōna anō herenga tāwahi), me te aha, kua kore e whakatauria ā hea, he aha hoki te urunga ki ngā whakatikahanga o tāwahi. I te korenga o ēnei kōrero kua ara mai te tino maunawenawe ki te hunga o te mākete me te Komihana, i ā te whakarite i tēnei kupu akiaki. Taro ake nei i te taenga mai o ēnei kōrero ka rerekē pea tō mātou kupu akiaki.

Te Tau Herenga

Ko te whakawhanaunga tētahi tino kaupapa kei te kupu akiaki ki te NZ ETS. Ko tā mātou kupu akiaki 2023, he kōrero tonu nā ngā kāhui, ngā kamupene me ngā uri Māori kei ngā ahumahi maha. He pēnei i ngā hunga i uiuitia, ngā kaitūhono kaupapa me ngā mema nō ngā rōpū kei a rātou he take ki te NZ ETS me ngā ratonga taiao. I konei te wānanga kōrero, te whakamātau kōrero me te whai māramatanga hoki ki te mākete NZ ETS me ngā nawe a ngā hunga mākete me ētahi atu hunga aroaro.

He maha ngā kaupapa i ara mai i tēnei huihuinga, arā:

- kei te huarahi e tika ana ki a mātou, me tā ngā hunga aroaro he kī mai he mana tō te mahi a te Komihana aromatawai me te āhua o ōna tikanga ki te whakawhanake kōrero mō te kupu akiaki 2022
- kei te kaha hāngai te ahu rākau ki ngā whakapoapoa NZ ETS engari he tino maunawenawe hoki i te mākete
- mā tētahi aronga ki te whakawhanaunga me te whakahāngai ake i ngā tikanga Māori, ka kaha ake tō te Komihana āheinga ki te whai whakaaro ki ngā wawata, ngā hiahia me ngā awhero e hāngai ana ki te haepapa me te whakahaerenga o NZ ETS.

Ko ētahi o ngā kōrero mō NZ ETS kua rangona, arā hei tauira, ko ngā whakaaro ki te mahinga o ngā utu tukuwaro kia tauritea te whakaheke tau tukuwaro me te whakapiki i ngā repo whakatika waro, kei waho atu i tēnei tuhinga kupu akiaki.

Kia tautika, kia tautini, ā, kia taurite te whakawhitinga NZ ETS

Ko tā mātou aromatawai i a *Ināia tonu* nei he whakaatu mai, ki te whakawhiti atu ki tētahi ao whakaheke tukuwaro e whakaaetia ana ki te ao ōhanga me te hapori. Ki te tutuki i tēnei, me tika tōna whakapounga, me tika tōna mahere, me tika tōna tukuhanga, ka mutu, me tika tōna whakarite.

Kei tēnei kupu akiaki te kōrero he pēhea tā NZ ETS hāngai ki te tutuki i te tahua tukuwaro, te NDC me te ahunga 2050, inā hoki ko te tautoko i tētahi whakawhitianga tautika, taurite, tautini hoki. Āpiti atu, ko te whānui me te whakarārangi ake i ngā momo whakawhiunga ā ngā panonitanga utu tukuwaro me tā te Kāwanatanga haepapa ki ngā mātapono o Te Tiriti o Waitangi.

Te Herenga Māori NZ ETS

Kua kopoua te Komihana kia whāia e te Kāwanatanga ki te whakapūmau i tētahi whakawhitianga pai mā Ngāi Māori. Mā roto i tō mātou whakawhanaunga ki ngā iwi Māori, ka rongo kua kore tonu he arotakenga Tiriti mō NZ ETS, ā, koinei tonu te take hei whakatika.

Me mahi tahi te Kāwanatanga ki te iwi Māori e piki ake ko te mārama me te mōhio, ā, he pēhea e kore ai te hanga o NZ ETS whakaoreore anō i te take raupatu. Me āki te Kāwanatanga hoki ki te tautoko i ngā kaupapa Māori hei atawhai i te whakatikahanga o ētahi tūmomo raru ka puta i te NZ ETS ki runga i te ōhanga Māori. Ā, he pēhea hoki te tohutohu i ngā āheinga hei whakakipakipa i a Ngāi Māori kia uru tautika ki te NZ ETS, e ai tā o rātou tumanako me o rātou wawata.

Hei tā tēnei me ngana te Kāwanatanga kia pūmau rawatia ngā mātāpono o Te Tiriti o Waitangi, ā, me mahi tahi ki a Ngāi Māori hei whakarite i te mahinga nui o NZ ETS ki te rautaki whakatikahanga āhuarangi o Aotearoa.

Ngā whiunga tikoki me tōna whakatikahanga

He nui tonu te mahi a NZ ETS ki te whakatenatena me te whakapoapoa i te penapena tautakere-waro me te auahatanga. I te nuinga o te wā, ko ngā penapena tautakere-waro o nāianei ka eke ki te utu i a ia anō ki te pae tata me te pae tawhiti.

E tika ai te haere o NZ ETS i ōna whakaheke tukuwaro, ko te utu ki ngā kaupapa, ki ngā hua, ka mutu, ki ngā whakahaere tukuwaro me eke ki tētahi taumata e whakatenatena ana i te auaha me te whakarerekē waiaro. He whiwhinga tēnei ki ngā ahumahi, ngā kaihokohoko me ngā kaiwhakarato e whakaheke tukuwaro ana, ā, e whakaritea ana kia iti ake te utu ki ngā kaupapa tukuwaro nui. Ko te nuinga o ngā utu ki te NZ ETS ka taka ki ngā takitahi me ngā pakihi e whakawhiti atu ana ki ētahi tukanga takere-waro, ā, kāhore i te pā kinotia e ngā utu tukuwaro. Heoi anō, mō te whāinga tata, ko ētahi pea kāhore i te whai wāhi atu ki ngā tūtohunga whakaheke tukuwaro.

E aro ana te Komihana ki te pikinga o ngā utu tukuwaro, i te pānga hoki ki tēnā kāinga, ki tēnā pakihi, ki tēnā hapori. Nō reira, he take nui tēnei mā te Kāwanatanga kia whakarite tukanga e hāngai ana ki te kaupare i ngā whakawhiunga tikoki ka kitea pea ki ngā utu tukuwaro, hei tauira, ki roto tonu i tōna *Rautaki Whakawhiti Taurite.*

Ahakoa e whakawhanake tonu ana tēnei rautaki, he maha tonu ngā kōwhiringa hei tauawhitanga mā ētahi, ki roto tonu i ngā herenga me ngā taunga moni e wātea ana ki te Kāwanatanga. Ko ētahi kaupapa kua kitea nōnā tata nei, pēnei i ngā utu tautoko i a COVID-19 me te whakahekenga haurua i ngā utu waka-hapori, he whakaatu atu ka taea e te Kāwanatanga ki te whakatika

wawe i ngā whiunga kino ki runga i ngā hapori. Ko ēnei momo kaupapa ohotata, he rongoa poto ki tētahi rongoa roa, kaupapa mauroa.

Ko te whakawhitianga e tautika ana, e tautini ana, e taurite ana, me here kotahi ki te whakatikatika i ngā take papori me nga pakihi ki ngā take āhuarangi. Kua kore e taea te kōrero ki tētahi take hei whakaiti anō i tētahi atu.

Te Herenga Utu

E herea ana te Komihana kia ākina te Kāwatanga ki ētahi wāhanga e toru o ngā tauhokohoko mā NZ ETS: he tauhere i ngā tauhokohoko e wātea ana e te mākete; he tauhere i ngā tauhokohoko o tāwahi kua whakaaetia; ā, he tauhere kotahi ki ngā tauhokohoko. Ko ngā tauhere he taupoki i ngā tukuwaro e taea ai e NZ ETS mā Aotearoa.

Ia tau, ka whānui ake ā mātou whakaritenga kua whakahoua ki tētahi tau anō, ā, hei aromatawai i ngā whakaritenga kua whakaturehia. E whai waahi atu ngā hunga ki ētahi kōrero whai mana, ka whakaaetia e te Ture ki ngā tau e rua tuatahi anake kia panoni i ētahi whakaritenga, engari ki ētahi tino herenga, pēnei i ngā tūtohu herenga hokohoko, i tētahi parekura nui rānei. Nātemea kāhore anō kia kitea ēnei take, kua waihanga kupu akiaki ki ngā tūtohinga o nāianei mō 2026.

Kua whāia i te pūnaha tukanga e whitu hei whakatau i a mātou tauhokohoko.

Te Whakarite Tauhere

1: Te Tahua Tukuwaro, ahunga 2050, me te NDC

Ko te tuatahi, kia hāngai ā mātou kupu akiaki ki ngā tahua tukuwaro, ahunga 2050 me te NDC a te Kāwanatanga. Ka noho tonu tā mātou kupu akiaki o mua kia wātea mai ngā tauhokohoko o tāwāhi, ā, ko ngā tauhere me noho ki ngā tahua pūtea a te Kāwanatanga, koinā te ara ki te ahunga 2050 me ngā takohanga ā motu ki te NDC. Ko tēnei kaupapa, ahakoa te tatari ki ngā tauhokohoko o tāwāhi, kua kore a NZ ETS e taea ngā whakatikahanga tāwahi e eke ai te NDC.

2: Te Tahua Tukuwaro me ōna pihi

Ko te tohaina o ngā pihi kei te tahua tukuwaro he waihanga i te katoa o ngā kohinga tahua tukuwaro ka whakapau ki ngā tukuwaro kei ngā ahumahi o nāianei, o waho atu hoki i te NZ ETS (pēnei i te ahuwhenua), ā, he aha hoki te pihi e wātea ana ki ngā ratonga NZ ETS.

Nō tērā kupu akiaki, kua piki ake mā te ~229,000ha o ngā ngahere kua rēhita mai i 1989 ki te NZ ETS, arā he pikinga 69% tōna rite. Ka whai pānga ki ngā tauhere i a te panoni o ngā whakapae tukuwaro me ngā poronga rākau o roto, o waho hoki I te NZ ETS, nā whai anō te whakarerekē i o mātou tatauranga hei tohatoha mā te tahua tukuwaro o waenga i ngā kaiuru NZ ETS me te hunga kāhore i uru. Nātemea, he nui atu ngā tangohanga tukuwaro ki te NZ ETS, kua whakahou o mātou tatauranga ki Te Ara 2 hei whakaheke i te tau tukuwaro kua tohaina ki ngā rāngai NZ ETS.

3: Te Tātai Kōaro

Ko ngā panonitanga ki ngā tikanga he aro ki ngā rerekētanga o ngā whakapae tukuwaro ō mua kei te NZ ETS me ngā reanga kei te Green House Gas Inventory (GHG Inventory), ka mutu, ngā ahunga tātai. I te 2022 ka tūtohua ngā rerekētanga o waenga i a GHG Inventory me ngā tukuwaro i tātaihia ki NZ ETS, nā whai anō te āki kia tātaia mā te tatau mā te tātai kōaro. I a te nui me te anga o ngā rerekētanga kāhore i te mōhiotia, ā, kāhore hoki he tātai kōaro kua tūtohua mō 2023, ka tau tonu tā mātou kupu akiaki mō 2022.

4: Te Tātai Kohinga Kore Utu

Ko ngā kohinga kore utu he kōrero ki ngā tauhokohoko (NZU) a te Kāwanatanga ka hoatu utu kore nei ki ngā ratonga ko ōna kaupapa he tukuwaro nui, he nui hoki te whakataetae hokohoko (EITE). Ko ēnei tauhokohoko he whakapau i tētahi wāhanga ki te tahua tukuwaro ka tukuna ki a NZ ETS, ā, ka heke te katoa o ngā NZU ka taea e te Kāwanatanga te hoko ki te mākete.

Ahakoa kāhore anō kia rerekē tēnei āhuatanga, kua whakahou tā mātou kupu akiaki mō 2022 nā runga i ngā tatauranga hou ki ngā kohinga utu kore kua wātea mai.

1. He tatauranga nō Hune 2022

5: Te whakarite whakaheke i te kōhinga tuwhene

O ngā NZU 144 miriona ki a NZ ETS[1], e matapaetia ana kei te takiwā o te 49 miriona te tuwhene o ngā tauhokohoko (te kohinga o ngā tauhokohoko e tūraru ai te tukuwaro kia neke atu i ngā tahua tukuwaro). Ko tā mātou he whakaheke i ngā kohinga mākete e hāngai ana ki te whakaheke i te tuwhene ki te kore, ā, mō mua i te 2030, ā, he whakauru i tētahi āpitihanga hei āki i te whakatikahanga o ngā raru tuwhene.

Ko te utu he kohinga mākete iti ā ngā tau e heke mai nei, kaua ki te kupu akiaki i tērā tau. Ahakoa tā mātou manawa nui ki tēnei tūwhāinga matapae tauhokohoko tuwhene, ka haere tonu ki te aromatawai i ngā matapae tuwhene ā haere ake nei me te whakahou i ngā kupu akiaki e ai tā ngā tatauranga hou.

6: Te Tauhere i ngā tauhokohoko tāwāhi

Hei tā Te Tuatahi, kāhore he tauhokohoko tāwahi ki Aotearoa nei. Nātemea, kāhore he tauhokohoko tāwāhi ki te NZ ETS, ā, kāhore hoki he whakataunga ā hea ka wātea mai, i tātaia te tauhokohoko tāwāhi nei ki te kore.

7: Te Tātaia i te kohinga mākete me te arotake tūraru

E eke ai te kupu whakamutunga ki ngā tauhokohoko mō 2024-2028, me kotahi mai ngā hua o tō mātou aromatawai kei Te Tuatahi-Te Tuaono me te whakamātau i ngā tūnewa me ngā tūraru e hāngai nei ki ngā whāinga.

E whakauru ana hoki ki tō mātou tātai whakamutunga tētahi āpitihanga hei panoni i ētahi taumau herenga utu (CCR) i puta i te tau 2023. Ahakoa kāhore i hokona te mākete o Maihe, kei reira tonu te tūpono ka tukuna anō ngā tauhokohoko o te CCR mō te mākete o Hune. Ko tā tēnei kaupapa he hiki i ngā tauhoko tuwhene ki te mākete, ā, he hiki anō i te tūraru ka tukuna e te NZ ETS ngā tukuwaro ki runga rawa i ngā tahua tukuwaro.

Kua tukuna e mātou tētahi tauira ki tā te Kāwanatanga āhei ki te tātai i ēnei tukuhanga CCR mā roto i te tono āpiti hou o 7a, ki reira whakahekea te tatau o ngā tauhoko kua hokona ki te mākete ā ngā rā kei tua.

Ko tō mātou tono kohinga mākete kei te wahanga e whai ake nei.

Te Tono Kohinga Mākete

Anei tō mātou whakaurunga ki tēnei pūnaha hatepe e whitu me te rāhui ake i ngā aronga panonitanga o ngā whāinga ki 2024 me 2025, ki ngā tono kohinga mākete ā-tau:

	Kua tau, ā, kua kore e neke		Ngā Whakahau Hou			
Tatau Miriona	2024	2025	2026	2027	2028	Tatau
Ngā Kohinga Mākete Tauhokohoko	17.1	15.3	8.5	7.1	5.2	53.2

Ko ēnei tono kohinga mākete ā-tau he wāhanga ki ngā whakamōhio i te whakahau a te Komihana mō te tauhere i ngā NZU e wātea ana mā te mākete (te kohinga mākete ā-tau āpiti atu ko te kohinga CCR) me te katoa o ngā herenga utu.

Te Ritenga Taura-Utu

Ko te taura-utu ki te NZ ETS ko te taumau herenga utu me te utu tauraro mākete. Ko te pūtake o ēnei herenga he whakahaere i ngā tūraru o te tauhokohoko ki te makete me tāna kāhore i hānga ki ngā kaupapa hei tutuki i ngā tahua tukuwaro. Ehara ēnei i te tohutohu ārahi, i te tūtohu rānei i ngā utu ki ngā tauhokoho rānei mō te mākete.

Taumau Herenga Utu

Ko te taumau herenga utu tētahi kaihoatu i ngā tauhokohoko kua wātea mai hei hoko, mēnā hoki kua eke te mākete utu, kua eke noa atu rānei ki tētahi, ki ētahi tūtohunga utu rānei. Inā te taumau herenga utu me uaua ka rangona, he mea kua tūtohua ki te toru o ngā mākete whakamutunga e whitu.

Kua tirohia e te Komihana ki ngā āwangawanga e punga ai pea te CCR ngā kawatau utu, te whakatū rānei i tētahi 'tākirkiritanga' e pana ai ngā utu ki ngā tūtohunga utu CCR. Kua kore mātou e taea te whakatau he aha rawa te utu tūtohu CCR me tōna momo tākirikiri i ngā utu tauhokohoko.

Heoi anō, nō te whakatau whakamutunga a te Kāwanatanga ki te ritenga NZ ETS 2022, kua ngana tonu te Komihana ki te karahuihui i ngā kaiuiui mākete. Nā runga i tēnei piringa me te rangahau i te mākete, ko te aronga o te Komihana ko te kotahi mai o ngā pānga tohutohu a te Kāwanatanga ki tōna momori ki te mahi āhuarangi, te āpitihanga kōrero ki ngā utu whakaitiwaro, ngā maunawenawe ki te ture, me te pikinga o ngā utu ki ngā kaupapa hokohoko o tāwāhi te take e whatanuku ana te pae mākete ki ngā utu kei mua kei te aroaro, māna, ko te whakapunga i tētahi tino utu me te tākirikiri i a ia anō.

Ko tō mātou kupu akiaki hoki he whakamōhioranga nā te kōrero hou ki te mākete, kāhore tonu i wātea i te wā i puta ngā whakatau a te Kāwanatanga mō te tau 2022. Mai i te Tīhema 2022, kua heke rawatia te mākete. Arā tēnei āhua kua tere tonu ki te mākete o te 15 o Maehe, koirā hoki i aukati nātemea kāhore i tutuki te utu tauraro muna. Koinei tonu te whakaritenga a te Kāwanatanga ia kaua e hoko rawatia āna tauhokohoko ki raro iho i te utu ki te mākete tuarua.

E ai ki tā mātou kupu akiaki, ko ngā tūtohunga utu tiketike te take ka whakaputaina ki waho atu o te mākete e āhei ai te whakahaere tika ki tō te tutukihanga tahua tukuwaro. Ka whakamātauria ki te tūpono o te momo tākirikiri ka punga ki te whakaoreore i ngā utu e eke ai ki tērā taumata. Heoi anō, ka ngana tonu ki te aromatawai i ngā utu NZU nō raro mai i tō mātou kupu akiaki ki ngā ritenga NZ ETS mō te tau me te whakawhanake i ngā mōhioranga e hāngai ana ki ngā waiaro mākete, rawa atu ko ngā taumata mākete me te pitomata o ngā whiunga a te utu punga nui.

Ka tono tonutia e mātou kia rua reanga te āhua o ngā tūtohu utu. Mēnā rā e rua ngā reanga utu, ko te tūraru o te momo tākirikiri ka heke rawatia, arā hoki te tūraru o te āpitihanga ki te tuwhene o te wā, ka mutu, ko te tukunga o ngā utu tauraro ka tuku hīrorihori mai. Ko te reanga rua o ngā tūtohu utu me ngā kohinga tauraro ka noho ki te hāpai i te tūraru o ngā pikinga utu ki tō te ekenga tahua tukuwaro me te tūraru tutuki i ngā tahua tukuwaro i te putanga o ētahi āpitihanga o ngā tauhokohoko.

Te Utu Tauraro Mākete

Ko te utu tauraro mākete (ARP) te utu kei raro iho i tā te Kāwanatanga kua kore nei e hoko i ngā tauhokohoko ki te mākete. He tata atu tēnei taunga ki te tatau tūtohunga o te taumau herenga utu (CCR), ā, kāhore e tika ana kia whakatau weherua i ngā ritenga nei.

Kāhore anō te ARP kia tūtohua. Ko ngā utu kei te mākete kua piki rawa ki runga i te ARP mai anō i tōna orokohanga, ā, ko ngā mākete anake o te wā kua aukatia, ka mutu, ko ngā mea kāhore i eke ki te utu tauraro muna. Ahakoa kāhore i te mōhio mēnā rānei ko ngā ritenga o te wā te take i raru ai te whakahaere o te NZ ETS, e matapaki mai ana kei raro iho te ritenga ARP mō te whakatikahanga o ngā tūraru, ki te pitomata o te tuwhenu nui a te mākete. Nā reira, ko tā mātou he whakahau kia piki te utu ki te ara o te tauhokohoko tauraro NZU me te whakahāngai kia tutuki i ngā tahua tukuwaro kei ngā ahunga tuarua a te rāngai Kāwanatanga.

Ngā Whakahau

Ko ā mātou whakahau ki ngā herenga utu me ngā taura-utu, he kōrero ki te rāhuitanga i ngā whakahau panonitanga ki te tau 2024 me te tau 2025:

Tatau Miriona	Kua tau, ā, kua kore e neke		Ngā Whakahau Hou		
	2024	2025	2026	2027	2028
Te Tauhere ki ngā Tauhokohoko e wātea ana ki te mākete[2]	24.8	22.5	15	13	10.6
Te Tauhere ki ngā Tauhokohoko o Tāwāhi kua whakamahia	0	0	0	0	0
Te Herenga Matua[3]	31.1	28.8	21.2	19.1	16.6

Taumau Herenga Utu	Kua tau, ā, kua kore e neke		Ngā Whakahau Hou			Tatau
	2024	2025	2026	2027	2028	
Reanga 1						
Tūtohu Utu, Utu Whakawhere	$91.61	$103.24	$205.00	$215.00	$226.00	
Kohinga Tauraro (miriona)	7.7	7.1	2.3	2.1	1.9	21.1
Reanga 2						
Tūtohu Utu, Utu Whakawhere	NA	NA	$ 256.00	$ 269.00	$ 282.00	
Kohinga Tauraro (miriona)	NA	NA	4.2	3.8	3.4	11.4
Kohinga Tauraro Katoa	**7.7**	**7.1**	**6.5**	**5.9**	**5.3**	**32.5**

	Kua tau, ā, kua kore e neke		Ngā Whakahau Hou		
	2024	2025	2026	2027	2028
Utu Tauraro Mākete	$35.90	$38.67	$72.00	$75.00	$79.00

Ko ngā kohinga tauhokohoko he whakakotahi ki te ira-tahi, ā, kua kore pea ētahi whakarārangi e eke nā tēnei mahi whakakotahi.

2. Koinei hoki ko ngā kohinga utu here tauraro.
3. Ko te tauhere kotahi, koinei ngā tauhokohoko ka wātea ki te mākete, ka tauhoko tāwāhi kua whakaatia, ā, ko ngā matapae pakihi tukunga utu kore.

PART 1

Te Taupuaki – Introduction

About this advice

The Climate Change Commission is an independent Crown entity set up to provide expert, evidence-based advice to successive governments to help Aotearoa New Zealand transition to a thriving, climate-resilient, and low emissions future.

As part of our responsibilities under the Climate Change Response Act 2002 (the Act), we are required to provide the Government with annual advice on the unit limits and price control settings for the New Zealand Emissions Trading Scheme (NZ ETS) across a five-year window. This is to support the Minister of Climate Change, who is required to update these settings every year. Annual updates help keep the NZ ETS aligned to emissions reduction targets and give market participants information they need to make sound decisions.

This report marks the second time the Commission has provided this advice. Under the Act, we must accord our recommendations with emissions budgets, the Nationally Determined Contribution (NDC) and the 2050 target. In developing our advice, we are required to consider the same matters as the Minister, any other relevant matters, as well as the matters we are required to consider when performing any of our functions. **Table 16** in the Appendix lists these considerations and how they have been addressed.

You can learn more about the NZ ETS and last year's recommendations in our first report, *Advice on NZ ETS unit limits and price control setting for 2023-2027*.

About the NZ ETS

The NZ ETS is an important tool in Government's strategy to reduce carbon emissions. The Government has set emissions budgets, the NDC and the 2050 target, and the NZ ETS translates these into a price signal. Putting a price on emissions, which in turn raises the price of emissions-intensive activities and goods, encourages behaviour change and innovation towards low emissions alternatives.

Businesses participating in the NZ ETS must surrender one NZU for each tonne of emissions they emit, measured in tonnes of carbon dioxide equivalent. In this way, NZUs are permits to emit and the 'currency' of the NZ ETS. Their limited availability gives them a value at which they are bought and sold among market participants.

The broad coverage of the NZ ETS – it covers every sector in the economy except biogenic methane and nitrous oxide emissions from agriculture – means it affects a much wider range of decisions than is possible with more specific policies. Participants face the costs associated with their emissions while being free to decide how best to make reductions based on their individual circumstances.

The NZ ETS unit limits and price control settings

The price signal in the NZ ETS is guided by the way the Government sets and reduces the number of units supplied into the scheme over time, and by price controls that apply to unit auctions. Reforms to the NZ ETS passed in 2020 provide the architecture for managing these settings over a rolling five-year period.

The price controls only operate at government auctions and do not prevent the trading of units between participants on the secondary market above or below these prices.

These unit limits and price control settings are set in regulation for five years into the future. The regulations are updated annually to extend the settings by a further year, so that there is always a five-year window of unit supply information.

This rolling approach allows the Government some flexibility to adjust these settings through a predictable process. This is designed to give market participants greater clarity and confidence in how the NZ ETS will be run while recognising the need to respond to changing circumstances over time.

The formal advice provided annually by the Commission on the NZ ETS unit limits and price control settings comprises:

A. A recommendation on the volume of units supplied by the Government into the market, made up of:

- i.) a limit on units available to be auctioned (made up of the auction volume and the cost containment reserve volume)
- ii.) a limit on approved overseas units
- iii.) an overall limit, which includes the available auction and overseas units, as well as units freely allocated to industry.

Together the unit limits determine the amount of NZUs that can be auctioned into the market each year and give the NZ ETS market information about expected future unit supply from other sources such as industrial allocation.

B. A recommendation on the price controls in the market, both:

- i.) a cost containment reserve (CCR), which releases a reserve amount of units for sale at auction if a trigger price is reached or exceeded by bidding at auction
- ii.) an auction reserve price (ARP), which is a minimum price below which units will not be sold at auction.

Making amendments

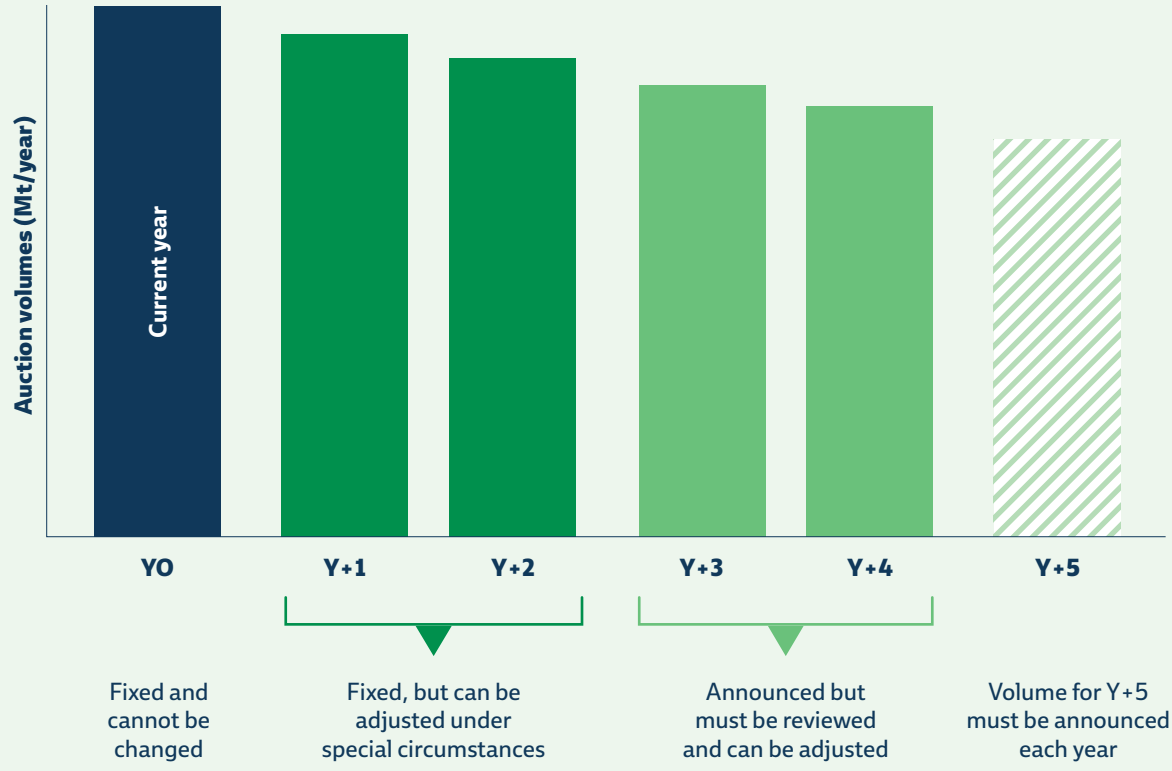
The NZ ETS unit limits and price control settings already in place are reviewed through the annual regulation update process. However, legislative rules govern what changes can be made by the Government, and under what circumstances. These restrictions enable the NZ ETS to be responsive to new data and other changes while maintaining regulatory predictability and keeping participants well-informed.

The current year is always out of scope for amendment under the annual review process. The settings for the first two years of the future five-year period are also fixed, unless there are conditions that justify a change (this is discussed in more detail below). Settings for the following two years may be amended, and a fifth year must be added to extend the settings. This is illustrated by **Figure 1** below, which shows how the unit limits are set for five years but must be extended and may be adjusted each year.

Under section 30GB of the Act, the circumstances that allow the first two years of NZ ETS unit limits and price control settings to be reviewed and potentially amended are:

- a change to the relevant emissions budget or NDC
- a change that has significantly affected any matter that was specifically required to be considered when the settings were put in place
- the triggering of the price controls, such as the release of NZUs from the cost containment reserve
- a *force majeure* event.

Figure 1: The five-year rolling process for unit limits and price control settings



The impact of Cyclone Gabrielle

As part of this advice, we considered whether Cyclone Gabrielle meets the threshold of a *force majeure* event. A *force majeure* event is a major event which renders fulfilment of obligations impossible, where the event is both unforeseeable and unable to be resisted in the given circumstances.[4]

The devastation to individuals and communities, livelihoods, wellbeing, and whenua associated with Cyclone Gabrielle has been extreme and was unforeseen at the time the relevant settings were put in place. However, it is still too early to fully understand the impacts on the NZ ETS, in terms of emissions and removals or its operation. We do not yet have the data to assess, for instance, whether the cyclone has changed the ability of the NZ ETS to accord with emissions budgets, targets, or the NDC. Accordingly, we cannot currently assess whether Cyclone Gabrielle constitutes a *force majeure* event (or if it significantly changed any of the matters the Minister must consider) or if it does, whether it would justify an amendment to the settings for 2024 and 2025.

This event underlines the purpose and benefits of annual updates to the NZ ETS settings. Right now, the priority for government agencies and responders is to support the recovery and wellbeing of impacted people and communities. If we determine later, based on new information, that Cyclone Gabrielle does meet the *force majeure* threshold for the NZ ETS as provided in the Act (section 30GB), we will have the opportunity to provide advice to the Government on how the unit limits and price control settings can best respond. The Commission will continue to monitor the situation as it unfolds and reflect any new information or lessons from Cyclone Gabrielle and its consequences in our future advice to the Government, including on the NZ ETS.

Amending settings from 2026

Being responsive to new data and other changes while maintaining regulatory predictability and keeping participants well-informed is an important feature of the annual updates to the NZ ETS settings. Changes to the first two years of the five-year settings period, which disrupt that predictability, are only justified under the specific conditions listed above, like a change to the relevant emissions budget or a *force majeure* event. As those conditions have not occurred, the Commission is only recommending changes to existing settings from the year 2026 in this report.

However, as there is a possibility of price controls being triggered at the planned 14 June 2023 auction (after the release of this report), we have also provided the Government with advice on unit limits and price control settings should conditions allow for a review of all five years of the advice window.

Engagement is an important component of quality advice on the NZ ETS

This is due not only to the many complex ways in which the scheme interrelates with Aotearoa New Zealand's social and economic landscapes, but also because of the continuous evolution needed to ensure the NZ ETS can best serve as a tool in our collective efforts to reduce emissions. As the NZ ETS changes over time, so too must our advice on how it can best work for Aotearoa New Zealand.

Our 2023 advice has been informed by engagement with Iwi/Māori-collectives, companies and individuals from different sectors including compliance participants, intermediaries, members of bodies with an interest in the NZ ETS, and environmental organisations.[5] This enabled us to hear insights, test ideas and enhance our understanding of the NZ ETS market and of market participants' and other stakeholders' concerns.

To respond to constraints due to the condensed timeframes for this year's advice, our engagement built on the more extensive discussions undertaken for the 2022 advice. We also complemented engagement by reviewing submissions from the Ministry for the Environment's consultation on NZ ETS settings in 2022 and examining submissions from Iwi/Māori to government agencies on relevant issues to help identify common themes related to the NZ ETS. We have also drawn on the evidence we collected through analysis and engagement in preparation for *Ināia tonu nei*.

4. See, for example (in the context of a contract) Bay of Plenty Electrical Ltd v Vector Gas Ltd [2008] NZCA 338 at [40]
5. We considered whether public consultation on our recommended settings was necessary and decided it was not necessary at this stage, in part because the Government will be consulting on these settings.

Key themes emerging from our engagement were:

Our analytical approach is sound

What we heard in our engagement affirmed that we are on the right track with our work. Several stakeholders told us they felt the Commission's approach to analysis and the methodology used to inform our 2022 advice was robust. Feedback confirmed that a key hedging-related assumption used in our analysis of the NZU stockpile was reasonable. Some particularly appreciated the transparency of information provided, including release of the data used in our calculations for unit limits.

Forestry is responding strongly to NZ ETS incentives but is a key source of uncertainty in the market

The NZ ETS is having a significant impact on forestry sector decisions about planting and how existing forests are managed, including harvesting. While we heard a range of views on the role of forestry in the NZ ETS, it was clear this issue is a source of uncertainty and concern across different groups and sectors.

Engagement feedback indicated that limited data as well as the complexity and options available under NZ ETS forestry rules make it difficult to understand the supply and demand related to forestry. This means not everyone in the market is well informed about the potential impact of forestry. This heightens some risks and underlines the importance of wider work on NZ ETS design, operation, and governance, including provision of more comprehensive and accessible market information.

From stakeholders involved in forestry, we heard about how the NZU price was driving increased planting rates, increased registration of post-1989 forests into the NZ ETS, and about the potential for it to cause decisions to not harvest forests on stock change accounting. This is an issue we intend to investigate further for future advice, to understand its scale and its potential impact on the NZU stockpile.

We also heard about how the owners of Māori collectively owned land under Te Ture Whenua Māori Act have to weigh decisions about how to utilise their NZUs attached to forestry against a range of competing priorities, tikanga values, and kaitiaki obligations including taonga tuku iho. This highlighted that the price of emissions is not the key driver for decision making by Iwi/Māori-collectives.

We also learned that the views and decisions of Māori landowners and foresters are highly diverse. This stems from the way the NZ ETS was introduced, and the lack of information and support provided at that time for Māori landowners to participate. This is an ongoing issue that was raised throughout engagement.

An approach to engagement that is better aligned with tikanga Māori will strengthen the Commission's ability to reflect the diversity of Iwi/Māori perspectives, needs, and aspirations in relation to the role and operation of the NZ ETS

While our engagement with Iwi/Māori has helped us gain valuable insights and shaped the thinking in this report, we acknowledge that there are some barriers to meaningful consultation and engagement. The timeframes for the Commission's part of the annual NZ ETS settings regulatory update under the Act (usually the last quarter of a given year through to the first quarter of the next) and the manner of our engagement have not always been conducive to full participation. This impacts our ability to build ongoing, reciprocal relationships as the foundation for our engagement.

We are therefore developing a different approach going forward. We are committed to developing a multi-year, meaningful, and relevant approach to our engagement that reflects the feedback we've received from Iwi/Māori and leads to enduring, reciprocal relationships. This will better enable the Commission to test our thinking on the NZ ETS and strengthen our ability to provide high quality, independent advice to the Government.

In addition to engagement, the Commission has sought to identify impacts the NZ ETS has on the Māori economy. We discuss this in more detail in Part 2: Moving towards a fair, inclusive, and equitable NZ ETS.

The current role and operation of the NZ ETS

According with the NDC

As the NZ ETS is a key tool in Aotearoa New Zealand's overall strategy to reduce emissions, the Commission is required to align our advice with Government's emissions budgets, the NDC and the 2050 target.

The Commission's 2021 advice on emissions budgets and the NDC showed that significant offshore mitigation is likely required to meet the NDC due to the time required for technological advancement and behaviour change, and the need to balance domestic emissions reductions with managing economic and social disruption. In its emissions reduction plan, the Government confirmed that the NDC will be met by a combination of domestic emissions reductions and removals, and a significant contribution from offshore mitigation.

In 2022, we estimated that if Government achieves its first and second domestic emissions budgets, 99 Mt of CO_2e of offshore mitigation would be needed to meet the NDC (2021-2030).

However, approved overseas units (units from another country's ETS or other foreign mechanism) remain unavailable in Aotearoa New Zealand, and the Government has not yet announced whether it has secured access to any offshore mitigation or whether offshore mitigation will be delivered via the NZ ETS.

In our 2022 advice, we set out two options for successfully according with the NDC:

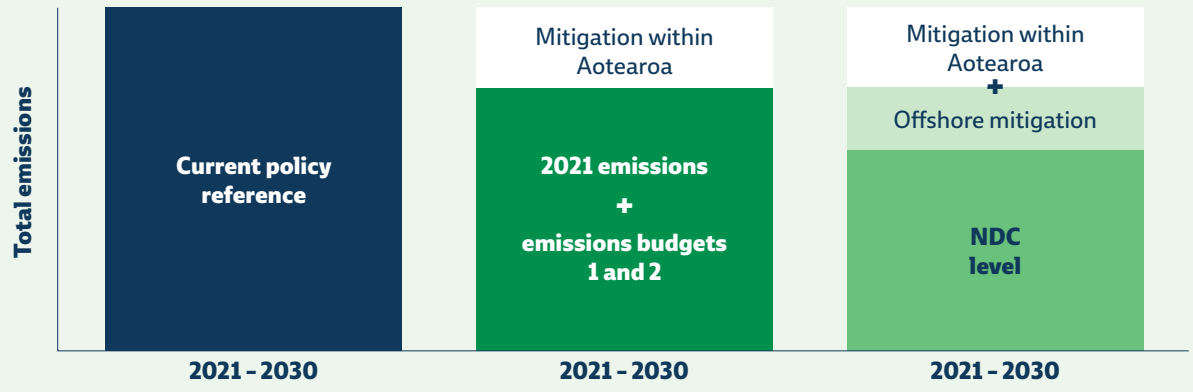
Option 1: The overall unit limit and the limit on units available by auction are set in line with the emissions budgets, which serve as the stepping-stones to the 2050 target and the intended domestic contribution to the NDC. The overseas unit limit is set at zero, recognising that until approved overseas units are made available, the offshore mitigation required to meet the NDC cannot be delivered by the NZ ETS.

Option 2: The overall unit limit and the limit on units available by auction are set in line with the NDC and the approved overseas unit limit is set to deliver offshore mitigation from a point in the future, anticipating approved overseas units becoming available.

In 2022, we set out the reasons for adopting Option 1 which, in summary, were:

- Taking Option 2 in effect pre-empts decisions that must be made by the Government, not the Commission, about how offshore mitigation will be obtained and who bears the costs of purchasing it.
- Pursuing Option 2 could force the Government into decisions around domestic emissions reductions that are inconsistent with its emissions reduction plan or our own advice. This could lead to unnecessarily severe economic and social outcomes.
- We are not able to anticipate when offshore mitigation might become available.
- The NZ ETS is currently a domestic-only scheme.

Figure 2: Illustration of the role of international mitigation in the NDC compared to emissions budgets



We also noted that if we had pursued Option 2 and overseas units are not approved in time, we would in effect be advising that the Government require NZ ETS sectors to reduce emissions in line with meeting the NZ ETS's share of the NDC domestically. We consider that the severe social and economic risks of Option 2 (which we set out in our previous advice) would justify using Option 1 in any event. The risks of attempting to require the NZ ETS to meet the NDC domestically are unchanged from when we produced our report in 2022.

Our previous advice remains therefore that until approved overseas units are available, unit limits should be set in line with the Government's emissions budgets.

However, should the Government obtain access to offshore mitigation, the NZ ETS could be used to link directly to another scheme, and overseas units could substitute for domestic units that would otherwise be auctioned. Government could also purchase overseas units directly and either auction them into the domestic market through the NZ ETS or pass the costs onto taxpayers or selected emitters through mechanisms other than the NZ ETS.

Without confirmation of how or when offshore mitigation will be obtained and whether or how costs will be passed on to domestic emitters, NZ ETS participants face significant uncertainty about the role of the scheme and the potential future impact of overseas units on the price of units.

Additionally, the longer the Government takes to confirm the role of offshore mitigation, the less scope there will be for using the NZ ETS to help deliver it. Under current settings, the units available to auction are expected to decline significantly over the NDC period – from nearly 18 million units per year in 2023 to 3-4 million units by 2030, and to zero in 2035 (based on current industrial allocation legislation, a goal to reduce surplus units by 2030 and the continued need for technical adjustments).

If the Government does not communicate its strategy for acquiring offshore mitigation and clarify the role it expects the NZ ETS to play in contributing to the NDC in the near future, the ability of the NZ ETS to support delivering this offshore mitigation will reduce significantly. Additional offshore mitigation needed to meet the NDC would then likely have to be acquired directly by the Government.

Forestry and the NZ ETS

Our advice is guided by the Climate Change Response Act 2002 and informed by the Government's statements in its emissions reduction plan that it seeks gross emissions reductions as well as forestry removals to meet targets. It is also consistent with our advice in *Ināia tonu nei* that removals from forestry should contribute to budgets and targets, but not displace gross emissions reductions.

However, the NZ ETS in its current form is not set up to deliver that outcome, as it does not distinguish between reductions in gross emissions and removals. This, combined with the relatively low cost of carbon dioxide removals by forests compared to the cost of reducing gross emissions, means that the NZ ETS is likely to continue to drive extensive afforestation rather than gross emissions reductions.

As we highlighted in our previous advice, relying heavily on forestry removals to meet emissions budgets in the short term increases the risk that we will not meet longer-term targets like future emissions budgets, the NDC, or the 2050 target. This is because relying excessively on forestry:

- risks the permanence of those removals to pests, fire, worsening storms like Cyclone Gabrielle, or future policy reversals
- locks in land use to (mostly) exotic forestry and puts pressure on rural communities who thrive on a diversity of land uses
- defers the work of reducing gross emissions to future generations while continuing to build up emissions-intensive infrastructure
- misses the health and economic savings of transitioning away from high emitting activities
- makes it more difficult to sustain low net emissions in the long term, as compensating for ongoing gross emissions requires continuing to convert more and more land into forest.

Under the current structure of the NZ ETS, forestry can displace the gross emissions reduction efforts in other sectors, thus disincentivising the very behaviour the scheme seeks to promote. The NZ ETS structure and operation is not currently consistent with the Government's stated goals for how it wants emissions budgets to be met. This is a major source of uncertainty

and confusion for the market and will make reducing gross emissions more challenging. This uncertainty could delay otherwise cost-effective investments and make emissions reductions more expensive in the future.

If the Government wishes to deliver on its stated goals to achieve gross emissions reductions, the NZ ETS needs to be amended to ensure forestry removals do not displace gross emissions reductions. Any adjustments will need to be made in partnership with Iwi/Māori to ensure no new inequities arise, particularly as significant amounts of Iwi/Māori-collective land are already in the NZ ETS.

This is an area that will be covered in detail in the Commission's advice on the policy direction for the Government's second emissions reduction plan.

The cost of inaction

As stated in the Executive Summary of this report, many of our recommendations in this year's advice reflect the impacts of Government's decisions on the NZ ETS in 2022 and are designed to help bring the NZ ETS back on the path to meeting emissions budgets and the 2050 target.

The purpose of an emissions trading scheme is to put a price on emissions that will incentivise the transition to lower emissions choices and behaviours, and to constrain the feasibility of emitting over time. However, the Government's 2022 decisions to set a relatively high volume of units in the cost containment reserve at a relatively low price increased the likelihood that extra New Zealand Unit (NZU) volumes will come to market and add to the existing surplus. The decision not to make a technical adjustment to unit supply to compensate for over-allocation further exacerbated the problem.

> *Ultimately, any release of reserve units puts us in debt to the future – we are simply borrowing emissions that will need to be paid back later.*

Once units are in the market, they enable increased emissions that can use up current emissions budgets or be carried over for use in future emissions budgets and NDC periods.

Currently, the mechanisms available to the Government to compensate for CCR units released to the market, or for over-allocation of units caused by not making surplus adjustments, are to auction fewer units in future or to increase expectations for future purchasing of offshore mitigation. As no source of offshore mitigation has been identified, the only currently available reliable mechanism is to reduce future auction volumes. Our advice this year reflects this reality, both in terms of our proposed auction volumes, and our recommendations for future price control settings that will reduce the chances of the Government continuing to need to find ways to make up for an unmanaged surplus.

PART 2

Te Kaupapa Hokohoko o Aotearoa: Te Tautika, Te Tautini, Te Taurite – Moving towards a fair, inclusive, and equitable NZ ETS

Our analysis from *Ināia tonu nei* showed that the transition to a low emissions society can be economically achievable and socially acceptable. The emissions budgets recommended by the Commission and set by the Government were specifically designed to be achievable in a manner that considers the wellbeing of people and the environment, and reduces existing inequities.

To achieve this, the transition must be well-paced, well-planned, well-signalled, and co-designed. In this next section we consider how the NZ ETS can align with achieving the emissions budgets, the NDC and the 2050 target while supporting a fair, equitable, and inclusive transition. This includes considering the scale and distribution of potential impacts from a changing emissions price and the Government's responsibility to give effect to the principles of Te Tiriti o Waitangi/ The Treaty of Waitangi.

Overall, households will be better off, and the economy will continue to grow

In *Ināia tonu nei*, our modelling showed that the economy would continue to grow under our recommended emissions budgets. However, we also found that the transition would increase in cost if key measures were not successfully rolled out. The NZ ETS has an important role to play in encouraging and incentivising these low emissions investments and innovations. In many cases, low emissions investments made now will more than pay for themselves in the medium to long-term.

In addition, the cost impact of a higher emissions price should decrease as households and businesses take advantage of low emissions alternatives. Improvements to housing quality and increased energy efficiency standards for appliances will also improve energy-related costs over time.

> *The Government must work in partnership with Iwi/Māori to ensure their diverse voices, perspectives, aspirations, and needs shape advice and decisions on the NZ ETS.*

To ensure all New Zealanders are supported to make the transition, it is important to examine how the NZ ETS interacts with and impacts the wider social and economic environments the scheme sits within.

Iwi/Māori relationships to the NZ ETS

In te ao Māori, the environment is closely interwoven with identity and culture as well as spiritual, physical, and economic wellbeing. The Government must work in partnership with Iwi/Māori to ensure their diverse voices, perspectives, aspirations, and needs shape advice and decisions on the NZ ETS.

The Commission has emphasised that the Government needs to ensure an equitable transition for Iwi/Māori. Through our engagement with Iwi/Māori we heard that there has yet to be Te Tiriti analysis underpinning the NZ ETS. We have also heard concerns regarding the ability for Iwi/Māori to participate in the NZ ETS. Government needs to work with Iwi/Māori to better understand how the design of the scheme compounds historic issues, and what opportunities there are to better enable Iwi/Māori participate in an equitable way.

As part of this the Government must ensure, in a manner consistent with Te Tiriti o Waitangi/The Treaty of Waitangi principles, that it partners with Iwi/Māori in shaping the role the NZ ETS plays in Aotearoa New Zealand's climate change mitigation strategy.

For example, Iwi/Māori have significant interests in decisions around forestry. In 2018, Iwi/Māori were estimated to own $4.3 billion of forestry assets, and to make up around 40% of the forestry workforce. Between 30-40% of plantation forestry is on Iwi/Māori held land.[6] Any amendments to Government's approach to forestry and the NZ ETS must be developed in partnership, including working with Iwi/Māori to understand what impacts the current forestry system is having, and what equitable participation in the scheme could look like in the future.

We reiterate our recommendations from *Ināia tonu nei* that the Government should support a Māori-led approach to understanding and addressing the impacts of the NZ ETS and other climate policies on the Māori economy and Iwi/Māori. This will help identify options that better enable Māori to participate in the NZ ETS equitably and in a way consistent with their aspirations and values.

Iwi/Māori account for a larger share of employment in emissions-intensive industries. In addition, many Iwi/Māori face resource challenges that may generate further inequities and affect their ability to participate in an equitable transition to a low emissions economy. Iwi/Māori-collectives own a significant proportion of primary sector assets and face historic barriers that make updating those assets to facilitate lower emissions activities highly challenging.

Targeted programmes designed in partnership with Iwi/Māori will help address these barriers and reduce our collective emissions.

6. (Ministry for Primary Industries, 2022)

Addressing inequitable impacts on households and the economy

For the NZ ETS to be effective in reducing emissions, the relative price of emissions intensive activities, products, and services must increase in a manner that encourages innovation and behaviour change.

For households and businesses who make the transition to lower emissions, emissions price costs related to the NZ ETS will have less and less impact over time. For example, those who are able to can make use of low emissions modes of transit such as walking, cycling, and taking public transport.

There will be some who have less access to lower emissions alternatives. This next section examines how emissions prices may impact different aspects of Aotearoa New Zealand's society and economy, explores who may need additional support from Government, and what kinds of targeted initiatives could make a difference for New Zealanders as they make the transition to lower emissions alternatives.

Impacts on consumer costs

Consumers experience emissions price-related costs largely indirectly, through changes to the costs of fuel, food, and electricity. These changes also flow through to the costs of food and manufactured goods that depend on these fuels for production and transportation.

In 2022[7], we presented modelling by the Treasury on the impacts of a range of NZ ETS prices on households.

Table 1 below shows the modelled potential impact of a given change in emissions price on households, broken down by household income.

It is difficult to assess how changes to emissions prices would actually impact household costs, as there are many other factors that influence consumer prices. For example, consumer electricity prices are determined by much more than just the cost of generating the electricity. They are also impacted by taxes, retailing costs, and the costs of maintaining electricity lines and the national grid.

This modelling therefore is not a projection of impacts – this would be an inappropriate use of this data. Instead, it can help give us a snapshot of relative potential impacts across a range of emissions prices under this NZ ETS. This helps to identify what groups might be exposed in the short-term by a change in emissions price.

The modelling also only provides a short-term view. The estimates also assume consumer and business behaviour does not change in response to price, low emissions alternatives are not taken up, no additional measures are introduced to manage the impacts, and that the economy remains the same. They do not account for longer term changes to the economy in the transition, or from measures such as improved housing quality, declining cost of electric vehicle ownership, and improved energy efficiency. As a result, the impact of emissions prices will be lessened over time, as consumers and firms take up low carbon technologies and change their behaviour.

Table 1: Modelled change in household spending on fuel and food from a change in emissions price

Median change in household expenditure on fuel (fuel includes petrol, diesel, natural gas and electricity) and food, for a given change in emissions price, assuming no change in technology or behaviour ($/week)[8]					
	Quintile 1 (low-income households)	Quintile 2	Quintile 3 (middle-income households)	Quintile 4	Quintile 5 (high-income households)
For a $50 Change in NZ ETS price	$3.30	$5.00	$5.90	$6.40	$7.30

7. (Te Tai Ōhanga The Treasury, 2022a)
8. It is difficult to assess how the NZ ETS flows through to household costs with accuracy. In order to isolate the impact, the Treasury's Tax and Welfare Analysis Model assumes a 100% flow-through of emissions prices to consumers. This means that, for example, there is no technology or behaviour change response assumed to respond to price. This table should therefore not be taken as our assessment of actual household flow-through costs.

For this modelling we have assumed 100% flow-through of costs to consumers, rounded to the nearest 10 cents.

As consumers switch to lower emissions alternatives, they will reduce their exposure to the emissions prices and will experience reduced costs. However, it is important that Government implement policies designed to address any inequitable impacts of emissions prices, for example through the *Equitable Transition Strategy* it is currently progressing.

While that strategy remains in development, there are multiple options for how targeted support could be provided using levers and funding sources already available to Government. Recent initiatives like the COVID-19 support payments and half-price public transport show that Government can act fast to counter cost of living impacts. The NZ ETS itself generates revenue that could be used to help fund action to support households in need.

The Government could also support consumers in the transition through continued implementation of recommendations from the Electricity Price Review, timely implementation of updates to the Building Code, and by ensuring the regulatory regime can deliver abundant, affordable, and reliable low emissions electricity to support electrification of different parts of the economy.

Government leadership and cross-sector collaboration will be important to support the development of robust low emissions fuel supply chains, and to ensure measures are put in place to develop the skills and capabilities required to identify and deliver these emissions reduction opportunities at pace.

Ultimately, a fair, inclusive, and equitable transition means that issues of social and economic equity and tackling climate change must be pursued in parallel. One set of issues cannot be used to justify inaction in the other. In line with our previous NZ ETS settings advice, we conclude the price control settings are not the appropriate tool for addressing domestic distributional impacts or other equity considerations in the transition, as the Government can act on climate change and manage impacts to households or businesses through policies outside the NZ ETS.

Businesses and industries

Rising emissions prices are likely to affect large and small businesses differently. The Ministry of Business, Innovation and Employment's 2021 *Business Operations Survey* indicates that larger businesses are more likely to make climate change-related investments over the next five years. Larger firms typically have more resources and capability to respond to regulatory requirements and are in a better financial position to invest in low emissions technologies. Smaller firms are more likely than larger businesses to report that they lack the time, technical, and organisational resources to implement measures which might make them more resilient to climate change.

For emissions-intensive and trade-exposed (EITE) businesses and industries, any potential emissions leakage risk – the possibility that a rising emissions price could impact competitiveness and drive these firms to move overseas – is currently being managed through industrial allocation. This substantially reduces the cost of the NZ ETS for these businesses and therefore the risk of slowdown of the economy and impacts on regional employment.

Although many businesses are not NZ ETS participants themselves, they indirectly interact with the NZ ETS. For instance, when businesses pay for petrol at the pump, generate or use electricity, or purchase goods, a portion of their costs are due to emissions prices.

> *Ultimately, a fair, inclusive, and equitable transition means that issues of social and economic equity and tackling climate change must be pursued in parallel. One set of issues cannot be used to justify inaction in the other.*

In the medium to long-term, the NZ ETS will help drive more efficient and competitive businesses. This will be especially important on the global stage as the international economy transitions to lower emissions. Many national companies have an international supply chain. International trends in leading economies around expectations for disclosing emissions and taking climate action throughout the value-chain will therefore impact businesses at home. To remain competitive in the future, Aotearoa New Zealand's businesses need to be making changes to reduce their emissions now. The NZ ETS provides a near market-wide incentive to support them to make the shift.

Generally, the effect of emissions pricing will be more manageable for less emissions-intensive businesses, and a properly functioning NZ ETS may enable more opportunities for these and other (new) low emissions businesses.

Sectors and regions

Change in the relative price of emissions driven by the NZ ETS will affect different sectors and regions in different ways. The nature of these impacts is influenced by the make-up of the local economy and workforce. It is important that Government ensure the outcomes of these impacts are not inequitable.

Some regions have a higher concentration of emissions-intensive industries that are NZ ETS participants with surrender obligations, particularly Southland, Taranaki, and the West Coast. In contrast, employment in more urban areas is often concentrated around low emissions intensity industries like service sectors.

Some regions, such as Tairāwhiti, have significant forestry industry, much of which is voluntarily registered into the scheme to earn NZUs for the carbon sequestered from their forests.

> *The nature of these impacts is influenced by the make-up of the local economy and workforce. It is important that Government ensure the outcomes of these impacts are not inequitable.*

In addition, many areas across the North Island are currently experiencing hardship and loss in the aftermath of Cyclone Gabrielle, with the long-term impact yet to emerge. The consequences of the cyclone and recovery efforts may make emissions price impacts more challenging to navigate for some regions.

Through its *Equitable Transition Strategy*, the Government has the opportunity to develop regional and sectoral transition plans which consider the localised impact of emissions pricing and regulatory policies as well as wider global climate policy trends. Several government plans or initiatives are underway relating to reducing emissions and increasing removals – such as the Government's *Forestry and Wood Processing Industry Transformation Plan*[9] to support the bioeconomy, and the Government *Investment in Decarbonising Industry* (GIDI) fund. Considering these together will ensure cohesion and avoid conflicting signals to sectors and regions about the enduring role of NZ ETS over time.

9. (Te Ara Whakahou – Ahumahi Ngahere Forestry and Wood Processing Industry Transformation Plan, 2022)

PART 3

Te Herenga Utu – Unit limits

In this section we provide advice on the unit limits for the NZ ETS. The purpose of the NZ ETS unit limits is to cap the emissions allowed by the scheme in accordance with Aotearoa New Zealand's emissions budgets, the NDC and the 2050 target. Capping emissions in the scheme is crucial for enabling the NZ ETS to help to achieve these targets.

The structure for the unit limits was introduced by the NZ ETS reforms passed in 2020. The Act requires annual updates to three categories of unit limits across a five-year window:

- a limit on the New Zealand units (NZUs) available by auction
- a limit on approved overseas units
- an overall limit on units.

The different unit limits and how they relate to each other are shown in **Figure 3**.

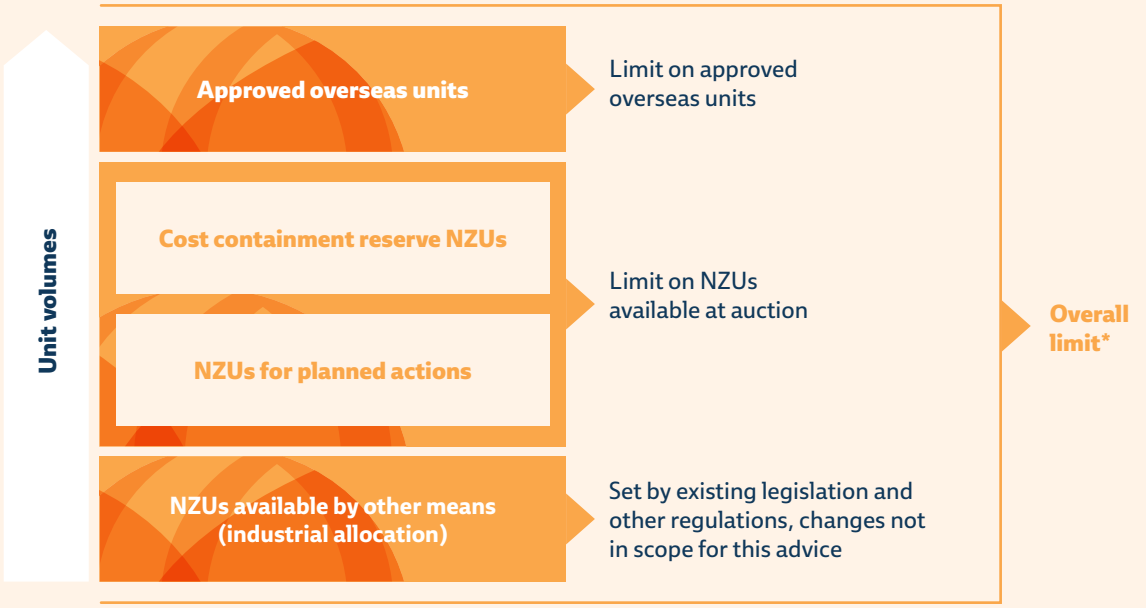
In the NZ ETS, post-1989 forestry units – units that can be supplied for the emissions absorbed by forests – sit outside of the unit limit regulations. However, because post-1989 forestry participation in the NZ ETS is voluntary, an estimate of the forests that are registered within the NZ ETS plays an initial role in setting the proportion of the emissions budget allocated to the NZ ETS.

Method for determining the unit limits

For the NZ ETS to be an effective tool in reducing emissions, it is important that participants are well-informed and have reliable forward information about the scheme's settings.

Therefore, the first two years of the five-year settings period can only be amended when specific conditions are met, like the triggering of price controls or a *force majeure* event. This helps to provide stability and predictability for NZ ETS participants.

Figure 3 NZ ETS unit limits and their components



*The overall limit constrains auctioned units and international units, but industrial allocation can cause the overall limit to be breached – as industrial allocation is adjusted for production each year and must accord with the regulated rates. The overall limit also does not apply to forestry units.

As those conditions have not occurred, we are only recommending changes to unit limits from 2026.

Because there is a possibility of price controls being triggered at the planned 14 June 2023 auction, or a separate condition occurring after the release of this report, we have also provided the Government with advice on our methodology for determining settings if a review of all five years of the advice window is allowed. While this event has not occurred, we are supplying this advice for transparency and to ensure Government has all the information it requires from the Commission to make informed decisions. These figures assume that the CCR is triggered, and the full 8 million reserve units are released.

In our advice last year, we utilised a seven-step method for determining the unit volumes. We have used the same approach to developing this year's advice. We have also identified two additional sub-steps within this method, set out in bold below[10]:

1. Accord with the domestic emissions budgets, the NDC and the 2050 target
2. Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors
3. Make technical adjustments
4. Account for free NZU allocation volumes
5. Set reduction volume to address unit surplus – **including splitting into sub-steps relating to the base surplus (5a) and adjustments for surplus discrepancies (5b) (discussed later)**
6. Set approved overseas unit limit
7. Calculate the auction volume and assess sensitivity and risks – **including splitting into two sub-steps relating to adjusting for CCR releases (7a) as well as overall auction volumes (7b) (discussed later)**

10. This builds on the six-step method previously developed by the Ministry for the Environment. Step 1 has been added to better reflect the requirements of the Act.

The remainder of Part 3 sets out each of these steps, summarising the analysis undertaken and the Commission's conclusion or recommendations for each. These seven steps lead to the figures for our proposed limits on the annual NZUs planned for auction (the annual auction volume) and on approved overseas units for each year from 2024 to 2028.

The last component of our advice on unit limits – the volume of NZUs in the cost containment reserve, which when combined with the annual auction volume results in the limit on NZUs available by auction – is considered in Part 4, Price Control Settings.

The consolidated recommendations for unit limits, including the overall limit and a comparison with current settings, are presented in Part 7.

Step 1: Accord unit limits with emissions budgets, the NDC and the 2050 target

The first step for advising on the unit supply volumes in the NZ ETS is determining the most appropriate way to accord unit limits with Aotearoa New Zealand's emissions budgets, the NDC and the 2050 target. Once this is determined, the unit limit volumes can be calculated in alignment with achieving these targets.

Our previous advice remains that until approved overseas units are available, unit limits should be set in line with the Government's emissions budgets, which are the stepping-stones to the 2050 target and the intended domestic contribution to the NDC. This approach recognises that while approved overseas units remain unavailable, the offshore mitigation required to meet the NDC cannot be delivered by the NZ ETS.

The emission budgets incorporate the Commission's analysis of existing technology and anticipated technological developments.

Analysis and findings

We have made no changes to our previous findings as no new data or relevant policy changes have emerged.

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

This step is about how Aotearoa New Zealand's emissions reduction goals are shared between NZ ETS and non-NZ ETS sectors. We refer to this as allocating the emissions budget, as it involves determining what share of the total emissions budget volume will be used up by emissions from sectors currently outside the NZ ETS, and what share is therefore available for NZ ETS sectors.

This can also be described as "setting the cap" for the NZ ETS, with the "cap" referring to the targeted level of emissions for sectors covered by the NZ ETS.

We base this allocation on the expected emissions levels implied by the sector sub-targets of the emissions reduction plan.

Analysis and findings

Since our previous advice, there has been a large increase in the areas of post-1989 forest registered into the NZ ETS – ~229,000ha according to data received in December 2022. This increases the area of post-1989 forest in the scheme by approximately 69%.

This affects unit limits as it increases the estimate from our 2022 advice of the amount of post-1989 forests that would earn units for emissions removals within the NZ ETS. Forestry removals that contribute to net emissions targets but sit outside the NZ ETS are adjusted for to ensure the settings align with net budgets. As less forestry is now outside the scheme, we have reduced our previous adjustment significantly. We have updated our previous calculations in Step 2 based on this new information which reduces our assessment of the NZ ETS emissions budget, from 1.7 million units in 2024 to 1.5 million units in 2028.

The large increase in forestry planting and registrations could have a more sizeable effect on the magnitude of unit allocations and the unit surplus in future. We discuss the risks to gross emissions reductions presented by the trend of increased planting of new forests in the introduction to this report. We also discussed this issue in our 2022 NZ ETS settings advice.

Step 3: Technical adjustments

In this step we identify any differences between past emissions estimates in the NZ ETS and actual levels from Aotearoa New Zealand's National Greenhouse Gas (GHG) Inventory and Aotearoa New Zealand's target accounting. We also investigate possible underlying causes, and whether any identified differences justify adjustments to unit volumes.

This technical adjustment is an important part of the analytical process as emissions budgets are based on the GHG Inventory, which will be used to measure progress in meeting the budgets. For the NZ ETS to be a useful tool in meeting emissions budgets, it must therefore remain in alignment with the national inventory.

Analysis and findings

In 2022 we identified differences between the GHG Inventory and emissions reported in the NZ ETS which amounted to between 1.3-1.6 million units per year over the 2023-2027 period. We advised these differences, a cumulative 7 million units, be accounted for through a technical adjustment. The Government chose not to account for our proposed technical adjustments because the source of the differences is not yet fully understood.

The Government has announced that it wishes to continue investigating the cause of these issues. While the cause is yet to be determined, we are clear on the direction and size of this difference. We are also clear about the overall impact, which is that it contributes to the NZ ETS being oversupplied. If the adjustment is not made and auctioned units are not reduced, the risk of the NZ ETS being out of line with emissions budgets increases, as does the risk emissions targets will not be met.

As no further information has become available, and no other technical adjustments have been identified in 2023, our advice from 2022 remains the same.

Step 4: Account for industrial free allocation

Industrial free allocation refers to the amount of NZUs provided by the Government for free to entities whose activities are both emissions-intensive and trade-exposed (EITE). These units use up part of the emissions budget available to the NZ ETS and reduce the total amount of NZUs that the Government can sell at auction. The amount of NZUs given out each year via industrial free allocation is not determined as part of the annual process for setting unit limits. Instead, the rules governing industrial free allocation are in separate provisions of the Act and associated regulations, and businesses must apply for their allocation in the previous year.[11]

For this step, we forecast industrial free allocation volumes based on the existing rules and the likely production levels of eligible activities over the next five years.

Analysis and findings

We have an additional year of data for how many units have been allocated to industrial free allocation recipients in 2021, which allows us to update our projection of future industrial allocations. This has minor impacts, decreasing our projection of industrial allocation volumes by 0.2 million units each year.

We will update our projections over time if facilities eligible for industrial free allocation shut down or signal changes in production. In addition, policy changes could affect our forecasts in the future (see Step 7 below for discussion on future developments affecting final auction volume calculations).

11. The framework for industrial free allocation is provided in Part 4, Subpart 2 of the Climate Change Response Act 2002 and the Climate Change (Eligible Industrial Activities) Regulations 2010.

Step 5: Set the unit surplus reduction volume

In this step, we estimate how many of the current units in the NZ ETS are surplus – those that risk enabling emissions to exceed emissions budgets – and how to address this risk over time.

We have categorised this into:

- **Step 5a:** our estimate of the base surplus of units held in private accounts and how to address it
- **Step 5b (new):** a resolution of surplus discrepancies arising from limitations in the ability to update unit volumes within the 5-year rolling process, and the additional surplus created from technical adjustments not being made in the previous year.

Analysis and findings

Step 5a: Base surplus

In June 2022 we calculated that of the 144 million NZUs currently in the NZ ETS, around 49 million of those were surplus units, with a possible range of 33-66 million units. Our 2022 advice recommended that auction volumes be reduced consistent with reducing this estimated 49 million base surplus to zero by 2030.

Our estimate was based on three categories of units that may not be available to the market:

- units held for post-1989 forest harvest liabilities
- units held for hedging purposes by emitters, and
- pre-1990 forest allocation units held long term.

While we do not have new data on emissions returns to update this year's surplus estimate, we do expect new data to become available before our advice is delivered in 2024. We therefore continue to use our 2022 central estimate of the surplus in our calculations.

The Commission has heard and considered concerns that the actual size of the surplus is not known, and that therefore more certainty is required before advising that auction volumes be reduced as we recommend.

However, our advice remains unchanged from last year for several reasons. The uncertainty goes both ways; the true surplus could be smaller than our estimate, but it could be also larger. It would be imprudent to not manage this risk arising from the surplus only because the exact figure is uncertain. In addition, some of the uncertainty relates to the estimate of units held by post-1989 foresters for harvest liabilities. This is because it is uncertain whether they will harvest, and if they do, when they will sell units. This uncertainty cannot be resolved through further analysis because it is inherent under current NZ ETS forestry rules.

The surplus poses a significant risk to meeting emissions budgets. Our analytical approach assumes adaptive management can be used to reduce the surplus, which accounts for uncertainty. For example, even if the liquid surplus was at the low end of our estimate (33 million), the total surplus reduction volume proposed to 2026 is less than this. This means that if it becomes clear that the surplus is less than our central estimate of 49 million, there is time to adjust the settings in response before the surplus is exhausted.

In Step 2, we note that the surplus may grow in the future due to changes in forestry. An increase in pre-existing post-1989 forests registered has the potential to significantly increase the surplus if these forests are not harvested. However, we do not currently have all the data necessary to quantify this effect into our estimate of the surplus. We expect to consider this issue again in our 2024 advice.

Step 5b: Adjusting for discrepancies

This year, our recommended unit limits include volume adjustments to account for discrepancies between the GHG Inventory and the NZ ETS that were identified in our 2022 advice, as well as new information about Industrial free allocation volumes and post-1989 forests registered in the NZ ETS. These factors together necessitate a reduction of auction volumes in future years to ensure the NZ ETS remains aligned with emissions budgets. We have incorporated these adjustments into the overall surplus adjustments, with the goal of drawing down extra units in the market by 2030. This now results in a lower auction volume in future years than in last year's advice.

On the technical adjustment that we recommended in 2022, the discrepancy adjustment here accounts for the adjustment not having been made in the 2022 settings. If the Government continues to not make the

technical adjustment in its volume settings, the need for these discrepancy adjustments will accumulate further over time and there will be a higher risk that emissions budgets are not met.

The timeframe our approach uses to recover these additional units is different from the one for recovering the release of units from the CCR (discussed in Step 7). This is because there is an ongoing need for these types of surplus volume adjustments which are themselves subject to uncertainty. We will evaluate these adjustments each year as new data becomes available.

This approach is consistent with the adaptive management rationale for adopting the rolling five-year approach to updating NZ ETS settings each year. We have applied an adjustment of 8.8 million units, covering discrepancies from years 2023-2025, over years 2026-2030. The discrepancy adjustment accounts for:

- 4.4 million units emerging from Step 4 technical adjustments that were not made by Government when reaching their final unit auction volumes for 2023-2025
- 5.0 million units from updated 2022 data regarding new forestry registrations, which impacts how we allocate emissions budgets between NZ ETS and non-NZ ETS sectors
- -0.6 million units from updated forecasts of industrial free allocation.

The table below (**Table 2**) shows how the sum of the discrepancies for years 2023-2025 could be applied over future years from 2026-2030.

Example of how to apply the surplus discrepancy if conditions allow for amendments from 2024

As stated above, our advice only covers discrepancy adjustments from 2026. However, as there is a possibility of the CCR being triggered at the June 2023 auction, we have included below an example of our approach to addressing the surplus discrepancy should conditions allow for changes to be made from 2024.

Under those conditions, we consider the Government could still apply a discrepancy adjustment. This would only contain differences in unit volumes related to 2023 (2.9 million units) and be applied over years 2024-2030. This step does not include consideration of units that could be released from the CCR; this is discussed later in Step 7.

The discrepancy adjustment for 2023 accounts for:

- 1.6 million units emerging from Step 4 technical adjustments that were not made by Government when reaching their final unit auction volumes for 2023
- 1.5 million units from updated 2022 data regarding new forestry registrations, which impacts how we allocate emissions budgets between NZ ETS and non-NZ ETS sectors
- -0.2 million units from updated forecasts of industrial free allocation using data from allocation volume decisions 2021.

The table below (**Table 3**) shows how to apply the sum of the discrepancies for years 2023 over future years from 2024-2030.

Table 2 2023-2025 volume discrepancy adjustments over 2026-2030

	Fixed and cannot be changed		Recommended adjustments			For visibility	
	2024	2025	2026	2027	2028	2029	2030
Surplus discrepancy adjustments (NZU m)	-	-	2.2	2.0	1.7	1.6	1.3

EXAMPLE

Table 3 2023 volume discrepancy adjustments over 2024-2030

	Example adjustments with changes allowed from 2024					For visibility	
	2024	2025	2026	2027	2028	2029	2030
Surplus discrepancy adjustments (NZU m)	0.6	0.5	0.5	0.4	0.4	0.3	0.3

Step 6: Setting the approved overseas unit limit

As discussed in Step 1, approved overseas units are currently unavailable in Aotearoa New Zealand. This puts Aotearoa New Zealand's ability to meet the NDC at risk.

Analysis and findings

There are currently no approved overseas units in the NZ ETS, and no clarity as to when they will be available. In this step we have therefore calculated the limit on approved overseas units as zero. Our reasoning, including current circumstances, is set out in detail in Steps 1 and 6 of our 2022 NZ ETS settings advice.

Step 7: Calculate the auction volume and assess risks

This final step uses the outcomes of the previous steps to identify the proposed annual auction volumes for the 2024-2028 period. These proposed annual auction volumes are a significant part of what informs the Commission's final recommendation for the limit on NZUs available by auction and the overall unit limit.

This step also involves assessing the sensitivity and risks associated with these volumes. Sensitivity testing from our 2022 advice showed that decisions made in Step 2, on allocating the NZ ETS emissions budget based on the demonstration path, and Step 6, on estimating the number of surplus units, both had significant impacts on the outcome of annual auction volumes.

We also consider the risks associated with the auction volumes, particularly related to the NZ ETS's ability to help deliver emissions budgets. We assessed that a significant risk to meeting emissions budgets was the potential release of units from the CCR. We have therefore added a sub-step, 7a, to consider how to account for any reserve units released within final auction volumes.

Analysis and findings

Step 7a: Adjusting for units released from the cost containment reserve

The release of units from the CCR increases the surplus of units in the market, further increasing risks that the NZ ETS will allow emissions above emissions budgets. The Government can compensate for such releases by reducing the number of units auctioned into the market in the future.

Although the CCR has not been triggered in 2023, there is a possibility it will be in future auctions. We have therefore added Sub-step 7a which allows for specific and separate consideration of the potential impact of a released CCR volume.

Example of how to apply adjustments for the CCR volume if conditions allow for amendments from 2024

Below we have shown the analysis used to determine adjustments for the CCR volume across three different timeframes: to 2025, 2028, or 2030. We have assessed these options based on release of the full 8 million CCR volume, but this same methodology can be applied to any actual volume released.

We considered the overall impacts of these options on auction volumes in **Table 4** against the same four criteria:

- **Meeting emissions budgets:** manages risks that surplus units enable emissions exceeding emissions budgets – we consider this criterion to be to be particularly important
- **Liquidity:** manages risks to liquidity and market cornering due to limited units available for purchase
- **Regulatory predictability:** supports a predictable, consistent rules-based framework for operating the NZ ETS
- **Resilience to uncertainty:** manages risks to uncertainty and allows flexibility in dealing with possible alternative future outcomes.

Table 4 Options assessment for CCR adjustment timeline (example figures based on 8m CCR volume release)

In our 2022 advice, when we assessed the surplus, we included units that were released from the CCR at auctions in 2022. The surplus reduction step we made last year would see these units removed by 2030. Therefore, in the assessment table below the 'status quo' method would imply making an adjustment to any CCR units released by 2030.

Criteria	A: adjust by 2030	B: adjust by 2028	C: adjust by 2025 (preferred)
Meeting emissions budgets	o Increases risk units will cause emissions to exceed budgets 1 and 2.	+ Lower risk of exceeding budgets 1 and 2 than by 2030 but greater risk than by 2025.	++ Adjusts for volume entirely by the end of budget 1, decreasing risk in budget 2.
Liquidity	o Auction volume is 0.8m and 1.5m lower than otherwise over 2024-2030. The risk to liquidity increases in later years as the overall NZ ETS budget decreases.	o Auction volume is between 1.3m-1.9m lower over 2024-2028. No reduction in auction volume for 2029 and 2030.	+ Auction volume is between 3.8-4.2m less for 2024 and 2025. No reduction in auction volume for 2026-2030.
Regulatory predictability	o Consistent with how other surplus units are treated.	x Different approach to reduce base surplus by 2030. Auction volumes decline steadily over time.	xx Different approach to reduce base surplus by 2030. Results in auction volumes going down significantly from status quo in 2024 & 2025 but then potential for an increase in 2026. Not in line with messaging that auction volumes will decrease steadily over time.
Resilience to uncertainty	o Requires the removal of auction units until 2030 with increasing uncertainty enough auctioned units will be available	+ Allows slightly more flexibility to adjust auction volumes in 2028 and 2029 than if we only adjusted by 2030.	++ Allows increased flexibility to adjust auction volumes throughout all budget 2.

o Similar to status quo
++ Much better than status quo
xx Much worse than status quo
+ Better than status quo
x Worse than status quo

We conclude that if amendments across all five years of the settings are possible, the most appropriate option available to Government is to ensure any units released from the CCR are adjusted for by 2025. We find reducing auctions volumes over the next two years to be the most advantageous option because:

- the risks these units present to achieving emissions budgets are significant, and should be managed as soon as possible, not continue to be carried over to future years
- this has the additional benefit of adjusting volumes within the current budget period, reducing the risk that these units carry over to subsequent budget periods.
- there is more room to adjust for this volume within the NZ ETS budget in the earlier years of the 2024 and 2025 period, as within the current NZ ETS architecture auction volumes decrease significantly by 2030. This results in less flexibility for auction volumes to be adjusted in later years, which is likely to be a tool that continues to be needed to address risks like a potential growing surplus from forestry units.

While any future release of the CCR will require unique consideration, we anticipate continuing to use the criteria above to inform our advice.

Step 7b: Calculate the auction volume and assess risks

The final unit limit recommendations as required under the Act, including additional CCR volumes, are summarised in Part 5: Final Recommendations.

Taken together, these steps are followed to reach our final proposed annual auction volumes. Our proposed volumes reflect restrictions from the Act that do not allow amendments to years 2024 and 2025. These years therefore remain consistent with previous assumptions used to reach the current settings.

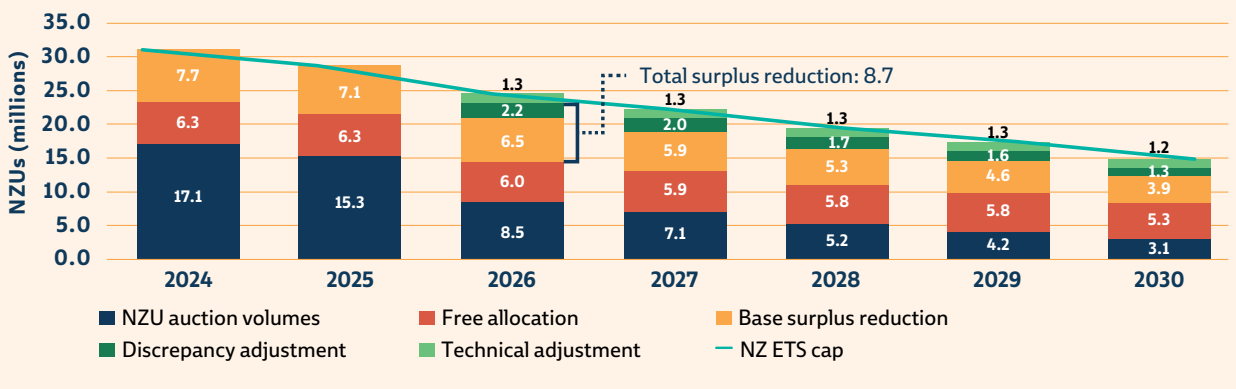
Example of final auction volumes if conditions allow for amendments from 2024

As there is a possibility the CCR will be triggered in the June 2023 auction, we have provided an example of how auction volumes could be calculated if years 2024 and 2025 are able to be amended (**Table 6**). This example is intended to demonstrate the methodology we would advise the Government to apply in that situation. The method is based on the release of all 8 million units from the CCR as a means of showing our thinking, but if fewer units were released, the calculations would need to be adjusted accordingly.

Table 5 Proposed annual auction volumes within the NZ ETS cap – summary of calculations from applying the seven-step method

	Cannot be changed		Updated calculations to inform recommendations				For visibility	
Units (millions)	**2024**	**2025**	**2026**	**2027**	**2028**	**Total**	**2029**	**2030**
Step 1: Accord with emissions budgets and NDC	72.1	69.7	66.5	63.9	60.7	332.9	58.3	55.4
Step 2: Allocate the emissions budget to NZ ETS and non-NZ ETS sectors	-41.0	-41.0	-42.0	-41.6	-41.3	-206.9	-40.9	-40.5
Total NZ ETS share of emission budget (cap)	**31.1**	**28.7**	**24.5**	**22.2**	**19.4**	**125.9**	**17.4**	**14.9**
Step 3: Technical adjustments	-	-	-1.3	-1.3	-1.3	-3.9	-1.3	-1.2
Step 4: Free allocation	-6.3	-6.3	-6.0	-5.9	-5.8	-30.4	-5.8	-5.3
Step 5: Surplus reduction	-7.7	-7.1	-6.5	-5.9	-5.3	-32.5	-4.6	-3.9
5b: Discrepancy adjustment	-	-	-2.2	-2.0	-1.7	-5.9	-1.6	-1.3
Step 6: Overseas unit limit	-	-	-	-	-	-	-	-
Step 7a: Assess CCR release volume	-	-	-	-	-	-	-	-
Step 7b: Calculate final auction volumes	**17.1**	**15.3**	**8.5**	**7.1**	**5.2**	**53.2**	**4.2**	**3.1**

Figure 4 Proposed annual auction volumes within the NZ ETS cap

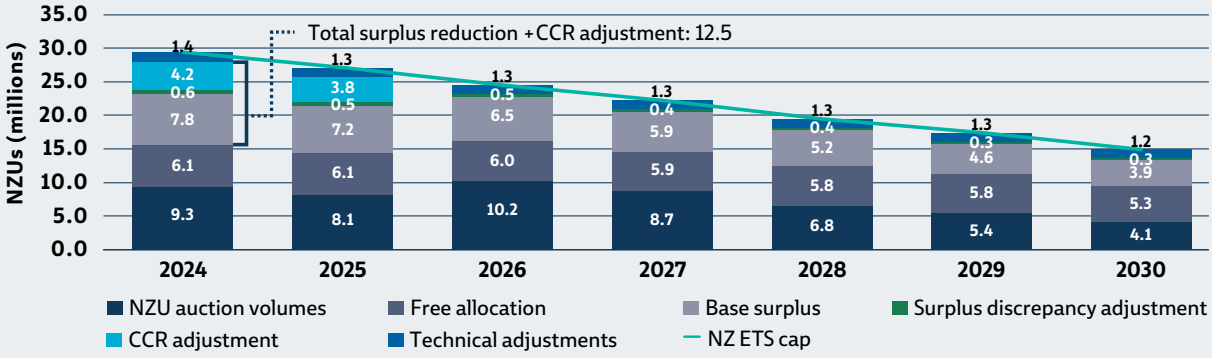


EXAMPLE

Table 6 Example of how annual auction volumes within the NZ ETS cap could change if amending all years of settings – based on summary of calculations from applying the seven-step method

	Example calculations with change from 2024						For visibility	
	2024	2025	2026	2027	2028	Total	2029	2030
Step 1: Accord with emissions budgets and NDC	72.1	69.7	66.5	63.9	60.7	332.9	58.3	55.4
Step 2: Allocate the emissions budget to NZ ETS and non-NZ ETS sectors	-42.7	-42.6	-42.0	-41.6	-41.3	-210.3	-40.9	-40.5
Total NZ ETS share of emission budget (cap)	**29.4**	**27.1**	**24.5**	**22.2**	**19.4**	**122.6**	**17.4**	**14.9**
Step 3: Technical adjustments	-1.4	-1.3	-1.3	-1.3	-1.3	-6.7	-1.3	-1.2
Step 4: Free allocation	-6.1	-6.1	-6.0	-5.9	-5.8	-30.0	-5.8	-5.3
Step 5: Surplus reduction	-7.7	-7.1	-6.5	-5.9	-5.3	-32.5	-4.6	-3.9
5b: Discrepancy adjustment	-0.6	-0.5	-0.5	-0.4	-0.4	-2.3	-0.3	-0.3
Step 6: Overseas unit limit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Step 7a: Assess CCR release volume (example of 8 million units)	-4.2	-3.8	0.0	0.0	0.0	-8.0	0.0	0.0
Step 7b: Calculate final auction volumes	**9.4**	**8.2**	**10.2**	**8.7**	**6.6**	**43.1**	**5.4**	**4.1**

Figure 5 Example annual auction volumes based on changes from 2024 and adjustment for an 8m unit CCR release



The example of removing the full 8 million units in the CCR in by 2025 would significantly reduce the available annual auction volume in 2024 and 2025. As shown in **Figure 5** below, from 2026 the annual auction volume increases because it is no longer removing CCR units which otherwise would have been auctioned.

Sensitivity risks and future developments in auction volumes

At current settings, with no changes able to be made until 2026, our proposed auction volumes are set at 17.1 million in 2024 but would decline to 3.1 million by 2030.

In the example above, we show what auction volumes would look like were the CCR to be triggered with a release of all 8 million reserve units, thus meeting the conditions which allow changing settings immediately from 2024. Under these circumstances, auction volumes would reduce to 9.3 million in 2024, but decline to 4.1 million by 2030.

Final auction volumes are subject to significant adjustments if there are changes to inputs in previous steps of the process. This could result from a range of reasons including the gathering of new data to refine forecasts or amendments to legislation. Our new sub-

step, 5b, helps us manage these changes and avoid future over or undersupply of units.

Here we have considered the largest sensitivities, risks, and factors most likely to cause changes within the previous steps and discussed them below.

Step 1: Accord unit limits with emissions budgets, the NDC and the 2050 target: Our NZ ETS advice is currently based on setting units in line with domestic emissions budgets. If the Government decided to further align the NZ ETS to the NDC budget without access to additional international units, this would cause a significant drop in available units. However, we judge this scenario to be highly unlikely. The Government has not communicated a decision in its first emissions reduction plan to achieve domestic emissions budgets sooner than is required by the Act.

Step 2: Allocate the emissions budget to NZ ETS and non-NZ ETS sectors: Proposed allocation of the NZ ETS emissions budget was updated this year due to an increase in registration of previously planted post-1989 forestry. However, we do not expect such significant changes based on forestry to continue in the future. The potential for already planted forests to register in the NZ ETS will decrease, and future estimations already assume that all newly planted forests and their associated emissions removals will fall within the NZ ETS budget. Therefore, even if there are substantially more forests planted than currently is predicted, the NZ ETS budget will remain stable.

Another factor that plays a significant role in setting the initial NZ ETS emissions budget is the exclusion of the agricultural sector, which accounts for over 50% of gross emissions in Aotearoa New Zealand. However, even if there are significant changes to emissions within the agricultural sector, a significant change to the budget allocated to the NZ ETS is unlikely. This is due to the way that the NZ ETS budget is set based on the share of effort each sector plays in meeting New Zealand's emissions reduction targets, rather than evolving emissions projections. This was discussed in detail in our 2022 advice on the NZ ETS settings.

Step 3: Technical adjustments: Technical adjustments represent a relatively small proportion (approximately 5%) of the NZ ETS budget. However, if the underlying issue is not addressed it will continue to contribute to oversupply and will need to be addressed through an increasingly larger surplus adjustment, resulting in ever lower auction volumes.

Step 4: Account for industrial free allocation: As emissions budgets tighten, industrial free allocation becomes a larger proportion of the NZ ETS's share of the emissions budget, leading to significant reductions in planned auction volumes. Our industrial free allocation forecasts are based on current levels of assistance, allocative baselines, and the electricity allocation factor. The *Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill* is currently before the House and if passed will lead to the levels of industrial free allocation changing. In this advice we have not tried to estimate the potential future impact of the Bill, as it is not yet law. If it is passed there will be a significant technical exercise for the Government to do before the impact on allocation volumes can be quantified.

Step 5: Set the unit surplus reduction volume: In 2022, we estimated that around 49 million units within the unit stockpile are surplus. Were this to increase further, for example through a continued increase in unharvested post-1989 forestry or a continued lack of accounting for technical adjustments, the ability to recover this surplus through a future reduction in auction volumes will become extremely limited.

Step 6: Setting the approved overseas unit limit: The Government's decisions about offshore mitigation and whether this will be managed by selling directly into the NZ ETS or used for additional government auction volume will significantly impact the volume of units available to participants in the future. The Government needs to obtain access to offshore mitigation to meet the international component of the NDC. As discussed in our 2022 advice, the Government will then need to make decisions about the role of the NZ ETS in sourcing and/or funding this mitigation. Under section 30IA of the Act, at the end of an emissions budget period Government must back units from the CCR that cause emissions budgets to be exceeded, for example through offshore mitigation. This is a solution with significant challenges, however, as relying on purchase of offshore mitigation will become increasingly costly.

PART 4

Te Ritenga Taura-Utu – Price control settings

The Act prescribes the price control settings as consisting of:

- **an auction reserve price (ARP), a minimum price at which units may be sold by auction, which may be zero**
- **a cost containment reserve (CCR), a reserve amount of New Zealand Units (NZUs) that is to be released for sale at auction, if a trigger price is reached or exceeded by bidding at auction.**

In addition to these two price control mechanisms there is a confidential reserve price. The confidential reserve price prevents the Government from selling units significantly below their price on the secondary market.[12] The Commission does not provide any advice on this setting.

The purpose of these controls is to manage the risk of the NZU price at auction being out of line with what is necessary to meet emissions budgets. They are not intended to guide or set the price of units at auction.

To remain in line with emissions reduction targets, it is important to consider the NZ ETS as a system, with each limit or setting contributing to a broader market environment. This is especially true with price controls – changing either the auction reserve or cost containment reserve price triggers materially shifts the nature of the price corridor and impacts the appropriate associated unit volumes. We have therefore developed our advice as a cohesive package and have noted how conclusions and recommendations correspond with one another to help the Government avoid unintended consequences as it makes its decisions.

This part of the report contains the Commission's analysis and recommendations for updating the price control settings for the 2024-2028 period.

12. Section 30GA (2A)(b)(ii) of the Act.

The role of the cost containment reserve

The cost containment reserve is a supply of NZUs that only become available for sale if the auction clearing price meets or exceeds a specified trigger price.

In its 2022 decision on NZ ETS settings, the Government stated its concern about avoiding unacceptable prices and mitigating potential impacts of the NZ ETS price on New Zealanders. We share this concern, as managing inequitable impacts is highly important. However, if the Government wants the NZ ETS to play a significant role in Aotearoa New Zealand's climate change strategy, the most effective approach to address inequitable impacts is through targeted measures outside the scheme.

For this advice, the Commission is first and foremost informed by our analysis of the range of emissions prices that would be consistent with meeting emissions budgets, which serve as the domestic component of the NDC and the stepping-stones to the 2050 target, accounting for uncertainty about the future. We also considered the potential impacts of emissions prices on households and the economy (described in Part 2), and inflation, international emissions prices, and our other mandatory considerations (described below).

This has led to recommended CCR and ARP price triggers that sit on the outer ranges of emissions budget consistent prices, giving a wider corridor for price discovery and aligning with emissions budgets by allowing the prices needed to meet them to arise in the market. We consider this approach to be consistent with the full range of considerations mandated in the Act.

The magnet effect and anchoring

In its report on our 2022 advice price controls, the Government stated its concern that raising the CCR could create a 'magnet effect' that would drive prices up to the CCR price triggers. It has described the magnet effect as occurring when "market NZU prices are attracted to the level of the CCR trigger price"[13] and "price control settings appear to have been encouraging market participants to bid high prices in order to trigger and exhaust the cost containment reserve fully each year."[14]

While we cannot at this time determine conclusively whether the CCR trigger price is affecting market prices in this way, we acknowledge that a magnet effect, or alternatively anchoring – a cognitive bias where decisions are influenced by a particular reference point – may have played a role in auction outcomes over the past two years.

> *The purpose of these controls is to manage the risk of the NZU price at auction being out of line with what is necessary to meet emissions budgets.*

13. (New Zealand Parliament, 2022b)
14. (Cabinet Economic Development Committee, 2022)

Since the Government's last decisions on the NZ ETS settings, the Commission has continued to engage with market participants and identified a range of factors that appear to have contributed to the triggering of the CCR last year, including:

- signals at the time from Government about its strong commitment to climate action
- more information becoming available about the costs of decarbonisation
- regulatory uncertainty
- price increases in international emissions trading schemes.

It is the Commission's view that these combined influences together contributed to the shift in market expectations about future prices, rather than a significant price anchoring or magnet effect by itself. This shift in expectations about future NZ ETS prices led to the CCR overlapping with where the market was trying to find the price.

Our advice has also been informed by new information from the market. If a magnet effect or anchoring created by the CCR trigger prices is indeed a major driver of NZU prices, then we would expect to see NZU prices closely following the CCR trigger price (this year set at $80.64). However, since December 2022, the market has weakened considerably, with the price of NZUs dropping around $20 from a peak of $88 to $65.50[15]. This trend was continued with the 15 March auction being declined as bids did not meet the confidential reserve price, which ensures the Government does not sell units significantly below their price on the secondary market.

These outcomes contribute to our overall observation that Government climate policy signals as well as external factors outside the NZ ETS are important influences on the market price.

On balance we consider that current CCR trigger prices are associated with too high a risk of the CCR being triggered, which in turn increases the risk to Aotearoa New Zealand meeting its emissions budgets. Significantly higher trigger prices are therefore warranted so that the market can operate in a manner consistent with meeting emissions budgets. Based on our engagement insights and recent market behaviour, we deem it unlikely that any magnet effect that may be operating would be sufficiently strong to cause prices to rise to the level of our recommendation. In addition, the slower rate of annual growth in trigger prices we recommend after the initial step up, and the two-tier structure should further minimise any incentive to anchor to the CCR trigger price or speculatively hold units.

We will continue to actively monitor NZU prices as part of our annual NZ ETS unit supply and price setting advice and to build our insights regarding market behaviour, including market expectations and the potential impact of price anchoring.

Risks to meeting emissions budgets

As stated in the Introduction under "Risks of inaction", it is not possible in an emissions trading scheme to keep unit volumes in line with emissions reduction targets while also maintaining tight control of prices.

The trigger price as currently regulated makes CCR units available at relatively modest prices in a market where there is already a significant unit surplus. In our advice last year, we estimated there were approximately 49 million units that could be considered surplus – nearly the sum of the total volume set for auction over 2023-2025. Releasing CCR units at the current regulated trigger price also means that reserve units may be sold for less than they would be worth if the market was allowed to find the price without any intervention. This is a loss to the Government and ultimately taxpayers and shifts the cost burden to future generations.

We have heard some concerns about the liquidity, or availability for purchase at stable and transparent prices, of units in the NZU stockpile. Our central estimate of the surplus component of stockpile units sits in the middle of a broad range. The actual liquidity of the stockpile is uncertain due to factors like the behaviour of forestry participants or of speculators. Auctioning further units into the market is not an appropriate response to this uncertainty, as it simply compounds other risks in the market, particularly the risk of prices that are too low which put meeting emissions budgets at risk. It would be better to allow a wider price corridor or explore other options outside of the NZ ETS unit limits and price control settings that could improve market liquidity.

15. As of 8 March 2023

Releasing reserve units is simply borrowing emissions from the future. Once units are in the market, they enable increased emissions that can use up current emissions budgets or be carried over for use in future emissions budgets and NDC periods.

Currently, the mechanisms available to the Government to compensate for CCR units released to the market, are to auction fewer units in future or to increase expectations for future purchasing of offshore mitigation. As no source of offshore mitigation has been identified, the only currently available reliable mechanism is to reduce future auction volumes. Our advice this year reflects this reality, both in terms of our proposed auction volumes, and our recommendations for future price control settings that will reduce the chances of the Government continuing to need to find ways to make up for an unmanaged surplus.

Addressing inequitable impacts

For the NZ ETS to be effective in its legislated purpose of assisting New Zealand to meet its 2050 target and emissions budgets, it must change the relative prices of emissions-intensive goods in the economy. Using the CCR as an easily available extra source of supply to depress NZU prices undermines the ability of the NZ ETS to do this.

The risk of constraining emissions prices is that to achieve a given budget, a greater burden will fall on other policies. If the Government expects the NZ ETS to contribute significantly to meeting emissions budgets and targets, the scheme will require a wider price corridor. To ensure everyone in Aotearoa New Zealand is supported to make the transition, Government can put in place targeted, responsive initiatives to address any potentially inequitable impacts of emissions prices. As consumers switch to lower emissions alternatives, they will reduce their exposure to emissions prices and will experience reduced costs.

From both an equity and climate perspective, this is far preferable to suppressing emissions prices across the entire economy. If Aotearoa New Zealand is to achieve its climate goals, issues of social and economic equity must be pursued in parallel.

Sumary of key considerations (relevant for both CCR and ARP)

In this section, we summarise our evidence and position on the key statutory considerations, which underpin our analysis of the appropriate settings for both the auction reserve price and cost containment reserve:[16]

- the forecast availability and cost of ways to reduce greenhouse gas emissions that may be needed to meet emissions reduction targets (covered below under "Modelling the range of NZU prices potentially required to meet emissions budgets")
- the level and trajectory of international emissions prices (covered below under "International emissions prices")
- the impact of emissions prices on households and the economy (covered in Part 2: Moving towards a fair, inclusive, and equitable NZ ETS)
- inflation (covered below under "Inflation").

Modelling the range of NZU prices potentially required to meet emissions budgets

In our 2022 report we analysed the range of emissions prices that could be required to meet emissions budgets, using the Energy and Emissions in New Zealand (ENZ) model to enhance the evidence available.

This does not replace the emissions values from *Ināia tonu nei* as our best estimate of the abatement costs associated with meeting emissions budgets. Rather, the modelling undertaken in 2022 gave greater insight as to what the range of emissions prices arising in the NZ ETS might be if the future plays out differently from the assumptions used to develop the demonstration path and emissions values in *Ināia tonu nei*.

While we have no updates to our 2022 modelling analysis given there has been no new GHG Inventory or significant new evidence to incorporate since it was undertaken seven months ago, we have considered views shared with us through the targeted engagement process. These included comments around the consistency of our ENZ modelling approach and how it informed our price control setting recommendations with net targets[17].

16. Our evidence and position on the other statutory considerations we have considered in developing our analysis of the appropriate price control settings are cross referenced in Appendix 1.
17. (Climate Change Commission, 2022)

We also received interest – both directly through questions and indirectly as part of observing the Ministry for the Environment's consultation – regarding how we decided the triggers for our recommended price control settings. This interest was especially focused on the impact of forestry, as it could continue to create more supply in the scheme. Our modelling approach did not exclude forestry from contributing to the meeting of emissions budgets. Rather, it accounted for carbon removal from forests based on the Government's stated sector sub-targets for each of the first three emissions budgets. These sector sub-targets set out expectations for the amount of carbon removed through forestry and the gross reductions from emitting sectors. Once we accounted for the Government's targeted level of carbon removed by forestry, we used our ENZ model to explore the range of possible prices needed to drive gross emissions reductions to achieve the remainder of the emissions budgets. This approach recognises that achievement of the emissions budgets and 2050 target will be judged against net emissions, rather than gross emissions, and is consistent with the Act.

This modelling informed our recommended price controls, aimed at allowing prices in the market which are consistent with meeting budgets and with achieving the balance of gross emissions reductions and removals advised by the Commission and reflected in the Government's sector sub-targets. However, there is no guarantee that these prices will occur, given the current design of the NZ ETS which is likely to steer towards meeting emissions budgets mainly through afforestation.

Level and trajectory of international emissions prices

The Act requires that we consider the level and trajectory of international emissions prices in our advice on price control settings. We see two reasons why these international emissions prices may be relevant:

- It is important that Aotearoa New Zealand contribute to the global effort to combat climate change, and international emissions prices give an indication of the level of effort needed to do this.
- Offshore mitigation is an option for meeting emissions reduction targets in addition to reducing emissions domestically, particularly where further domestic reductions are likely to lead to severe social and economic impacts.

In our 2022 report we presented information about current and future possible international emissions prices, and this year have scanned for updates to regulated or forecast international emissions prices. Since then, emissions price changes have occurred in some jurisdictions and new pricing initiatives have been announced or implemented – such as Indonesia's new ETS for the power sector, launched in February 2023, and some new analysis has emerged – like the OECD report on *Pricing Greenhouse Gas Emissions*. We have considered these changes and like last year, judge that our recommendations are still within the range of forecast international emissions prices and comparable with peer countries' efforts, rather than overtaking them.

Considering the impact of inflation

The Act requires that we consider inflation. We judge this to be relevant in two ways – both how inflation should be applied to the price control triggers, and what, if any, inflationary impact eventual emissions prices in the market might have.

On the first point, the continued use of an inflation adjustment avoids the effectiveness of settings being eroded over time in real terms. The CCR trigger price must be set in nominal prices so any inflation adjustment must be set in advance. The existing trigger prices for the CCR and ARP are both adjusted for inflation.

As with our 2022 advice, we have applied the Treasury's most up-to-date annual Consumer Price Index (CPI) inflation forecast rate to the relevant year of the settings (see **Table 7**). When it becomes available in

Table 7 Treasury's CPI inflation forecasts from the 2022 Half Year Economic and Fiscal Update (HYEFU22)[18]

June years	2023	2024	2025	2026	2027
CPI inflation (annual % change)	6.4	3.5	2.5	2.0	2.0

18. (Te Tai Ōhanga The Treasury, 2022b).

May 2023, Treasury's Budget Economic and Fiscal Update (BEFU23) should be used to account for any forecast updates in the last six months.

On the second point, we have investigated whether the effect of the NZU price on inflation can be analysed, but this is likely to be challenging in the near-term. The impact appears difficult to isolate, as there are multiple other significant contributing external factors influencing the costs of goods and services in the economy, such as changes in the international oil price or changes to electricity transmission lines fees.[19] The Commission will continue to explore possibilities for investigating the potential impact of the NZU price on inflation in the future.

Monetary policy mechanisms from central banks remain an important policy tool to manage economy wide flow-on costs from climate policy and pricing mechanisms[20]. In Aotearoa New Zealand's case, the Reserve Bank of New Zealand is required to keep the CPI within a target range of 1% to 3% over the medium-term with a focus on the 2% midpoint.

New available information does not justify departing from the Commission's 2022 conclusion that impacts should be managed through policies outside the NZ ETS, rather than by keeping the price control settings low.

Desirable emissions price path

Section 5ZOA(2) of the Act states that the Commission must recommend limits and price control settings for units, including "any desirable emissions price path."

As stated above, we judge that price controls manage the risk of the NZU price at auction being out of line with what is necessary to meet emissions budgets. They are not intended to guide or set the price of units at auction.

Within these broad bounds, any desirable emissions price path will depend on the level and scope of other policies to drive emissions reductions, and external factors that affect the cost of mitigation (such as energy prices and exchange rates). These factors are difficult to predict and market participants will determine the trading prices.

We have considered whether to recommend a desirable emissions price path. As was the case in 2022, we have concluded we are not at this time in a position to define such a path, given the current context of the NZ ETS and the many uncertainties that will shape future prices.

Cost containment reserve

In this section we discuss analysis on components of the CCR including its structure, trigger price, and the volumes in the reserve.

Analysis and recommendations

CCR structure

In 2022, we recommended a two-tiered CCR to Government. This is for two reasons:

- With two price tiers, the risk of any potential anchoring or magnet effect will be reduced, as it is harder to anchor price expectations to split price triggers.
- If CCR units are released, not all become available at once, reducing the number of units adding to the existing surplus.

The two tiers of trigger prices and reserve volumes will therefore help manage the risk of prices going above what is considered necessary to meet emissions budgets while reducing the risks to meeting Government's emissions budgets should additional units be released.

In addition, if a release of reserve units causes emissions budgets to not be met, section 30IA of the Act will require the Minister of Climate Change to back those units as soon as possible after the end of an emissions budget. The approach we propose will reduce the risks of this requirement being triggered.

While we strongly recommend maintaining a two-tiered design, if the Government continues to prefer a single-tier option, the price triggers and reserve volume from our recommended lower tier should be adopted. This is because the lower tier price trigger already represents a significant widening of the price corridor compared to the status quo, and the lower volume from the lower tier should be sufficient to meet demand while posing less of a threat to emissions budgets.

19. (Statistics New Zealand, 2022)
20. (IMF, 2022)

CCR trigger price

In 2022, we recommended that trigger prices for the CCR be set with reference to prices of $200 and $250 (2022 real) by 2030, and that there be a one-off step-change in the trigger price level in 2023.

Following that prices should increase only by 3% each year and be adjusted for forecast inflation (as discussed above). By moving the trigger price well clear of likely price expectations, with only small increases to trigger prices annually after the initial step up, any anchoring effect or incentives to speculatively hold units are likely to be reduced.

We suggest to only update the trigger price for updated inflation forecasts.

We have applied these changes from 2026 onwards as current settings must remain for 2023-2025 (**Table 8**).

Example of CCR trigger price change if conditions allow for amendments from 2024

At the March 15 auction, neither of the two price controls – the auction reserve price or the cost containment reserve – were triggered. However, it is still possible that the cost containment reserve could be triggered at later auctions in 2023. In that event we would advise different trigger prices to be set for 2024 and 2025.

We have included an example below of what our recommendations would be if the CCR is triggered, or an alternative circumstance occurs in 2023 that would allow for 2024 and 2025 settings to also be adjusted (**Table 9**).

Determining the reserve volumes

We have retained our approach from 2022, with the total CCR volume across both tiers equal to the base surplus reduction volume. We have not increased this volume from last year. This means we have not included any increase to the surplus reduction volume from the discrepancy adjustment addressed in Step 5b of the unit limits method. This is because these units adjust for discrepancies in unit volumes we expect following our advice in 2022, but do not change our original estimate of the underlying surplus volume.

The first tier contains a portion based on an estimate of the average demand gap between the NZ ETS cap and forecast emissions under current policies for sectors covered by the NZ ETS. The lower tier volume should meet demand if NZ ETS participants find it more difficult than expected to reduce their emissions, while avoiding enabling emissions above current forecasts. Under this approach, Tier 1 comprises around a third of the total CCR volume.

We considered whether to update our estimates of the expected demand gap. However, the GHG Inventory

Table 8 Proposed trigger price for the CCR

	Cannot be changed		Updated recommendations			For visibility	
	2024	2025	2026	2027	2028[21]	2029	2030
Tier 1	$91.61	$103.24	$205.00	$215.00	$226.00	$237.00	$249.00
Tier 2	NA	NA	$256.00	$269.00	$282.00	$297.00	$312.00

EXAMPLE

Table 9 Example of trigger prices we would advise if changes were able to be made for 2024 and 2025

Example conditional advice	2024	2025
Tier 1	$184.00	$195.00
Tier 2	$231.00	$243.00

21. Note, for these recommendations and forecasts in years beyond the Treasury inflation forecasts to 2027 we have assumed inflation stays constant at a level of 2.0%

has not been updated since our last advice, nor do we have new Commission-produced projections of emissions. The Government has published its own emissions projections in *New Zealand's Fifth Biennial Report,*[22] but we are still assessing those projections and reconciling differences with our own analysis. We have therefore decided to simply extend the approach we used for the 2023-2027 reserve volume to 2028.

This approach recognises that any estimate of the demand gap is imprecise due to the inherent uncertainty of emissions projections. Maintaining the current approach also avoids creating unnecessary regulatory uncertainty. If new data emerges that justifies a change, we will reflect this in our 2024 advice.

Given the constraints under the Act for amending existing settings for years 2024 and 2025, we have applied these changes from 2026 onwards, as the current settings must remain for 2024-2025 (**Table 10**).

Example of CCR volume change if conditions allow for amendments from 2024

However, as there is a possibility of price controls being triggered at the planned 14 June 2023 auction (after the release of this report), we have also provided the Government with advice on settings should circumstances allow for the 2024 and 2025 settings to be adjusted (**Table 11**).

Auction reserve price

The auction reserve price (ARP) is the price below which the Government will not sell units at auction.[23] Its stated purpose is to act as a safety valve that helps guard against NZU prices dropping below what is needed for meeting emissions budgets.

The ARP is not a hard price floor as secondary market prices can fall below it. Instead, it prevents the Government from adding further NZUs into the market when prices are low, so it has a role in minimising the risks of unit oversupply. It cannot be treated as a minimum guaranteed price.

As of 2022 the currently regulated auction reserve price is $33.06, rising at 5% plus inflation adjustments. Prices on the secondary market and those cleared at auction have been well above the ARP since its introduction, and current settings are not known to have caused any issues to the functioning of the NZ ETS.

Analysis and recommendations

In 2022, we recommended that trigger prices for the ARP be set with reference to prices of $70 (2022 real dollars) by 2030, and that there be a one-off step-change in the trigger price level in 2023. Following that prices should be discounted back at 3% each year and be adjusted annually for forecast inflation.

Table 10 Proposed volumes in CCR Tiers 1 and 2, amendments from 2026

	Cannot be changed		Updated recommendations			For visibility	
Million NZUs	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Tier 1 volume	7.7	7.1	2.3	2.1	1.9	1.7	1.4
Tier 2 volume	NA	NA	4.2	3.8	3.4	3.0	2.5
Total CCR volume	**7.7**	**7.1**	**6.5**	**5.9**	**5.4**	**4.7**	**3.9**

EXAMPLE

Table 11 Proposed volumes in CCR Tiers 1 and 2, amendments from 2024

	Example conditional advice	
Million NZUs	**2024**	**2025**
Tier 1	2.8	2.6
Tier 2	4.9	4.5
Total CCR volume	**7.7**	**7.1**

22. (Ministry for the Environment, 2022)
23. The Government has also implemented a confidential reserve price, which prevents NZUs from being sold at auction at a price significantly below the secondary market price. It is not within scope of this advice.

As we outlined in our 2022 advice, the ARP could come into play in different kinds of situations. These include underachievement scenarios, where market prices drop below the levels needed to keep emissions within emissions budgets. The ARP could also be triggered in scenarios in which it would be appropriate to seek to achieve emissions budgets more quickly than required by the Act. This could happen if emissions reductions are easier to achieve than expected.

This second scenario would assist with meeting the NDC by reducing the need to purchase offshore mitigation. As we determined in *Ināia tonu nei*, Aotearoa New Zealand should seek to achieve emissions budgets earlier than required if the impacts of doing so are manageable, as this could help to manage the fiscal and economic costs of meeting the NDC.

Therefore, in 2022 we factored the potential costs of procuring offshore mitigation into our judgements about the ARP. We did this to help ensure that the price at which NZUs would be withheld at auction would not be below the costs of offshore mitigation that the Government might need to purchase. This issue is arguably even more important now, as another year has passed within the NDC period without a clear plan from the Government on how it will secure offshore mitigation to meet the NDC.

As no new data or reasons to depart from our previous approach and recommendations have emerged, for this advice we have only updated for inflation forecasts.

We have applied these changes from 2026 onwards and current settings must remain for 2023-2025, with example forecasts to 2030 (**Table 12**).

The ARP is closely interrelated with the cost containment reserve (CCR) trigger price, and we advise against making decisions on either setting in isolation.

Example of ARP changes if conditions allow for amendments from 2024

However, as there is a possibility of price controls being triggered at the planned 14 June 2023 auction (after the release of this report), we have also provided the Government with advice on settings should circumstances allow for the 2024 and 2025 settings to be adjusted (**Table 13**).

Table 12 Minimum price below which units must not be sold by auction, recommended updates from 2026

	Cannot be changed		Updated recommendations			For visibility	
	2024	2025	2026	2027	2028	2029	2030
ARP	$35.90	$38.67	$72.00	$75.00	$79.00	$83.00	$87.00

EXAMPLE

Table 13 Minimum price below which units must not be sold by auction, recommended updates from 2024

Example conditional advice	2024	2025
ARP	$65.00	$68.00

PART 5

Te Taupoki – Final recommendations

Bringing together the analysis and findings discussed in Part 3 on unit limits and Part 4 on price controls, we present our final recommendations for the unit limit and price control settings. We also provide comparison between these and the current settings.

Our final recommendations reflect that under the Act, both the Commission and the Minister are restricted in our ability to advise changes to the current settings for the first two years (2024 and 2025) of the upcoming five-year window unless specific conditions apply, which we judge they do not.

Earlier in this report, we provided examples of how our recommended settings would change if any of the conditions under the Act which allow for amendments from 2024 occur in the future. As these are meant to be examples demonstrating our thinking and methodology and are not formal recommendations, we have not included them here.

The unit limit volume figures in these recommendations are rounded to one decimal place, with recommended price control levels presented to the nearest dollar.

Unit limits

	Fixed and cannot be changed		Updated recommendations			
	2024	2025	2026	2027	2028	Total
Limit on auction volume	17.1	15.3	8.5	7.1	5.2	53.2
Limit on total CCR volume	7.7	7.1	6.5	5.9	5.3	32.6
Limit on overall NZUs available by auction	**24.8**	**22.5**	**15.0**	**13.0**	**10.6**	**85.9**
Limit on approved overseas units	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Overall limit	**31.1**	**28.8**	**21.2**	**19.1**	**16.6**	**116.8**

Cost containment reserve trigger price and volumes

Cost containment reserve	Fixed and cannot be changed		Updated recommendations			
	2024	2025	2026	2027	2028	Total
Tier 1						
Trigger price, including inflation	$ 91.61	$ 103.24	$ 205.00	$ 215.00	$ 226.00	
Reserve volume	7.7	7.1	2.3	2.1	1.9	21.1
Tier 2						
Trigger price, including inflation	NA	NA	$ 256.00	$ 269.00	$ 282.00	
Reserve volume	NA	NA	4.2	3.8	3.4	11.4
Total reserve volume	7.7	7.1	6.5	5.9	5.3	32.5

Auction reserve price

Auction reserve price	Fixed and cannot be changed		Updated recommendations		
	2024	2025	2026	2027	2028
Auction reserve price	$35.90	$38.67	$72.00	$75.00	$79.00

Comparison to existing unit limit settings

Our newly recommended settings show some significant disparities from current settings. Table 14 highlights the disparity of recommended auction volumes with current auction volumes.

Recommended auction volumes drop significantly from current settings in 2026 due to the recommendation that expected discrepancies of units between the years of 2023-2025 need to be recovered by additional surplus reduction volumes in subsequent years (see Part 3, Step 5b).

Table 14: Auction volume comparisons

	2023	2024	2025	2026	2027	2028
Current	17.9	17.1	15.3	13.5	11.7	
Proposed		17.1	15.3	8.5	7.1	
Difference		-	-	-5.0	-4.6	

Comparison to existing price controls

Our recommended settings show some significant differences from current settings. **Table 15** highlights these.

Under the current settings, a single price at which all the volume of the CCR is released would remain until 2025. As we are only able to advise changes from 2026 onwards, we then shift with an initial step up in trigger price followed by a gradual increase year-on-year for the CCR and ARP and with a two-tier structure of the CCR.

Table 15 Comparison to current settings

Cost containment reserve	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Current	$80.64	$91.61	$103.24	$115.84	$129.97	
Proposed		$91.61	$103.24	Tier 1		
				$205.00	$215.00	$226.00
				Tier 2		
				$256.00	$269.00	$282.00
Difference				$89.16	$85.03	

Auction reserve price	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Current	$33.06	$35.90	$38.67	$41.45	$44.35	
Proposed		$35.90	$38.67	$72.00	$75.00	$79.00
Difference				$30.55	$30.65	

APPENDIX 1

Te Taurapoto: Kua ea rānei ngā tukanga whakarite me ngā whakahou e ai tā te Ture? – Summary of how legislative requirements and considerations under the Act have been addressed

Under the Climate Change Response Act 2022, in relation to the Commission's annual recommendations about NZ ETS unit limits and price control settings, the Commission has three principal obligations. The recommendations must:

a. cover the limits and price control settings for each year that the Minister's must cover;

b. be made in accordance with:

   i. the requirements of sections 30GB and 30GC (except for s 30GC(5)(e)) that apply to the making of the Minister's recommendations

   ii. the Commission's other duties, for example:

      1. to consider, where they are relevant, the matters set out in s 5M of the Act;

      2. to proactively engage and provide for public consultation where necessary (s 5N);

      3. to act independently (s 5O); and

      4. to act in a manner consistent with the purpose of the Act (s 3); and

c. be given to the Minister a reasonable time before the Minister is required to recommend the making of regulations.

Table 16 below describes the legal obligations on the Commission and where in this report they are addressed.

Table 16: Requirements for our advice

Obligations in the Act	Where addressed
Section 3: Purpose[24]	
(aa) provide a framework by which New Zealand can develop and implement clear and stable climate policies that – (i) contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels;	Throughout the advice, particularly Parts 3 and 4.
...	

24. The other elements of the purpose of the Act not included here refer to matters such as adaptation and international reporting requirements and are not relevant to the scope of this advice

Obligations in the Act	Where addressed
(b) provide for the implementation, operation, and administration of a greenhouse gas emissions trading scheme in New Zealand that supports and encourages global efforts to reduce the emission of greenhouse gases by – i) assisting New Zealand to meet its international obligations under the Convention, the Protocol, and the Paris Agreement; and ii) assisting New Zealand to meet its 2050 target and emissions budgets:	Throughout the advice, particularly Parts 3 and 4.
Section 30GC: Requirements for regulations about limits and price control settings for units	
(2) The Minister (and the Commission) must be satisfied that the limits and price control settings are in accordance with – (a) the emissions budget and the nationally determined contribution and (b) the 2050 target	Part 3 Step 1: Accord unit limits with emissions budgets, the NDC and the 2050 target Part 3 Step 2: Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors Part 3 Step 5b: Adjust for discrepancies Part 3 Step 7a: Adjust for units released from the cost containment reserve Part 4: Price control settings
The Minister (and the Commission) must consider the following matters:	
(5)(a) Projected trends in greenhouse gas emissions, including both emissions covered by the NZ ETS and those that are not covered	Part 3 Step 2: Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors Part 3 Step 3: Technical adjustments
(5)(b) The proper functioning of the NZ ETS	Throughout the advice, particularly Parts 3 and 4.
(5)(c) International climate change obligations and contracts New Zealand may have for accessing offshore mitigation from other carbon markets	Part 3 Step 1: Accord unit limits with emissions budgets, the NDC and the 2050 target Part 3 Step 6: Setting the approved overseas unit limit

Obligations in the Act	Where addressed
(5)(d) 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	Part 3 Step 1: Accord unit limits with emissions budgets, the NDC and the 2050 target Part 3 Step 2: Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors Part 4: Price control settings
(6) In respect of the price control settings:	
(a) the impact of emissions prices on households and the economy	Part 2: Moving towards a fair, inclusive, and equitable NZ ETS Part 4: Price control settings
(b) the level and trajectory of international emissions prices	Part 4: Price control settings
(c) inflation	Part 4: Price control settings
Section 5ZOA Recommendations about limits and price control settings for units	
Any desirable emissions price path	Part 4: Price control settings
Section 5M: Matters the Commission must consider, where relevant	
(a) Current available scientific knowledge	Our analysis on emissions budgets in *Ināia tonu nei* considered this matter, and it was used as an input to this advice. We consider that there has not been significant change in this area since that advice to warrant material changes.
(b) Existing technology and anticipated technological developments, including the costs and benefits of early adoption of these in New Zealand	Our analysis on emissions budgets in *Ināia tonu nei* considered this matter, and it was used as an input to this advice. We consider that there has not been significant change in this area since that advice to warrant material changes.
(c) Likely economic effects	Part 2: Moving towards a fair, inclusive, and equitable NZ ETS Part 3 Step 1: Accord unit limits with emissions budgets, the NDC and the 2050 target Part 3 Step 2: Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors
(d) Social, cultural, environmental, and ecological circumstances, including differences between sectors and regions	Part 2: Moving towards a fair, inclusive, and equitable NZ ETS Part 3 Step 1: Accord unit limits with emissions budgets, the NDC and the 2050 target Part 3 Step 2: Allocate the emissions budgets to NZ ETS and non-NZ ETS sectors

Obligations in the Act	Where addressed
(e) Distribution of benefits, costs, and risks between generations	Our analysis on emissions budgets in *Ināia tonu nei* considered this matter, and it was used as an input to this advice. We consider that there has not been significant change in this area since that advice to warrant material changes. Part 1: Introduction Part 2: Moving towards a fair, inclusive, and equitable NZ ETS
(f) The Crown-Māori relationship, te ao Māori, and specific effects on Iwi/Māori	Part 1: Introduction Part 2: Moving towards a fair, inclusive, and equitable NZ ETS
(g) Responses to climate change taken or planned by parties to the Paris Agreement or to the Convention	Part 4: Price control settings
Section 5N: Consultation	
(1) In performing its functions and duties and exercising its powers under this Act, the Commission must— (a) proactively engage with persons the Commission considers relevant to the functions, duties, and powers; and (b) where the Commission considers it is necessary, provide for participation by the public.	Part 1: Introduction Part 4: Price control settings

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