

Advice on NZ ETS unit limits and price control settings for 2025-2029

February 2024



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

ISSN: 3021-1956 (Print)

ISSN: 3021-1964 (Online)

Disclosure statement

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Chair's Message

For Aotearoa New Zealand to increase the likelihood it will meet its second domestic emissions budget (2026-2030) and its Nationally Determined Contribution (2021-2030), policy tools like the New Zealand Emissions Trading Scheme (NZ ETS) must be fit for purpose.

The Government has choices available now that will bring opportunities for New Zealanders and avoid exacerbating the consequences of a late response to climate change, including how it uses the NZ ETS as a tool to meet its emissions reduction goals.

This advice seeks to make the best use of the NZ ETS as it is and within the legislated scope of this advice.

There are ongoing gaps in Government policy that affect the NZ ETS and create uncertainty for market participants. These issues are not the focus of the recommendations in this advice, but we raise them as they undermine the ability of the NZ ETS unit limits and price control settings to serve their purpose. If these issues remain unresolved, it will become increasingly difficult to accord the settings with emissions reduction targets in future.

To fulfil its role, the NZ ETS needs to align with Aotearoa New Zealand's emissions budgets, the 2050 target, and the Nationally Determined Contribution under the Paris Agreement, which

successive governments have reiterated a commitment to meeting.

The Commission has consistently supported putting a price on greenhouse gas emissions which encourages investments and behaviour change that reduce emissions, while preparing society and the economy for a low emissions future.

However, the unique design of the NZ ETS means that if its current structure persists, it will create challenges for meeting our emissions reduction targets in an equitable, stable and predictable way.

The NZ ETS covers less than 50% of our emissions as a nation. Its structure allows action on gross emissions to be displaced by carbon storage by forests. As a country we need both or we'll be worse off if one ends up being substituted for the other.

Under its current structure, after the mid-2030s, the NZ ETS will also no longer be able to deliver substantial incentives for the forests needed to balance difficult-to-reduce emissions. This will be an additional challenge to staying on the path to net zero long-lived emissions by 2050, and staying at net zero in every subsequent calendar year.

Iwi/Māori have a crucial role in Aotearoa New Zealand's climate change response. The Māori economy is estimated to be worth about \$70 billion¹ in contribution to GDP annually, including substantial assets in forestry directly linked to the NZ ETS, and iwi/Māori should be involved in any decisions related to changes in the NZ ETS.

1. Business and Economic Research Limited (BERL), (2021).

“ *The surplus of New Zealand Units (NZUs) already in the market represents oversupply* ”



The Government working in partnership with iwi/Māori is fundamental for an equitable and fair transition and can accelerate emissions reductions to meet our targets.

Within the existing system, our advice can only go so far in enabling emissions pricing that rewards investors, producers, and consumers for actions that help meet emissions reduction targets.

The surplus of New Zealand Units (NZUs) already in the market represents oversupply. The outcomes of all four government auctions in 2023, which were declined with no units sold, support this conclusion. The auction results highlight that the NZ ETS is not primarily a revenue generating mechanism and cannot be relied on as a steady source of funds.

This unit surplus will not self-correct. It is critical that the Government adjust the NZ ETS unit volume limits as soon as possible to draw the surplus down and bring the settings back into alignment with targets. There is scope to do this, while keeping the current price control settings essentially the same. Emerging information from the country's official emissions projections indicates long-lived gas emissions are expected to decline, meaning lower demand for units in the NZ ETS than previously expected.

These emissions trends, which include reductions associated with complementary policies, also create opportunities to tighten the NZ ETS emissions cap. This could lock in lower emissions to help meet more of the first NDC domestically, meaning less money spent on offshore offsets.

We have deferred adopting this approach in this advice as we await the Government's clarification of its approach to gross emissions reductions, removals from forestry and purchasing offshore mitigation, as well as its wider vision for climate policy in the second emissions reduction plan to be developed this year.

If the Government continues to place high reliance on emissions pricing to achieve our climate goals, it is urgent that it set out the role it sees for the NZ ETS within a coherent policy package for meeting all of the country's emissions reduction targets, including the NDC.

The second emissions reduction plan (due December 2024) will need to show, if the current NZ ETS structure is to be maintained, how other policies will make up for the scheme's limitations – or alternatively, outline how the NZ ETS will evolve. Delay will undermine the confidence of investors, lead to disappointed expectations, delay action needed to meet targets and impose avoidable costs in the future.

We urge the Government not to delay action to make the tool more capable of delivering the outcomes that the Government seeks – as maintaining the status quo will not create the stability sorely needed by the market.

Dr Rod Carr, Chair
29 February 2024

Te kupu a te Pou

E nui ake ai te āheinga o Aotearoa ki te tutuki i te tuarua o ngā o ngā tahua tukuwaro ā-motu (2026-2030) me te taha ki tōna Takohanga ā-motu (2021-2030), ko ngā rauemi tukanga pēnei i te Kaupapa Hokohoko o Aotearoa (NZ ETS) me pakari hei whakamahinga.

He kōwhiringa kei te Kāwanatanga i tēnei wā e hua mai ai he āheinga ki a Ngāi Aotearoa, ā, he kaupare i te nui o ngā whakawhiunga a tētahi urupare āhuarangi tōmuri, otirā ko tōna whakamahinga i te NZ ETS hei rauemi whakatutuki i ngā ahunga whakaheke tukuwaro.

E anga atu ana tēnei kupu akiaki ki te whakamahi tika i a NZ ETS i tēnei wā tonu, ā, ki ngā herenga tukanga kei tēnei kupu akiaki.

Ka nui tonu ngā pokapoka ki ngā tukanga a te Kāwanatanga ka whai pānga ki te NZ ETS me te whakahua mai ko te rangirua ma ngā kaihoko māketē. Ehara ēnei take i te aronga matua ki ngā whakahau kei tēnei kupu akiaki, engari ka kōrerotia e mātou ēnei take nā tōna whakararu i te āheinga o ngā herenga hokohoko me ngā ritenga hokohoko a NZ ETS te kawē i tōna kaupapa. Mēnā rā ka kore e ea tonu ēnei raruraru, ka nui ake te uauatanga kia whakaaetia ēnei ritenga ki ngā ahunga whakaheke tukuwaro hei te anamata.

E tutuki ai tōna kaupapa, me hāngai a NZ ETS ki ngā tahua tukuwaro o Aotearoa, te ahunga 2050, ka mutu, ko te Takohanga ā-motu kei te Kirimana o Parī, kua whakamana kē e ngā Kawanatanga maha o mua i tōna takohanga nui nei.

He rite tonu te mahi a te Komihana ki te tautoko i tētahi utu ki ngā rehukino hei āki i ngā kaipenapena me ngā waiaro ki te whakaheke tukuwaro, tūia ko te whakarite i ngā hapori me te ōhanga ki tētahi anamata iti te tukuwaro.

Heoi anō, ko te momo ahureinga o te NZ ETS he whakatau ake mēnā rā ka tū tonu tēnei hanga, ka tūwhera mai ngā uauatanga mō te tutuki i a tātou ahunga whakaheke tukuwaro ki tētahi āhuratanga tautika, toitū, taunga hoki.

Kei raro i te 50% o o tatou tukuwaro i Aotearoa nei he mea whakamarumarū nā NZ ETS. Ko tōna hanga he āheinga ki ngā tatau rehukino kia whakakāia e ngā pātaka-warō nā ngā ngahere. Inā hoki te mahi a te motu me whai i ngā mea e rua, engari ka kino kē ten oho mehemea ka whakakāia tētahi i tētahi.

Kei raro mai i tōna hanga, mō muri i ngā tau waenga 2030, ko tā NZ ETS kua kore e āhei te tuku i ngā hua tika ki ngā ngahere hei taurite atu i ngā uauatanga ki te whakaheke tukuwaro. Ka noho hei tāpirihanga mō ten oho tonu ki te ara o te tatau kore ki ngā tukuwaro 2050, otirā kia noho ki te tatau kore ki ia tau, ki ia tau anō.

He tino herenga kei te Māori mō te taha ki te urupare āhuarangi o Aotearoa. Ko te ōhanga Māori he matapaki ake ki te wāriu o te \$70 piriona i tōna takohanga ki te Tatau GDP ia tau, nā kona mai ngā te nunui o ngā rawa kei te ahu ngahere e here tika mai nei i a NZ ETS. Nā reira me whai wāhi te iwi Māori ki ngā whakatau e hāngai ana ki ngā panonitanga ki te NZ ETS. He tino herenga te mahi a te Kāwanatanga i ōna tūhonohono ki te iwi Māori e matatika ai, e tautika ai te whakawhitianga. Ka āhei hoki te whakatere ake i ngā whakahekenga tukuwaro hei tutuki i o tātou whāinga.

“ *Ko te tuhene o Ngā
Tauhokohoko (NZU)
kei te māketē he
kōrero ki te puhake* ”



Mā roto i tēnei pūnaha, ko tō mātou kupu akiaki he herenga ōna mō te taha whakatenatena i ngā ritenga tukuwaro e utu ai ngā kaipenapena, kaiwhakaputa hua me ngā kaihokohoko mō ana mahi ki te tutuki hoki i ngā ahunga whakaheke tukuwaro.

Ko te tuhene o Ngā Tauhokohoko (NZU) kei te māketē he kōrero ki te puhake. Ko ngā hua a ngā māketē kāwanatanga e whā mō 2023, i whakakorea me te mea hoki kāhore he tauhokohoko i riro, ka mutu, kei te tautoko i tēnei whakataunga. Ko ngā hua o te māketē he kōrero ki tō NZ ETS nohonga, ā, ehara hoki i tētahi pae matua mō te whakatupu moni. Ā, kua kore e tautika te noho hei pūnaha matua ki te whai moni.

Ko te tau-tuhene kua kore e taea te whakatika i a ia anō. He tino mahinga mā te Kāwanatanga kia wawe te panoni i ngā kohinga utu NZ ETS ki te whakaheke i te tuhene me te whakahoki i ngā whakaritenga kia hāngai ki ngā ahunga. He wāhanga e taea ai tēnei mahi, engari e taea tonu ai ngā whakaritenga taura-utu ki te wā kotahi. Ko ngā kōrero hou hei tā ngā taunaki matapae tukuwaro he tūtohu atu ko ngā rehukino tahuaroa he heke, nā whai anō te heke o te hiahia ki ngā tauhokohoko kei te NZ ETS, e ai rā e ngā matapae o mua.

Ko ēnei whakahaerenga tukuwaro, arā ngā whakahekenga e tūhono atu ana ki ōna tukanga, ka ara mai anō ētahi āheinga hei whāiti rawa i ngā poko tukuwaro NZ ETS. Ka āhei pea te whakatīna kia iti te tukuwaro hei tutuki ake i ngā ahunga NDC ā-motu, nā reira ka iti hoki ngā moni ki ngā huakino o tāwāhi.

Kua kaupare atu tēnei kupu akiaki kia atawhai tēnei whāinga, inā rā he tatari ki te Kāwanatanga tohutohu tika i te whāinga ki ngā whakahekenga tatau rehukino, tangowaro i ngā ngahere me ngā tauhokohoko o tāwāhi. Arā hoki ko te whakakitenga whānui mō te tukanga āhuarangi ki te tuarua o ngā whakahekenga tukuwaro ka whakawhanake i tēnei tau.

Ki te kore te Kāwanatanga e aro tonu ki ngā utu tukuwaro hei tutuki i ngā ahunga āhuarangi, me wawe hoki te whakatau tōna haepapa nui mā NZ ETS, e tika tonu ana hei kohanga tukanga ki te tutuki i ngā ahunga whakaheke tukuwaro a te motu me NDC hoki.

Ko te tuarua o ngā whakaheke tukuwaro (ka tae mai hei te Tihema 2024) me aro kia tautika tonu te hanga o NZ ETS, kia aro hoki ki ētahi atu tukanga e whakaiti ake i te mana o te kaupapa – māna pea, ko te whakarārangi ake ko ngā wāhanga hei whakawhanake mā NZ ETS. Inā rā ka takaroa, ka heke hoki ko te aro a ngā kaipenapena ki te kaupapa, inā hoki ko te whatinga o ngā kawatau, nā whai anō te takaroa o ngā mahi ki te tutuki i ngā whāinga me te pikinga o ngā utu ki te anamata.

E ākina ana te Kāwanatanga kia kua e tārewa tonutia ngā mahi ki te whakakaha ake i tēnei rauemi ki te whakaputa i ngā hua e hiahia ana i te Kāwanatanga – nātemea inā rā ka pērā tonu te haere, ka kore hoki e tautika, ā, he mea nui tēnei mā te māketē.

Dr Rod Carr, Te Pou

Chief Executive's Message

Over the last 18 months, the New Zealand Emissions Trading Scheme market has been highly volatile. This volatility is a symptom of uncertainty about the objectives for emissions reductions in Aotearoa New Zealand and how the NZ ETS should be managed to achieve them.

This uncertainty is being driven by debate about some fundamental questions that must be answered by the Government one way or another:

- Do we want to reduce gross emissions as much as possible, or is reducing net emissions all that matters?
- Should we be aiming to transform our economy, pushing hard on industrial decarbonisation or not?
- How should we make choices around our land? How should we weigh up the climate benefits of planting more forests against the locking away of some of this land from other uses and the change this might bring for rural communities?

The answers matter for the NZ ETS because it is a crucial tool to achieve emissions reductions. It needs to be guided by clear objectives.

The NZ ETS was designed back in the 2000s to work within the former Kyoto Protocol, the international treaty that preceded the Paris Agreement. Countries around the world have since agreed that much more ambitious action is urgently needed and the global economy is adapting to this. Our economy needs to follow, or risk being stranded as a high emissions producer in a low emissions global economy.

Globally, we now know much more about climate change. The scale and urgency of action that is required to address climate change has gone well beyond the ambition set under the Kyoto Protocol, and even the first set of commitments collectively made under the Paris Agreement.

What is now known about the scale of change required means some fundamental aspects of the NZ ETS design and previous assumptions about its place in climate policy no longer work. The status quo - leaving the NZ ETS alone - will not bring stability to the market.

As long as uncertainty remains about the mix of emissions reductions and forests that the Government is seeking to meet our climate targets, it will be difficult for investors to commit to action.

“ *The status quo – leaving the NZ ETS alone – will not bring stability to the market* ”



One of the most pressing legacy issues for the NZ ETS is a surplus of New Zealand Units that has been allowed to build up. This presents risks to the ability of the NZ ETS to support the country to meet its emissions reduction goals, particularly the goals for later this decade and into the 2030s.

The Commission has consistently advised that this surplus must be drawn down to support the scheme to work as effectively as possible. We estimate that the surplus has instead grown, connected with the way forestry is incorporated into the NZ ETS. This highlights that the wider design of the scheme, which is outside the scope of this advice, creates challenges for keeping it aligned with emissions reduction targets.

Aotearoa New Zealand has been slow to implement policies that reduce our emissions at source; further delay in addressing those fundamental climate policy questions will slow the country's climate response and make future action even more urgent.

Private sector investment is needed for the low emissions transition. Businesses need to have confidence that the objectives for the NZ ETS will endure.

The Commission's independent advice is produced to make the NZ ETS as effective as possible to help Aotearoa New Zealand transition to a low emissions economy. It supports the predictable management of the NZ ETS by the Government, gives market participants information they need and brings transparency to the settings process.

This advice is being delivered at a time when 2023 has been declared the hottest year on record and information released during the COP28 climate conference indicated that the world is not on track with its pledges to keep warming below 2°C, let alone 1.5°C.

The Government has choices in how to reduce the country's emissions. Those choices need to be made now, and must add up to meet climate action goals.

Jo Hendy, Chief Executive
29 February 2024

Te karere a te Tumu

I ngā marama 18 kua taha ake nei, he nui tonu te raruraru ki te māketē a te Kaupapa Hokohoko o Aotearoa. Ko tēnei raruraru tonu he tohu o te rangirua ki ngā tūwhāinga ki ngā whakahekenga tukuwaro ki Aotearoa me te āhua o ngā whakahaerenga a NZ ETS ki te tutuki i ēnei whāinga.

Ko tēnei rangirua tonu i ahu mai i ngā tautohetohe ki ētahi o ngā pātai taketake me whakautu nei e te Kāwanatanga, ahakoa te aha:

- Kei te hiahia tātou ki te whakaheke i ngā tatau tukuwaro pau te kaha, māna ko te whakaheke kē i ngā tatau tangowaro te mea nui?
- Me ahu tātou ki te panoni i tō tatou ōhanga, ā, mā te whakatenatena rānei i ngā tangowaro ahumahi?
- He pēhea tā tātou mahi whakatau tikanga ki o mātou whenua? He pēhea rānei te whakatau i ngā aukatinga whenua ki ētahi atu whakamahinga me ngā hua ka puta mā ngā hapori taiwhenua?

E whai tikanga ana ēnei whakautu ki te Kaupapa Hokohoko o Aotearoa nātemea he tino rauemi hei whakatutuki i ngā whakahekenga tukuwaro. Me whai hoki ko ētahi tino tohutohu hei arahi i a ia.

I hanga a NZ ETS i ngā tau 2000 hei mahi mā roto mai i a Kyoto Protocol, te tiriti o mua mai i te Kirimana o Parī. Mai i taua wā mō ngā whenua huri i te ao kua whakaae kia wawe, kia kaha kē hoki te mahi, ā, kei te whakawhiti atu te ao ōhanga ki tēnei. Me whai tō tātou ōhanga, ki te kore, ka nui te tūpono ka tau hei kaitukuwaro nui ki tētahi ao ōhanga tukuwaro iti

Huri i te ao, kua piki te māramatanga ki te āhuarangi. Ko te whānui me te wawenga o ngā mahi me whai nei ki te kaupare i te āhuarangi kua eke noa atu i tā Kyoto Protocol ahunga nui, otirā ko te kotahi atu o ngā takohanga i hangaia e te Kawenata o Parī.

Ko te mōhioranga e mau nei ki te whānui o ngā panonitanga, kua kore ētahi āhuratanga taketake ki te hanga o NZ ETS me ētahi atu whakakitanga o mua ki te tukanga āhuarangi e whai mana. Ko te āhua anō rā – ko te waiho kia motuhake a NZ ETS – me kore hoki e tautika te māketē.

Ki te noho tonu te pōhēhētanga ki ngā momo whakahekenga tukuwaro me ngā ngahere e arongia ana e te Kāwanatanga ki te tutuki i a tātou ahunga āhuarangi, ka uaua mā o mātou kaihokohoko ki te utanga o ngā mahi.

“ *Ko te āhua anō rā – ko te waiho kia motuhake a NZ ETS – me kore hoki e tautika te māketē* ”



Ko tētahi o ngā tino take ōhākī mā NZ ETS ko te tuhene o ngā tauhokohoko o Aotearoa kua whakaae kia tupu. Ko ngā tūraru o te wā ko te āheinga o NZ ETS ki te tautoko i te motu kia tutuki ai ngā ahunga whakaheke tukuwaro, manohi anō ko ngā ahunga ki te hiku o ēnei taungahuru me ngā tau 2030.

He rite tonu te mahi a te Komihana ki te tūtohu me heke ai tēnei tuhene hei tautoko i te Kaupapa kia tika ai āna mahi. E whakapae nei kua tupu kē nei te tuhene, i tōna tūhononga ki te ahumahi a te ngahere kei te NZ ETS. E tūtohu ana tēnei i te whānuitanga o te Kaupapa, kei waho tonu mai i te aronga ki tēnei kupu akiaki, ā, ki reira te aranga o ngā uauatangaki te whakahāngai ki ngā ahunga whakaheke tukuwaro.

He pōturi te mahi a Aotearoa ki te whakauru tukanga e whakaheke ai i ngā tukuwaro ki tōna takenga; ki te tōmuri tonu te kaupare o ēnā urupounamu tukanga āhuarangi taketake ka pōturi te urupare āhurangi ā-motu me te whakahoro ake i ngā mahi o te anamata.

Me whai ko ngā penapena a te rāngai tūmatawhāiti ki te whakawhitianga whakaiti tukuwaro, ā, me pakari hoki ngā pakihī ki ngā mahinga mā NZ ETS me te mōhio ko ngā penapena tahuaroa he hua ake i ngā utu tahuaroa.

Ko tā te kupu akiaki motuhake a te Komihana he ārahina te NZ ETS kia tika tōna rere ki te akiaki i a Aotearoa te whakawhititi atu ki tētahi ōhanga iti te tukuwaro. Kei te tautoko te Kāwanatanga i ngā whakahaerenga matapaki o NZ ETS, he hoatu ki ngā kaihokohoko māketē ngā kōrero e tika ana ki a rātou me te tūwhera o ngā ritenga ki tēnei pūnaha

Ko tēnei kupu akiaki he tuku ki tētahi wā e kī ai a 2023 koinei tonu te tau wera rawa, ā, ko ngā kōrero ki te huinga o COP28 he tūtohua kāhore nei te ao i te hāngai ki ōna kī taurangi kia tārewa te whakamahana ki raro iho i te 2°C, māna anō te 1.5°C.

He kōwhiringa kei te Kāwanatanga mō te āhua o tōna whakaheke i ngā tukuwaro a te motu. Me whakatau iho ēnei kōwhiringa ināia tonu nei e tutuki ai ngā ahunga āhuarangi.

Jo Hendy, Te Tumu

Executive summary

This is our annual advice to Government on the settings of the New Zealand Emissions Trading Scheme (NZ ETS). It focuses on two areas: adjustments to limits on the number of units in the scheme, and to the auction price control settings. Our advice is based on analysis of the system, its operating environment and its impacts; this also raises urgent policy questions.

The NZ ETS is a key policy tool for reducing the country's greenhouse gas emissions. He Pou a Rangi Climate Change Commission has an annual task to check the scheme's settings and advise any adjustments needed to keep the NZ ETS on track to support Aotearoa New Zealand's targets for emissions reduction. Our assessment also considers the impact of emissions pricing.

This year we recommend a significant reduction of auction volumes and flag pressing concerns affecting the ongoing effectiveness of the NZ ETS. These are presented in the context of intensifying climate change impacts at home and across the world, reflecting our consistent identification that urgent Government action is required to broaden, strengthen and accelerate efforts to meet Aotearoa New Zealand's climate change objectives.

This executive summary is an overview of the key elements of our 2024 advice on the scheme's settings. It recognises the keen interest across Aotearoa New Zealand in understanding how the Government's climate change response tools are working, and what improvements might be needed to support the country to make the transition to a thriving, low emissions economy.

Key points for decision-makers

An NZ ETS that is working well can help meet the country's goals to reduce emissions in Aotearoa New Zealand. It can also help to meet the country's international commitment – the Nationally Determined Contribution (NDC) – which combines emissions reductions in this country with reductions funded in other countries. This advice recommends changes to NZ ETS settings and highlights Government policy decisions needed to support the effectiveness of the NZ ETS.

Key issues for the settings updates

- New information shows there are too many units in the NZ ETS: this increases the risk that the Government will not achieve the targets.
- Our unit limit settings recommendations help the Government reduce this risk by reducing the NZ ETS auction volumes as soon as possible.
- NZ ETS auctions are not a reliable source of income for Government.
- The price control settings we advise on remain fit-for-purpose with inflation adjustments.

Key issues requiring Government policy decisions

- There are policy issues limiting how well the NZ ETS works.
 - Uncertainty about Government priorities and plans is affecting market and investor confidence.
 - The Government's next plan for reducing greenhouse gas emissions (due out this year) is a good opportunity for it to address the policy issues.
- A key improvement would be for the Government to make clear statements about its goals for reducing greenhouse gases (at their source), and its goals for using forestry to absorb some emissions.
- There is an urgent need for the Government to confirm how the country will achieve its NDC.
 - The NZ ETS could be used together with other policies to help speed up emissions reductions at home.
 - Emissions reductions in other countries – funded by Aotearoa New Zealand – will also be needed to meet the NDC. It is important to make clear whether the NZ ETS has a role in this.

Introduction

Why the NZ ETS matters for the transition to a low emissions economy

The NZ ETS is a key tool in the Government's strategy to reduce greenhouse gas emissions and transition to a thriving, low emissions economy. The scheme operates alongside other government climate policy.

The NZ ETS is a market mechanism created by government to encourage choices that move away from activities that create greenhouse gas emissions, such as burning fossil fuels. It creates an 'emissions price' by limiting the volume of greenhouse gases allowed; in the NZ ETS this covers all sectors except agriculture. This 'cap' on emissions reduces over time, in line with emissions reduction targets.

The targets the scheme is designed to match up with are the Government's five-year emissions budgets (which are the stepping-stones to the 2050 target), and Aotearoa New Zealand's current Nationally Determined Contribution (NDC) - the country's international commitment to reduce emissions.

However, the history and design of the NZ ETS, as well as uncertain Government climate policy, create challenges for aligning the scheme to those targets. It is now well into the 2021-2030 NDC period, but the plan for meeting the NDC and the role of the NZ ETS in that are still unclear.

The past 18 months have been eventful for the NZ ETS. The emissions price has moved sharply up and down in response to policy announcements and the four declined auctions held in 2023, where bids at the auctions did not meet minimum requirements so no units were sold.² The 2023 auction outcomes are not a failure but rather the result of the system operating as designed. They are, however, a demonstration of low market confidence and also reflect the large amount of units already in the market.

Over recent years, the cash proceeds from NZ ETS auctions have been a source of income to Government. The reliability of this income is uncertain. Selling units by auction is unlikely to generate steady funds in coming years, because the number of units auctioned is already set to decline in line with targets, and because the auction unit levels is the only setting that Government can adjust to keep permitted emissions in line with the country's targets.

Our approach

In line with our role to provide independent, evidence-based advice to the Government we have analysed the latest data, considered the issues the Act requires us to address, and drawn on insights and evidence from engagement with iwi/Māori and stakeholders.

Our check of the NZ ETS settings uses a system approach, recognising that each setting interacts with other aspects of the scheme to affect the market. This means our recommendations need to be read as a package. They include information about how the different parts of the scheme link up, to help the Government avoid unintended consequences as it makes decisions.

2. There were insufficient bid volumes above each auction's confidential reserve price. The confidential reserve price prevents the Government from selling units significantly below their price on the secondary market to avoid auction clearing prices unduly disrupting the secondary market (see section 30GA(2A)(b)(ii) of the Act). The confidential reserve price is separate from the NZ ETS price control settings and is not in scope for this advice.

Our approach recognises that future reductions in greenhouse gases may not happen exactly as predicted. We treat the emissions budgets and the 2050 target as ceilings on emissions, rather than “bullseye” targets.

In our advice to Government the Commission considers the Crown–Māori relationship, te ao Māori, and specific effects on iwi/Māori. Our analysis and engagement with communities shows this will support faster emissions reduction and help achieve an equitable transition for the benefit of all New Zealanders – as set out in our December 2023 advice to Government on its next emissions reduction plan.³ These considerations are mandated in the Climate Change Response Act 2002.

The matters considered in this year’s advice on NZ ETS settings include the wide variety of approaches taken by iwi/Māori entities to their decision-making about forestry management and their NZ ETS units. This reflects the overall point, also made in our December 2023 advice on the second emissions reduction plan, that iwi/Māori interaction with the NZ ETS is affected by the specific characteristics and historical circumstances of land owned by Māori.⁴ Decisions connected with managing land owned by Māori collective owners, including about using New Zealand Units (NZUs) from forests, are often subject to protracted administrative steps and can be strongly influenced by the need to weigh up a range of competing priorities, tikanga values, and kaitiaki obligations including taonga tuku iho.

The diversity of viewpoints we have heard on iwi/Māori perspectives on the NZ ETS indicate a careful and collaborative approach is necessary, including regarding co-design and related aspects under Te Tiriti/The Treaty (see also **Part 2: Iwi/Māori perspectives on the NZ ETS**).

The impacts of emissions prices on iwi/Māori connects with our consideration of impacts across the economy, as detailed in **Part 4: Price control settings**. This reflects the need to ensure the transition to a low emissions economy is both ambitious and achievable. Our analysis has shown a fair, inclusive and equitable transition will endure, because that kind of transition would anticipate and manage how decisions affect different groups of people around the country.⁵

Many households and businesses will be able to take up options that involve lower levels of greenhouse gases (such as changing how they travel or move goods, or heat buildings), meaning emissions pricing will impact them less and less over time. Impacts of emissions pricing, however, are not felt evenly across communities. Some households are unable to afford low emissions options, some do not have access to them. This is particularly relevant now, as higher inflation over the past two years has caused more people to struggle with the cost of living. Our recent advice on policy options for the Government’s next emissions reduction plan recommends continued use of targeted support for people less able to cope with the impacts of emissions pricing, rather than delaying climate action.⁶

3. He Pou a Rangi Climate Change Commission (2023a).

4. The terms ‘land owned by Māori’ and ‘Māori landowners’ are used in this report to cover the collective owners of Māori land (as regulated by Te Ture Whenua Māori Act 1993) and other Māori land entities which serve similar purposes. The distinctive characteristic is the collective ownership structure and its impact on land management and investment opportunities (as in our advice about ‘Māori-collective landowners’ in Ināia Tonu Nei).

5. He Pou a Rangi Climate Change Commission (2023a) – Chapter 9: An equitable transition.

6. He Pou a Rangi Climate Change Commission (2023a) – Recommendation 10.

What we heard through engagement

Effective engagement is an important part of the Commission's process for developing advice. For this advice we heard from mandated iwi/Māori representatives, companies, industry associations, market intermediaries including trading houses, and individual experts or consultants specialising in the NZ ETS.

We also drew on insights from past NZ ETS engagements, and engagements undertaken for other Commission work. An important input in the last 12 months was the public consultation and engagement that informed our December 2023 advice for the Government's second emissions reduction plan.

The key themes arising from engagement were:

- *Our NZ ETS settings analysis is sound:* our methodology and recommendations were generally considered to be appropriate.
- *Uncertainty about rules and policy is undermining confidence in the NZ ETS:* this was consistent feedback across almost all engagements. The feedback highlighted Government decisions about price control settings and the (now stopped) review of the role of forestry in the NZ ETS in particular as discouraging investment in decarbonisation and forestry.

- *Feedback that forest planting is not likely to continue at rates seen in past years:* There was consistent feedback that recent high rates of forest planting were unlikely to continue in the immediate future due to policy uncertainty and other unfavourable conditions, with little planting planned for 2025.
- *More information on the NZ ETS market would be beneficial:* some participants noted key information for understanding supply and demand was held by the Government but not available to the market; some also hoped that planned NZ ETS market governance reforms would improve market information.
- *Iwi/Māori perspectives on the NZ ETS:* as outlined above, representatives of iwi/Māori entities provided diverse views reflecting interest but difficulty in navigating forestry elements of the NZ ETS.

The feedback is reported in more detail in **Part 2: Current state and role of the NZ ETS.**

“ This year we recommend a significant reduction of auction volumes and flag pressing concerns affecting the ongoing effectiveness of the NZ ETS



About the NZ ETS

The NZ ETS is a market created by the government to support Aotearoa New Zealand to meet its emissions budgets, the 2050 target, and the country's international commitment under the Paris Agreement, the Nationally Determined Contribution (NDC).

Putting a price on emissions changes the relative prices of goods and services across the economy. This influences the behaviour of both producers and consumers by discouraging activities involving high levels of greenhouse gases, and rewarding low emissions choices.

The NZ ETS covers every sector in the economy except agriculture: the scheme does not include biogenic methane and nitrous oxide emissions. Participants in the NZ ETS face the costs associated with emissions while being free to decide how best to reduce emissions.

There are several sources of units in the NZ ETS; each of those units (NZUs) represents a tonne of emissions:

- The Government awards units in the scheme to reward the growth of forests.
- Some units are allocated at no cost to businesses involved in specific activities that are both emissions-intensive and trade-exposed (this is 'industrial free allocation').
- The Government sells a limited number of units at auction, in line with a declining emissions cap.

Market participants trade units with each other on the secondary market.

Our annual advice on settings

The Commission is required by law to advise the Government annually on NZ ETS settings for the following five years: for three kinds of unit limits, and for two kinds of price controls (explained below). This supports the Minister of Climate Change to update system settings to keep the NZ ETS lined up with emissions reduction targets, and reward choices that have lower emissions.

This is the third time the Commission has provided this advice. It covers the settings for 2025–2029.

Three categories of unit limits: we advise on a limit on units available by auction (including reserve volumes); a limit on approved overseas units available for use (currently none); and an overall limit on units. These help implement 'the cap' on emissions permitted from the sectors covered by the scheme.

The Act specifies that changes to settings can be recommended only for years 3 to 5 of the cycle, unless there are special circumstances. This year we consider that threshold is met, and we recommend the Government changes unit limits from 2025.

Two categories of price control: we advise on the price controls that apply when the Government either sells reserve units (if the auction price reaches very high levels – this is the cost containment reserve), or withholds units from sale at auctions (the auction reserve price). These help manage the risk of unit prices at auction being out of line with what is needed to meet emissions budgets. Our assessment in 2024 is that these remain fit-for-purpose and only minor changes are required to reflect inflation.

Note: these price controls *do not* set the unit price at auction, and they do not apply to NZ ETS participants trading units on the secondary market.

What happens next for NZ ETS settings

This advice is one step within a wider process for updating the NZ ETS settings regulations. The Government will consider our advice and run a public consultation on proposals, led by the Ministry for the Environment on behalf of the Minister of Climate Change. This is in the second quarter of 2024.

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 2024. The new settings will come into force on 1 January 2025. We expect to provide our next advice on this topic, for the period 2026–2030, in the first quarter of 2025.

Other Commission advice relevant to the NZ ETS

This advice on the system settings for the NZ ETS is as required in the Act. We note this year it lands alongside other closely related advice and reports:

- In December 2023 the Commission provided detailed advice to inform the Government's second emissions reduction plan (due in final form by the end of 2024). This included options Government has around amending NZ ETS incentives to accelerate the shift to a low emissions economy.
- In April 2024 the Commission will be consulting on draft advice on the fourth emissions budget and the 2050 target review, which will set out longer-term options the Government has to encourage emissions reductions.
- In mid-2024 the Commission will publish the first annual monitoring report showing our independent assessment of progress towards meeting emissions budgets and the 2050 target, and an assessment of the adequacy of the Government's emissions reduction plan.

Critical issues for the settings updates

Dealing with surplus units already in the NZ ETS market

For the NZ ETS to work well to support emissions reductions, the units available for use in the scheme need to decline in line with the Government's declining emissions budgets. This is to encourage a drop in the greenhouse gas emissions covered by the NZ ETS, at the rate that will achieve the 2050 target and the domestic emissions part of the NDC.

Over many years, the number of units in the market has grown significantly, built up over time from a variety of sources. Some of the units in the market are necessary for the smooth operation of the NZ ETS, but there is an excess share that presents a high risk to the achievement of the emissions budgets. We refer to these excess units as 'the surplus'.

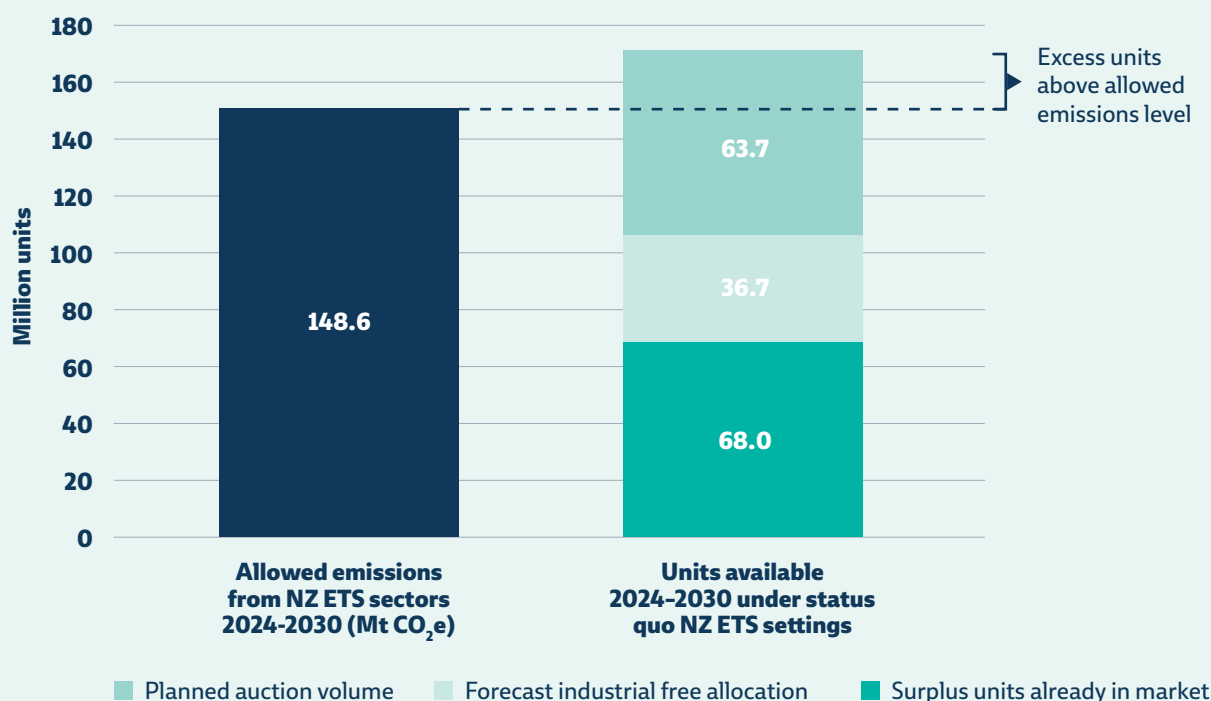
The Commission last estimated the surplus in mid-2022. Our recent analysis shows the estimated surplus has grown from 49 million units to 68 million units at the end of September 2023. The greatest contribution in that period came from a large increase in units allocated to forests registered in the NZ ETS. **Figure 1** shows the combined total of surplus units, industrial free allocation units, and units set to be auctioned under the current NZ ETS settings regulations. The graph makes clear the units available exceed the level of allowed emissions from NZ ETS sectors under the NZ ETS emissions cap. The graph does not include the additional 93 million units currently held in private accounts that are not considered surplus.

Currently there is only one way to correct the excess number of units. That is by reducing the volume made available in government auctions. Based on our estimate of the increase in the surplus this year, we are recommending unit limit levels that reduce auction volumes significantly – see **Part 3 Unit limits: Step 1**.

The Commission's recommendations on unit limits are based on the same methodology as previous NZ ETS settings advice.⁷ This year, we have judged it is appropriate to recommend changes to the first two years of unit limit settings – we consider there are circumstances that satisfy the criteria for doing this. Adjusting from 2025 supports the scheme to align with existing emissions budgets.

7. He Pou a Rangi Climate Change Commission (2022a) and (2023b).

Figure 1: Our assessment of allowed emissions from NZ ETS sectors compared to units in the market over 2024–2030 (before adjustment)



It avoids the need for drastic reductions from 2027 that would be needed if the settings remained unchanged for 2025–2026, and allows room for further reductions later if the surplus is larger than estimated, or if it grows in the future. This recognises that factors influencing the surplus estimate are dynamic.⁸

Other factors have also contributed smaller changes to the recommended auction volumes. These include an update to the overall emissions volume (the ‘emissions cap’) available to the NZ ETS due to methodological updates to the government’s Greenhouse Gas Inventory (GHG Inventory). These methodological updates are refinements to emissions calculations that bring estimated emissions down because of better data and information, rather than because of actions that reduce emissions – this is explained in detail in **Part 3 Unit limits: Step 1**.

Our recommendation also reflects a technical adjustment related to liquid fossil fuel emissions (as in our previous advice), an updated forecast of industrial free allocation, and refinements to more accurately reflect the NZ ETS’s coverage of synthetic greenhouse gases. Together these combine to give the proposed auction volumes that are set out in the **Recommendations** section.

Reliability of cash proceeds from NZ ETS auctions

Adjusting units in the scheme to align to targets – by reducing the volume of units available at auction – highlights the unreliability of income for government from the NZ ETS. This was already a reality, given the planned decline in auction volumes in line with emissions targets; this is currently expected to reach zero in the mid-2030s, at which point there will be no further units to auction. The current increase in the surplus, which leads us to recommend sharper adjustment to auction volumes, makes this unpredictability more acute.

8. For example foresters could decide to leave more forests unharvested (choosing to transition production forests to permanent forests), meaning fewer units need to held for future harvest liabilities.

Opportunities to bring unit limits down to support further emissions reductions

The Commission has identified opportunities to use the NZ ETS together with other emissions reduction policies to make the most of domestic emission reduction opportunities. This could help reduce the need to fund emissions reductions in other countries to meet the NDC – see also points about the NDC in the **Clarifying the plan to achieve the country’s Nationally Determined Contribution** section below.

Unit limits in the NZ ETS could be adjusted to reflect sizeable changes in emissions that result from other emissions reduction policies – where these are not already reflected in the related emissions budget. These are where there is a material shift in emissions by NZ ETS participants, and the reduction in unit limits could be made without increasing pressure on others in the scheme. One of several such examples is the action by NZ Steel in partnership with the Government to introduce an electric arc furnace to replace coal as a fuel for part of its manufacturing at Glenbrook Steel Mill. This is expected to reduce that company’s greenhouse gas emissions by 0.8Mt annually from 2027, which will be a permanent reduction to its demand for units in the NZ ETS (this shift away from coal will halve their use of units). The electric arc furnace was not anticipated in the Commission’s scenario pathway analysis in our 2021 advice on emissions budgets, unlike other emissions reduction projects funded by the Government Investment in Decarbonising Industry (GIDI) Fund.

The Government does not currently have policy on how the NZ ETS should be managed in these circumstances. It has the option to reduce the NZ ETS cap to lock in the reductions from other emissions reduction policies or investments. If the Government chooses not to adjust the cap, this would leave more units available and lower costs for other participants. Both options are available to the Government, but they have different consequences for the NZ ETS settings.

The option of reducing the emissions cap when step changes in emissions are achieved through other policies could increase certainty that domestic emissions budgets will be met, and make it easier to also meet the NDC by reducing reliance on offshore emissions reductions.

In the absence of policy direction, the Commission has deferred making a recommendation to tighten the NZ ETS cap this year to reflect the change in expected demand from emissions reduction policies outside the scheme. We are instead flagging this as an urgent policy issue requiring Government decisions, which could include setting out a framework for how the NZ ETS and complementary emissions reduction policies should interact.

Price controls are fit-for-purpose

We have assessed there is no need to change the NZ ETS price controls – the cost containment reserve and the auction reserve price – beyond an adjustment for expected inflation. The ‘price corridor’ that the auction price controls establish remains fit-for-purpose in combination with the unit limits.

Our analysis of price controls included an assessment of impacts of potential emissions prices – as covered in **Our approach** above.

“ *The Commission has deferred making a recommendation to tighten the NZ ETS cap this year to reflect the change in expected demand from emissions reduction policies outside the scheme* ”



Key issues requiring Government policy decisions

The NZ ETS is most effective at encouraging changes to lower emissions options if the scheme is operating as part of a cohesive suite of climate policies.

There are ongoing gaps in Government policy that affect the NZ ETS and create uncertainty for market participants. These issues are not the focus of the recommendations in this advice, but we raise them as they undermine the ability of the NZ ETS unit limits and price control settings to serve their purpose. If these issues remain unresolved, it will become increasingly difficult to accord the settings with emissions reduction targets in future. There is opportunity for the Government to address those issues in its next five-year plan for reducing greenhouse gas emissions (due December 2024).

This summary of the key policy issues provides an overview of the most important matters, as set out in **Part 2 Current state and role of the NZ ETS**.

Decisions needed on goals for gross emissions and carbon removals

The Government has not specified goals for the levels of gross emissions (reducing greenhouse gases where they are produced) or for the levels of carbon dioxide removed through forestry. Clarity from the Government on the levels sought, and the role of the NZ ETS in achieving them, would support action to meet the emissions budgets and the net zero component of the 2050 target.

As part of our advice on the direction of policy for the second emissions reduction plan, the Commission recommended the Government commit to specific levels of gross emissions levels for the second and third emissions budgets, and provide indicative levels of gross greenhouse gas emissions and carbon dioxide removals out to 2050 and beyond, to guide policy decisions.

Structural improvements to encourage decarbonisation and forests

The NZ ETS is a key tool for meeting emissions budgets and the 2050 target but there are structural issues that prevent the scheme from achieving those goals in a stable way over time.

Addressing these structural issues will bring uncertainty, while solutions are worked out. However, not dealing with these issues risks greater uncertainty and poor outcomes for Aotearoa New Zealand, as the NZ ETS will be limited in its ability to support emissions reductions in line with targets and the overall transition to a low emissions economy.

- The NZ ETS risks initially encouraging increases in forest area at the expense of reductions of emissions at their source. This is a result of the way the scheme rewards carbon dioxide removals by forests, which is usually lower cost than reducing emissions at source.
- From the mid-2030s, the NZ ETS will not continue to incentivise all the forests needed to achieve the 2050 target level of net zero long-lived gas emissions. This is because a significant proportion of the country's long-lived gases (namely nitrous oxide from agriculture) is not covered by the NZ ETS, which means there is currently no incentive to plant forests to compensate for those emissions.

In our advice on the second emissions reduction plan, the Commission recommended that lasting incentives for forests be provided through to and beyond 2050.

Our other key recommendation was that Government amend the NZ ETS to separate the incentives for gross emissions reductions from those applying to forests. If the Government chooses not to pursue this approach, it will need to clarify how gross emissions reductions will be made in other ways, such as strengthening other climate policies. This will be essential to decarbonise the economy.

For both issues, our recommendations emphasised that these changes must be developed in partnership with iwi/Māori under Te Tiriti o Waitangi/The Treaty of Waitangi. When considering emissions pricing incentives, the unique characteristics and historical circumstances of land owned by Māori must be taken into account.

Clarifying the plan to achieve the country's Nationally Determined Contribution

There are significant challenges involved in meeting Aotearoa New Zealand's current NDC target: to reduce net emissions by 50% below gross 2005 levels by 2030. Earlier analysis by the Commission shows that significant offshore mitigation (emissions reductions achieved in other countries) is likely required.

The Government urgently needs to confirm how the country will achieve the current NDC by 2030.

The Government developed a high-level NDC strategy in 2023.⁹ That document includes a principle of prioritising domestic action to reduce emissions, which in turn has potential to reduce reliance on offshore mitigation. However, it is not clear how this principle will be put into practice and what the role of the NZ ETS will be in achieving the NDC strategy.

There is significant uncertainty about the role of the scheme and the potential future impact of overseas units on the price of units.

If Government makes its NDC plan and policy clearer, it will help clarify the respective roles of the NZ ETS and other policies to help speed up emissions reductions in this country, and potentially reduce the need to pay for mitigation in other countries to deliver increasingly ambitious NDCs under the Paris Agreement.

For at least the first NDC (2021-2030), emissions reductions from other countries will be needed. The Government could fund these directly, or the NZ ETS could be used to help bring these in if participants were able to directly purchase and surrender international units. Before deciding to help re-open the NZ ETS to international units, the Government would need to consider the implications for equity and the proper functioning of the NZ ETS, particularly in terms of preserving the ability of the NZ ETS to continue to encourage domestic emissions reductions.

There are related issues for the effective operation of the NZ ETS, in particular, to develop unit limits and price control settings that fit well with other climate policies and accord to the NDC as required in legislation. This is an increasingly urgent issue the closer it gets to the NDC 2030 target. It needs to be a priority for the Government.

9. Ministry for the Environment (2023b).

Recommendations

Proposed auction volumes

Million units	2025	2026	2027	2028	2029	Total
NZU auction volumes (excluding cost containment reserve volumes)	5.9	5.0	4.9	3.9	3.0	22.7

Recommended unit limits and price control settings

Million units	Updated recommendations					
	2025	2026	2027	2028	2029	Total
Limit on the New Zealand units available by auction (including CCR volume)	13.0	11.5	10.8	9.2	7.7	52.2
Limit on the approved overseas units used	0.0	0.0	0.0	0.0	0.0	0.0
Overall limit on units	18.9	17.3	15.8	14.1	12.5	78.6

Cost containment reserve	No changes		Updated recommendations		
	2025	2026	2027	2028	2029
Tier 1					
Trigger price	\$194	\$205	\$216	\$227	\$238
Reserve volume (millions)	2.6	2.3	2.1	1.9	1.7
Tier 2					
Trigger price	\$243	\$256	\$270	\$283	\$298
Reserve volume (millions)	4.5	4.2	3.8	3.4	3.0
Total reserve volume	7.1	6.5	5.9	5.3	4.7

Auction reserve price	No changes		Updated recommendations		
	2025	2026	2027	2028	2029
Auction reserve price	\$68	\$72	\$76	\$79	\$83

Te taupuaki – Introduction

He Pou a Rangi Climate Change Commission is an independent Crown entity established by the Climate Change Response Act 2002 to provide expert, evidence-based advice and monitoring to successive governments on how to reduce emissions and adapt to the effects of climate change.

About this advice

As part of our responsibilities under the Act, the Commission is 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 to settings are intended to keep the NZ ETS aligned to emissions reduction targets and give market participants information they need to make decisions.

This is the third time the Commission has provided this advice. This report covers the settings for 2025–2029.

Under the Act, the Commission is required to recommend NZ ETS settings that accord with Aotearoa New Zealand's emissions budgets, the Nationally Determined Contribution (NDC), and the 2050 target.

In developing our advice, we must consider the same matters as the Minister when recommending the unit limits and price control settings, as well as several other matters the Act requires us to consider in all our work, where relevant. **Appendix A** shows these considerations and how they have been addressed.

As an independent Crown entity, our advice is based on research and expert analysis, and is informed by insights and evidence drawn from engagement with iwi/Māori and stakeholders.

“ Annual updates to settings are intended to keep the NZ ETS aligned to emissions reduction targets and give market participants information they need



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 2024.

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 2024. The new settings will come into force on 1 January 2025. We expect to provide our next advice on this topic, relating to 2026–2030, in the first quarter of 2025.

About the New Zealand Emissions Trading Scheme

The NZ ETS is a government-created market with the purpose of assisting Aotearoa New Zealand to meet its emissions budgets, the Nationally Determined Contributions (NDCs) under the Paris Agreement, and the 2050 target. The scheme is a key tool in Aotearoa New Zealand’s overall strategy to reduce greenhouse gas emissions. It is the government’s role to design and operate the NZ ETS to support desired outcomes for the transition to a low emissions economy.

Businesses or people who have an obligation in the NZ ETS are known as ‘participants’; this includes businesses that produce emissions, and forest owners. Participants must surrender one tradable emissions unit (‘NZU’) for each tonne of emissions that they are responsible for, reported in tonnes of carbon dioxide equivalent (CO₂e). Forests planted after 1989 that are registered in the NZ ETS can also earn units for the carbon stored as their trees grow.

Putting a price on emissions changes the relative prices of goods and services across the economy. This influences the behaviour of both producers and consumers by discouraging high emitting activities and rewarding low emissions choices.

In the NZ ETS, participants can potentially acquire NZUs by:

- buying them from the Government at auction
- buying them from other NZ ETS participants
- receiving them from the Government for free (if they undertake an eligible activity that is both emission-intensive and trade-exposed)
- earning them from the Government for recognised removal activities (such as carbon storage in forests).

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

The NZ ETS unit limits and price control settings

The price signal in the NZ ETS is determined by the market. The Government sets and reduces the number of units supplied into the scheme over time. The function of the unit limits (sometimes referred to as 'the cap') is to restrict the supply of units in line with emissions reduction targets.¹⁰

They do this primarily by determining how many units the Government can sell into the market by auction each year.

The unit limits work together with price controls, which are intended to manage the risk of the NZU price at auctions not being consistent with the prices necessary to meet emissions budgets. The price controls only operate at government auctions and do not apply to participants trading units on the secondary market.

The unit limits and price control settings are set in Government regulations for five years into the future. The Minister of Climate Change updates the regulations annually to extend the settings by a further year, so there is always a five-year window of information.

This rolling approach allows the Government some flexibility to adjust these settings through a predictable process using adaptive management. It 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.

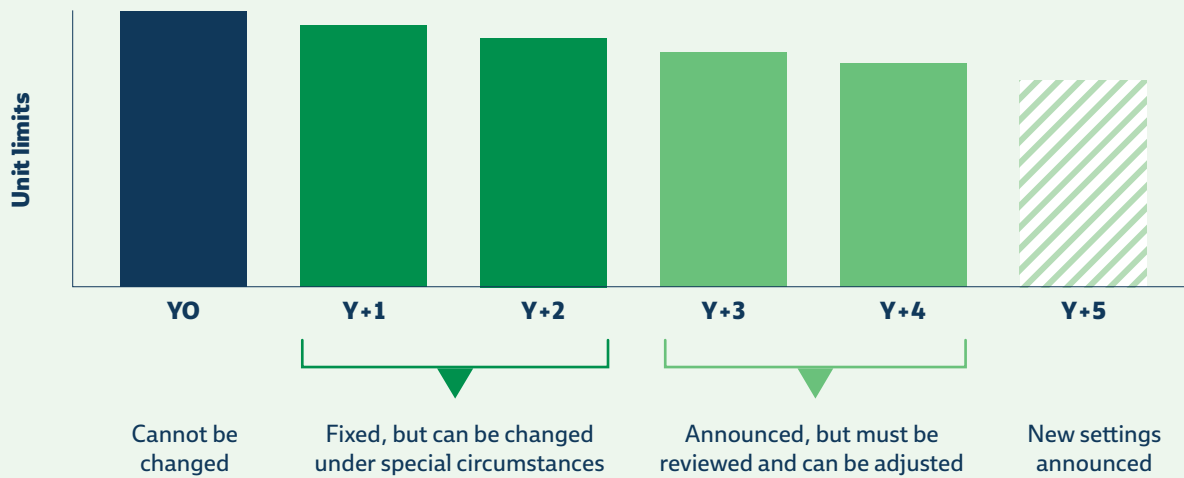
What is in the Commission's annual advice on the NZ ETS unit limits and price control settings:

- 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 industrial free allocation units.
- 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.

See **Parts 3 and 4** for a more detailed description of the design and operation of these unit limits and price controls.

10. Other than units allocated for removal activities (most significantly, forestry units), which are not incorporated into or restricted by the NZ ETS unit limits.

Figure 2: The five-year rolling process for unit limits and price control settings



Making amendments

Legislative rules determine the changes the Government can make in the annual regulation update process, and the circumstances under which they can be made. These rules strike a balance between enabling the NZ ETS to be responsive to new developments and maintaining regulatory predictability.

Figure 2 shows how the unit limits are set for five years but must be extended and may be adjusted each year.

The settings in regulations for the current year are fixed and cannot be changed under the annual update process. The settings for the first two years of the future five-year period are generally also fixed; they can only be changed if certain conditions are met.

The conditions for possible amendment to the first two years' settings are:

- a change to the relevant emissions budget or NDC
- a change that has significantly affected any matter that the Minister was required to consider when recommending the settings

- the triggering of the price controls, such as the release of NZUs from the cost containment reserve
- a force majeure event.¹¹

In all circumstances, the annual update allows for settings for years three and four to be amended, and a fifth year must be added to extend the settings.

Amending settings from 2025

We have considered whether the conditions outlined above for amending settings for the first two years (2025 and 2026) have been met. We assess there has been a significant change affecting the proper functioning of the NZ ETS and conclude that this justifies amending the unit limits, but not the price control settings, from 2025 onwards. This is discussed in detail in **Part 3 Step 5: Set the unit surplus reduction volume**.

11. Section 30GB of the Act.

Our approach

As outlined above, the Act sets out requirements and matters that we must consider when developing recommendations on the NZ ETS settings. These are discussed where relevant throughout this report, particularly in **Part 3: Unit limits** and **Part 4: Price control settings**, which step through the analysis underpinning our recommendations. **Appendix A** provides a summary of how each matter has been addressed, and where it is found in the report.

This section highlights three overarching matters that have influenced the development of our advice.

“ We have considered the overall probability that any particular package of settings will ensure the necessary constraints on emissions to support achievement of emissions reduction targets ”

The NZ ETS settings must be considered as a package aligned to emissions reduction targets

We are satisfied our advice on unit limits and price controls are set in accordance with emissions reduction targets.

We have considered the NZ ETS as a system, where each setting interacts with other aspects of the scheme to affect the market. This is especially true for how price controls combine with unit limits. For example, changes to the cost containment reserve trigger price shifts the nature of the price corridor and impacts the appropriate reserve unit volume, which in turn affects the unit limits.

As with earlier years’ advice on NZ ETS settings, we have developed our recommendations as a cohesive package. We have noted how conclusions and recommendations correspond with one another to help the Government avoid unintended consequences as it makes its decisions.

To account for the uncertainties in how emissions reductions occur over time, we have considered the overall probability that any particular package of settings will ensure the necessary constraints on emissions to support achievement of emissions reduction targets. Our approach takes into account the nature of emissions budgets, the NDC and the 2050 target as ceilings on emissions, rather than as “bullseye” targets.

Engagement to support quality advice

Effective engagement is an important part of the Commission's process for developing advice. The NZ ETS interacts in many and complex ways with Aotearoa New Zealand's social and economic landscapes. Hearing directly from people helps us understand the different needs, perspectives, and concerns around Aotearoa New Zealand and how the NZ ETS can best serve the collective effort to reduce emissions.

To support the development of this advice we engaged with certain mandated iwi/Māori representatives including representatives from landowning collectives, companies from different sectors participating in the NZ ETS, industry associations, market intermediaries including trading houses, and individual experts or consultants specialising in the NZ ETS.

We also drew on insights from past NZ ETS engagements, and engagements undertaken for other Commission functions. An important input this year was the public consultation and engagement that informed our advice on the policy direction of the Government's second emissions reduction plan, which was published in December 2023.¹²

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. Key themes arising from our engagement are summarised in **Part 2: Current state and role of the NZ ETS**.

Iwi/Māori considerations relevant to this advice

In our advice to Government the Commission considers the Crown-Māori relationship, te ao Māori, and specific effects on iwi/Māori. Our analysis and engagement with communities shows this will support faster emissions reductions, and help achieve an equitable transition for the benefit of all New Zealanders – as set out in our December 2023 advice on the second emissions reduction plan.¹³ These considerations are mandated in the Climate Change Response Act 2002.

Engagement with iwi/Māori is a key mechanism that helps identify issues relevant to this NZ ETS settings advice. Following engagement, we analysed these issues further by investigating data and other types of evidence to incorporate them in our methodology to develop the NZ ETS settings advice.

The matters considered in this year's advice on NZ ETS settings include impacts of emission prices on iwi/Māori and the wide variety of approaches taken by iwi/Māori entities to their decision-making about forestry management and their NZ ETS units. This reflects the overall point, also made in our December 2023 advice, that iwi/Māori interaction with the NZ ETS is affected by the specific characteristics and historical circumstances of land owned by Māori (see also **Part 2**, specifically the section on iwi/Māori perspectives on the NZ ETS).

We also acknowledge a range of wider issues are consistently raised in our engagement with iwi/Māori that are not directly in scope for this advice. Some of these issues are better addressed by the Commission in our other functions, such as our 2023 *Advice on the direction of policy for the Government's second emissions reduction plan*. This feedback is nevertheless important and provides relevant context for the NZ ETS settings. We have provided a high-level summary of this feedback in **Part 2: Current state and role of the NZ ETS**.

12. He Pou a Rangi Climate Change Commission (2023a).

13. He Pou a Rangi Climate Change Commission (2023a).

How this advice fits with the Commission's wider work

This advice is focused on technical recommendations about the NZ ETS unit limits and price control settings, as required in the Act. The scope is limited to delivering that quantitative set of recommendations.

The NZ ETS settings advice sits within the Commission's wider work programme, which includes multiple other reports to support Aotearoa New Zealand's transition to a climate-resilient, low emissions future. Some of these reports address NZ ETS issues that fall outside the scope of this annual settings advice or have implications extending to future NZ ETS settings advice.

Between December 2023 and December 2024, in addition to this NZ ETS settings advice, the Commission is required to deliver seven reports to the Minister:

- Advice on the direction of policy for the Government's second emissions reduction plan – delivered December 2023
- The first annual monitoring report on progress towards meeting emissions budgets and the 2050 target, and an assessment of the adequacy of the first Government's emissions reduction plan – due mid-2024
- The first two-yearly progress report assessing implementation and effectiveness of the national adaptation plan – due August 2024
- Advice to enable the preparation of the fourth emissions budget and assess the need for revisions to the first, second and third emissions budgets – due December 2024
- A review of the 2050 emissions reduction target – due December 2024

- Advice on whether (and if so, how) emissions from international shipping and aviation should be included in the 2050 target – due December 2024
- Advice to inform Aotearoa New Zealand's second Nationally Determined Contribution (NDC) – due December 2024.

Our recent advice on the second emissions reduction plan¹⁴ raised several structural issues with the NZ ETS that hinder the scheme's ability to support meeting emissions budgets and the 2050 target. While this report providing advice on the NZ ETS settings cannot resolve those structural issues, the policy questions provide important context on the overall effectiveness of the scheme. We provide a summary of those contextual issues in **Part 2: Current state and role of the NZ ETS**.

The report monitoring progress towards emissions budgets due in mid-2024 must include an assessment of the adequacy of the first emissions reduction plan. This will touch on the effectiveness of the NZ ETS, given its importance for reducing emissions in the plan.

The suite of four reports due in December 2024 will look at setting new or changing existing commitments for Aotearoa New Zealand to reduce its emissions. The Government will respond to this advice and make policy decisions on these commitments in 2025. If changes are made, there will be implications for future NZ ETS settings advice.

14. He Pou a Rangi Climate Change Commission (2023a).

Te hanga me te haepapa o NZ ETS - Current state and role of the NZ ETS

The Government has choices about policy priorities and its preferred role for the NZ ETS within its wider climate policy package. This section provides commentary on the key policy questions and structural issues that form important context to our advice on technical settings for the scheme.

The wider context for this advice

The Commission's ability to develop coherent recommendations on the NZ ETS settings depends on clarity from the Government about the role of the NZ ETS within its wider climate policy approach. Aotearoa New Zealand's climate policy is rapidly evolving, and two important issues remain unresolved:

- the relative role and levels of gross emissions reductions and carbon dioxide removals in achieving Aotearoa New Zealand's domestic net emissions reduction targets, and the role the NZ ETS plays in delivering those outcomes
- how the country's Nationally Determined Contribution (NDC) will be achieved, including how offshore mitigation will be obtained and how domestic emissions reduction opportunities can be leveraged.

This creates uncertainties for managing the NZ ETS settings that are becoming more acute the longer they remain unresolved.

This part of our advice summarises key issues in this wider context. It reflects our analysis and research into critical areas where structural issues and/or a lack of policy direction pose challenges, as well as feedback from engagement with market participants and experts about the operation of the market, including representatives of iwi/Māori entities.

It covers:

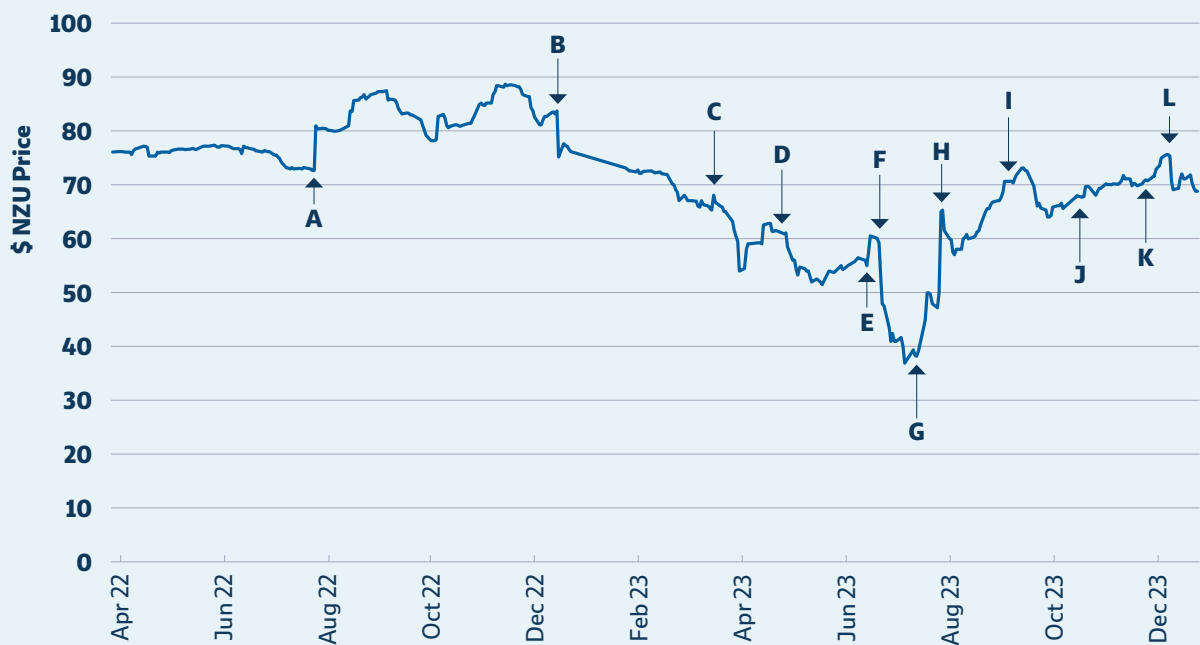
- recent NZ ETS market developments
- key areas of feedback from our targeted engagement
- issues covered in our December 2023 advice on the direction of the Government’s second emissions reduction plan¹⁵
- issues connected to our analysis for this advice about the potential role for the NZ ETS in assisting Aotearoa New Zealand to meet the NDC.

Recent NZ ETS market developments

The past 18 months have been eventful for the NZ ETS.

Figure 3 illustrates the evolution of the NZU secondary market spot price¹⁶ over 2022–2023, noting the timing of key policy and/or market events. This shows significant volatility in the emissions price associated with policy announcements and the four declined auctions held in 2023, where bids at the auctions did not meet minimum requirements so no units were sold.¹⁷

Figure 3: NZU spot prices over 2022–2023



- | | |
|--|--|
| A Commission’s first NZ ETS settings advice (2023–2027) released | G High Court announces decision on judicial review of Government’s NZ ETS settings decision |
| B Government announces decision on NZ ETS settings for 2023–2027 | H Government adopts new NZ ETS settings for 2023–2028 |
| C March 2023 auction declines | I September 2023 auction declines |
| D Commission’s second NZ ETS settings advice (2024–2028) released | J General election |
| E June 2023 auction declines | K Formation of new government |
| F Government launches NZ ETS review consultation | L December auction declines and Government announces cessation of work on NZ ETS review |

15. He Pou a Rangi Climate Change Commission (2023a).

16. Spot price data sourced from Theecanmole (2024).

17. There were insufficient bid volumes above each auction’s confidential reserve price. The confidential reserve price prevents the Government from selling units significantly below their price on the secondary market to avoid unduly disrupting the secondary market (see section 30GA(2A)(b)(ii) of the Act). The confidential reserve price is separate from the NZ ETS price control settings and is not in scope for this advice.

The 2023 auction outcomes are not a failure but rather the result of the system operating as designed. They are, however, a demonstration of low market confidence and also reflect the large amount of units in the market already.

Those auction outcomes continued earlier trends. Through 2022 the volume of bids compared to the volume of units available for sale at each auction (the cover ratio) steadily declined, until in 2023 the demand at prevailing market prices was insufficient for the auctions to clear.

We gathered further insights about these dynamics through discussions with market participants, as noted in the following section.

Key themes from engagement

Our work to build the analysis and insights that underlie this advice included engaging with a range of individuals and entities to discuss issues connected with developing the NZ ETS settings advice and to update our understanding of how the NZ ETS is operating (see also **Part 1**).

We have summarised the key themes from this engagement in this part of our advice, as much of the feedback focused on the wider contextual issues.

Our NZ ETS settings analysis is sound

Most market participants we spoke with supported the Commission's previous annual NZ ETS settings advice developed in 2022 and 2023; they expressed the view that our methodology and recommendations were generally appropriate.

More specifically, several entities indicated that the hedging-related assumptions we used to estimate the surplus were reasonable. A smaller sub-set considered that some of those assumptions were overly conservative. Overall, the feedback did not uncover major concerns about our technical analysis.

Uncertainty about rules and policy is undermining confidence in the NZ ETS

Most people we engaged with highlighted that developments over the past year undermined confidence in the NZ ETS. In addition to the then Government's decision to not adopt the Commission's recommended price control settings in 2023, they cited that Government's review of the role of forestry in the NZ ETS as a destabilising influence. In particular, they raised concerns about the lack of information in that (now ceased) review about transitional arrangements for forests already in the NZ ETS.

We heard the lack of clarity about the future of the NZ ETS was continuing to undermine investments in decarbonisation and forestry, as it was difficult to take a long-term view on the emissions price. Some stated that policy signals were currently the main driver of the NZU price rather than supply and demand.

Some stakeholders also commented that it would be beneficial if the Government defined its goals for gross emissions reductions, and for use of forests for carbon removal, in terms of meeting emissions reduction targets. They felt the (former) Government's NZ ETS review was a missed opportunity in this regard.

Feedback that forest planting is not likely to continue at rates seen in past years

There was consistent feedback that the high forest planting rates seen in recent years would not continue for the foreseeable future. In particular, very little planning was occurring for planting from 2025 onwards. This was affected by the uncertainty around the role of forestry in the NZ ETS that was created by the NZ ETS review launched in June 2023, with uncertainty persisting despite the new Government announcing in December 2023 it had stopped work on the review. Feedback around expecting a decline in forest planting was also influenced by other developments such as increases to NZ ETS fees, changes to overseas investment rules, the new National Environmental Standards for Commercial Forestry and councils' approaches to managing forestry.

More information on the NZ ETS market would be beneficial

Several market participants commented that key information essential for understanding supply and demand in the NZ ETS is not available to the market. For example, only limited information is available about the post-1989 forests registered in the NZ ETS. They noted they would benefit from additional information published by the Government in an aggregated format about the age classes and accounting approaches applying to registered forests. Improved transparency would enable market participants to analyse the market and make better-informed judgements about future NZU prices.

A number of stakeholders commented that the planned NZ ETS market governance reforms, which the Government committed to in 2023 with a view to implement from 2025, could also improve market participants' and the Government's understanding of the market.¹⁸ There was an opportunity through these reforms to introduce requirements for market participants to disclose information on unit holdings and intentions, which if published on an aggregated basis would support the Commission and the government in estimating the unit surplus and managing unit limits as well as being useful for the wider market. This type of information is collected and available in other markets such as the EU ETS.

Iwi/Māori perspectives on the NZ ETS

We heard feedback from some representatives of iwi/Māori entities, consistent with previous engagements, that iwi/Māori interaction with the NZ ETS is affected by the specific characteristics and historical circumstances of land owned by Māori.¹⁹

The price of emissions is not always factored into decision-making by iwi and other Māori landowners in the same way as it is by other entities participating in the NZ ETS. This is due to a range of factors, including broader non-financial considerations. Decisions connected with managing land owned by Māori, including about using NZUs from forests, are often subject to protracted administrative steps and can be strongly influenced by the need to weigh up a range of competing priorities, tikanga values, and kaitiaki obligations including taonga tuku iho.

We also heard from some mandated representatives that forestry in the NZ ETS was considered an important revenue opportunity for some land owned by Māori, particularly where that land is considered to have comparatively limited opportunities for other uses. However, some feedback indicated that commercial approaches to managing forestry, and selling associated NZUs to maximise income were not unusual, and such approaches may become more common in the future. This underscores that we heard from a diversity of views and decisions among some Māori landowners and foresters in respect of the NZ ETS.

18. Ministry for the Environment (2023a).

19. The terms 'land owned by Māori' and 'Māori landowners' are used in this report to cover the collective owners of Māori land (as regulated by Te Ture Whenua Māori Act 1993) and other Māori land entities which serve similar purposes. The distinctive characteristic is the collective ownership structure and its impact on land management and investment opportunities (as in our advice about 'Māori-collective landowners' in *Ināia Tonu Nei*).

A common concern voiced during this engagement was the perceived inequity within certain aspects of the NZ ETS, particularly in the forestry rules. These inequities were considered to create barriers that hinder the ability to fully benefit from the opportunities presented by the scheme or properly understand the risks that come with participation. For example, when the NZ ETS was introduced, there was a lack of information and support provided by the Crown for Māori landowners to decide to participate in the scheme. We again heard that the complexity and high stakes involved in engaging with the NZ ETS poses numerous challenges particularly for entities without sufficient resources, including difficulty accessing capital, to secure the necessary technical advice, build in-house expertise or make the initial investment in land preparation and planting.

In preparing our December 2023 advice on the policy direction for the second emissions reduction plan we heard similar feedback in our engagement and consultation activities with representatives of iwi/Māori communities and collectives. This included a diversity of viewpoints which indicate a careful and collaborative approach is necessary, including regarding co-design and related aspects under Te Tiriti/The Treaty. This is discussed in detail in our advice to the Government about the NZ ETS policy for the second emissions reduction plan, which is the appropriate policy mechanism to address these wider issues (see Chapter 5 Emissions pricing of that report).

We note too that the Commission continues to build engagement as a relationship-based approach mandated by section 5M(f) of the Act, which requires the Commission to consider te ao Māori, and thereby tikanga, to strengthen our advice. This advice is part of an ongoing engagement process, acknowledging diversity of perspectives, needs, and aspirations within te ao Māori in relation to the role and operation of the NZ ETS.

Policy direction needed in the second emissions reduction plan

The Government's second emissions reduction plan, due in December 2024, provides an opportunity for clarification of key policy issues that impact the NZ ETS operation and its overall effectiveness to support emissions reduction.

In December 2023, the Commission provided advice to the Government on policy direction for that plan, setting out issues and options for resolving them. This section of our advice summarises those key policy matters that relate to the operation of the NZ ETS, and in particular that limit the effectiveness of adjustments to unit levels and price controls.

These issues have implications for the structure and management of the NZ ETS and its place within the overall climate policy package. Prompt attention to these issues would provide opportunity to achieve increased market stability and enable the scheme to help achieve emissions reductions in line with Government targets.

Achieving gross emissions reductions and carbon dioxide removals

Decisions for the Government about the role and levels of gross emissions reductions and carbon dioxide removals

Achieving gross emissions reductions and the relative role of carbon dioxide removals is a key focus of the Commission's recent advice on the policy direction of the second emissions reduction plan. We briefly recap that advice here to highlight its relevance to the NZ ETS settings; see also Chapter 4: A path to net zero and Chapter 5: Emissions pricing of that report.

The Government has not specified the intended level of gross emissions and carbon dioxide removals for achieving the second and third emissions budgets. It is important for a well-managed transition to a low emissions, climate-resilient economy that the Government clarifies and communicates its approach to gross and net emissions reductions. It will impact how emissions budgets and the net zero component of the 2050 target are met, and the risks and impacts Aotearoa New Zealand will face as a result.

Ambiguity about the relative role of gross emissions reductions and carbon dioxide removals creates uncertainty for the NZ ETS. This is illustrated in the earlier engagement section noting feedback that the recent NZ ETS review was one of several factors contributing to likely reductions in planting rates compared to high rates in recent years.

As part of our advice on the direction of policy for the second emissions reduction plan, the Commission recommended the Government commit to specific levels of gross emissions for the second and third emissions budgets, and provide indicative levels of gross greenhouse gas emissions and carbon dioxide removals out to 2050 and beyond, to guide policy decisions.

This issue is also relevant for setting emissions budgets. The first three emissions budgets that have been set by the Government are based on a pathway developed by the Commission in its 2021 *Ināia tonu nei* advice²⁰ reflecting the Commission's view that gross emissions should be reduced as much as is feasible. This approach was not clearly set out in the Government's policy in the first emissions reduction plan when it set the emissions budgets. The policies to achieve emissions budgets, especially the NZ ETS, are not set up in a way that is likely to result in outcomes aligned with the pathway underlying these budgets and the sector sub-targets in the first emissions reduction plan.²¹ In 2024 the Commission will advise on the fourth emissions budget. This may also include advice on revisions to the first three emissions budgets as set out under the Act. Consultation on the draft advice is planned to begin in April.

Structural issues that hinder NZ ETS support for achieving targets

Aotearoa New Zealand's climate policies need to encourage both decarbonisation and forest planting, as both are essential in the transition to a low emissions economy. The NZ ETS is a key tool for meeting emissions budgets and the 2050 target, but there are structural issues that prevent it from fulfilling these objectives in a stable way over time:

- In the near term, the NZ ETS is likely to encourage extensive afforestation but only limited gross emissions reductions. This is a result of the way it allows carbon dioxide removals by forests to undermine the incentive to reduce emissions at their source.
- From the mid-2030s onwards, the NZ ETS will not provide incentives for the forests needed to achieve the 2050 target level of net zero long-lived gas emissions by 2050.

In our advice on the second emissions reduction plan, the Commission recommended amending the NZ ETS to separate the incentives for gross emissions reductions from those applying to forests. If the Government chooses not to pursue this approach, it will be important to clarify how objectives for gross emissions reductions will be achieved, for example through strengthening complementary policies instead.

Our advice on the second emissions reduction plan also recommended that durable incentives for forests be provided through to and beyond 2050.

For both issues, our recommendations emphasised that these changes must be developed in partnership with iwi/Māori under Te Tiriti o Waitangi/The Treaty of Waitangi. When considering emissions pricing incentives, these must take into account the unique characteristics and historical circumstances of land owned by Māori.

These issues have direct relevance given the way forestry can affect the build-up of surplus units in the scheme, creating challenges for aligning the unit limit settings with emissions reduction targets. While several factors have contributed to the current surplus of units in the NZ ETS, the increase over the past year has primarily been driven by forestry. If the status quo is maintained, dynamics related to forestry units including changes to harvest decisions could create the need for further, more extreme adjustments to NZ ETS unit limit settings that would undermine the scheme's stability and effectiveness. See the discussion in **Part 3 Step 5: Set the unit surplus reduction volume** for further information.

20. He Pou a Rangi Climate Change Commission (2021).

21. Ministry for the Environment (2022b) p32.

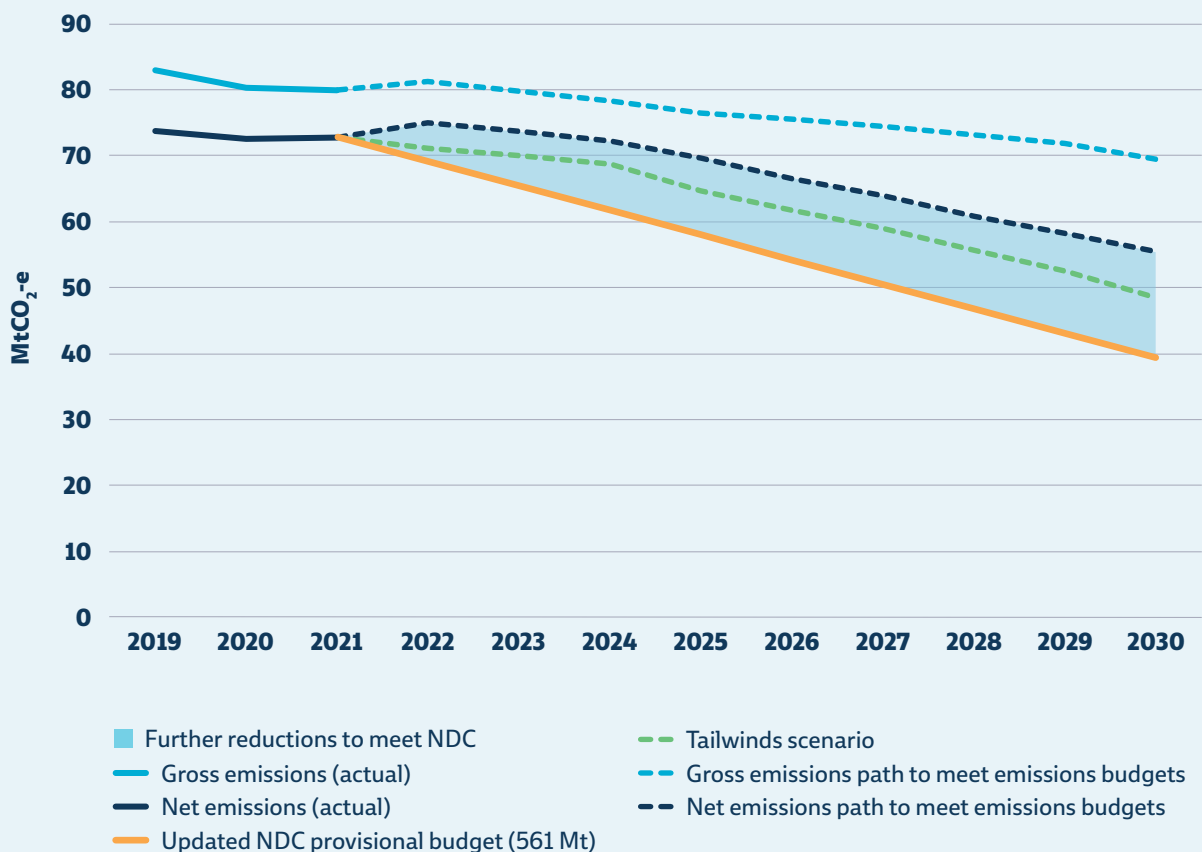
Clarifying the strategy and actions to achieve Aotearoa New Zealand’s NDC

The Act provides a framework for Aotearoa New Zealand to develop and implement clear and stable policies that contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° C above pre-industrial levels.

Nationally determined contributions (NDCs) represent a country’s commitment under the Paris Agreement and must reflect the country’s highest possible ambition. Aotearoa New Zealand’s first NDC target is to reduce net emissions by 50% below gross 2005 levels by 2030.

Meeting the NDC requires emissions reductions beyond the levels required to meet domestic emissions budgets. A pathway for meeting the NDC compared to emissions budgets is set out in **Figure 4**, based on the Commission’s updated calculation of the provisional NDC budget.²² The shaded area represents the further emissions reductions needed, which we estimate at 107 Mt CO₂e. Our previous analysis²³ and that from the Government²⁴ indicate that significant offshore mitigation is likely required to fill this gap. This is due to the time required for technological advancement and behaviour change to reduce emissions domestically, and the need to balance domestic emissions reductions with managing economic and social disruption.

Figure 4: The emissions pathway for meeting emissions budgets 1 and 2 compared to the NDC



22. The methodology for this figure is discussed in Part 3: Unit limits under step 1.

23. He Pou a Rangi Climate Change Commission (2021).

24. Te Tai Ōhanga The Treasury and Ministry for the Environment (2023).

There may be some scope to enhance domestic action to meet more of the NDC domestically. This will depend on policies implemented as well as external factors such as economic conditions and the pace of technological change.

The most optimistic scenario, Tailwinds, considered in the Commission's first advice on emissions budgets,²⁵ gives a sense of the type of scale that could be possible. It assumed favourable conditions, particularly in terms of technology, supported by strong policies. The Tailwinds scenario would see the gap between the emissions budget 1 and 2 levels and the NDC close by a further 44 Mt CO₂e of domestic emissions reductions to 2030, still leaving 63Mt CO₂e to be met by offshore mitigation.²⁶

Since our analysis in 2021, conditions have changed and real efforts to reduce emissions have accelerated, altering the emissions path that the country is following and could follow in future. The Commission's upcoming monitoring report and draft advice on emissions budgets to be published in mid-2024 will provide our updated insights on emissions trends and reduction potential.

For domestic emissions reductions to continue and potentially scale up towards levels seen in the Tailwinds path, however, would require a comprehensive and coherent package of climate policies, including the NZ ETS working together with other measures. The benefit of making these concerted efforts would be to bring forward the benefits of the low emissions transition, as well as reduce the amount of offshore mitigation that Aotearoa New Zealand would need to purchase.

Timely policy decisions are also critical. There is limited time available before 2030 for the implementation of further domestic emissions reduction efforts. Under the rulebook developed to implement the Paris Agreement, each country's NDC²⁷ must set out how it will track and demonstrate its progress on meeting the

NDC.²⁸ In terms of supporting reductions overseas, Article 6 requirements indicate it is not a viable approach to only turn attention to offshore mitigation in 2030²⁹ (see the section, **Obtaining offshore mitigation**, further below).

Determining the role of the NZ ETS in achieving the NDC

The NZ ETS unit limit and price control settings are required to accord with the NDC alongside the other emissions reduction targets.

The policy questions about meeting the NDC require resolving to enable the Commission to recommend NZ ETS settings that are coherent with wider climate policy and that accord with the NDC. We are flagging these matters for urgent attention as the approach used so far for the settings may become unsustainable in future.

We have identified opportunities to use the NZ ETS to support a stronger constraint on domestic emissions. These are based on non-NZ ETS emissions reduction policies and other expected developments in emissions trends. This could help support a higher level of achievement of the NDC domestically. This is set out, using the NZ Steel GID1 project as an example, in **Part 3 Step 1: Align with emissions reduction targets**. We have not incorporated this into our recommended settings this year as the Government does not yet have a clear policy on its preferred role for how the NZ ETS interacts with other climate policies or helps to meet the NDC.

In 2023, the Government took a step towards clarifying its intentions for meeting the NDC by developing a high level NDC strategy.³⁰ It includes a principle of prioritising domestic action to reduce emissions, which in turn has potential to reduce reliance on emissions reductions offshore. However, it is not clear how this principle will be put into practice and what the role of the NZ ETS will be in achieving the NDC strategy.

25. He Pou a Rangi Climate Change Commission (2021).

26. This analysis was undertaken in 2021 and does not incorporate developments since then, such as methodological updates to greenhouse gas inventories or assumptions used by the government in the preparation of recent emissions projections. Updated Commission analysis on the potential for domestic emissions reductions for meeting emissions budgets will become available later in 2024 as part of its draft advice on the fourth emissions budget.

27. UNFCCC (2021).

28. UNFCCC (2018).

29. UNFCCC (2022).

30. Ministry for the Environment (2023b).

The Commission has therefore broadly maintained the approach both we and the Government have taken in previous years in terms of how the NZ ETS relates to the NDC, which is to align the settings with emissions budgets as the domestic contribution to meeting the NDC. The viability of this approach relies on the Government making progress on a credible plan and securing offshore mitigation for meeting the NDC.

It is becoming increasingly urgent that the Government outline a clear plan for meeting the NDC to support the stable operation of the NZ ETS, including to enable the predictable management of the NZ ETS settings over time. While some progress has been observed over the past year with the NDC strategy, the Commission will need to see further concrete steps by the Government. The absence of such steps and further uncertainty will call into question the ability of the current approach to accord the settings with the NDC.

Obtaining offshore mitigation

It is clear that part of the NDC will need to be met by Aotearoa New Zealand helping other countries to achieve emissions reductions. If done in the right way, this can be a valuable contribution to the global effort on climate change. Partnering with developing countries on emissions reduction initiatives can deliver offshore mitigation while improving the lives and environment for people in these countries.

To our knowledge the Government has not yet secured access to any offshore emissions reductions or made decisions about whether those reductions will be delivered or funded via the NZ ETS.

The NZ ETS could be used to deliver some of the emissions reductions in other countries that are needed to meet the NDC if participants were able to directly purchase and surrender international units. Before deciding to allow this, it would be important for the Government to consider the implications for equity and the proper functioning of the NZ ETS, particularly in terms of preserving the ability of the NZ ETS to continue to encourage domestic emissions reductions.

Alternatively, the Government could purchase offshore emissions reductions directly, for example through bilateral agreements with other countries. Other countries are making progress in their pursuit of bilateral mechanisms to cooperatively achieve emissions reductions outside their own borders, including Switzerland, Sweden, South Korea, Japan, and Singapore.³¹

It is also not clear how the costs of obtaining offshore emissions reductions will be distributed between emitters in NZ ETS sectors and emitters from the agriculture sector, or whether they will be primarily borne by the taxpayer.

The Commission's advice is informed by the Government's statements that it is working on obtaining offshore emissions reductions. Without confirmation of how or when this will be achieved, 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 these uncertainties continue without resolution, the more difficult it becomes to use the NZ ETS to help achieve the offshore emissions reduction component of the NDC.

“ Without confirmation of how or when [offshore emissions reductions] will be achieved, and whether or how costs will be passed on to domestic emitters, NZ ETS participants face significant uncertainty about the role of the scheme



31. UNEP CCC (2024).

Te herenga utu – Unit limits

In this section we provide advice on the unit limits for the NZ ETS. The unit limits 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 achieve these targets.

The Climate Change Response Act 2002 (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 (NZUs for planned auctions and cost containment reserve NZUs)
- a limit on approved overseas units
- an overall limit on units (NZUs available by auction, overseas units, and industrial free allocation).

Method for determining the unit limits

In our advice for the previous two years, we applied a seven-step method to determine the unit volumes. We have used the same approach to developing this year’s advice, set out below:

- 1 Align with emissions reduction targets
- 2 Allocate volume to NZ ETS and non-NZ ETS sectors (‘set the emissions cap’)
- 3 Technical adjustments
- 4 Account for industrial free allocation volumes
- 5 Set reduction volume to address unit surplus – including set a base surplus reduction volume (5a) and adjust for unit discrepancies (5b)
- 6 Set approved overseas unit limit
- 7 Calculate the auction volume and assess risks

“ *Our method for calculating unit limits follows an adaptive management approach ...some uncertainty is unavoidable as it is built into the design of the NZ ETS*



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 annual auction volumes.

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

The consolidated recommendations for unit limits, including the overall unit limits and a comparison with current settings, are presented in **Part 5**.

Adaptive management

Our method for calculating unit limits follows an adaptive management approach, consistent with the system under the Act. The annual updates process allows us to monitor trends and new information over time so assumptions and judgements that informed existing regulations can be reassessed and amended in future settings advice if needed.

A key reason this annual review system was established is that the Government’s decisions on these settings must be made based on inherently uncertain information such as emissions projections or forecasts of unit flows. This creates a need to

regularly revisit the settings. As time passes, actual data becomes available that inevitably differs from the projections that informed the settings approved in regulations previously.

We have heard concerns that some elements of our analysis are uncertain. However, some uncertainty is unavoidable as it is built into the design of the NZ ETS. Examples include the way that the volume of industrial free allocation in the NZ ETS changes with firms’ production levels each year, and the voluntary participation of post-1989 forests which means that the NZ ETS’s coverage of forestry emissions and removals can change significantly over time as forests register or deregister from the scheme.

As we have applied the unit limits method, we have also considered how to manage the risks created by uncertainties in our estimates. This is most relevant to Step 5 in relation to the estimate of surplus units and is discussed further in that sub-section.

1 Step 1: Align with emissions reduction targets

The first step for advising on the unit supply volumes in the NZ ETS is determining the most appropriate way to align unit limits with Aotearoa New Zealand’s emissions reduction targets. Once this is determined, the unit limit volumes can be calculated in alignment with achieving these targets.

Our previous advice has been to align unit limits with the Government's current domestic emissions budgets, as the stepping-stones to the 2050 target and the intended domestic contribution to the NDC (the 'status quo').

Previous assessments from the Commission³² and the Government³³ have shown that part of the NDC will need to be met through offshore mitigation, due to the time required for technological advancement and behaviour change to reduce emissions domestically, and the need to balance domestic emissions reductions with managing economic and social disruption.

The Government has not decided on the NZ ETS's role in delivering offshore mitigation to meet the NDC. The NZ ETS could be used to deliver some offshore mitigation but it would not be possible for it to deliver the full amount needed, as there is not enough planned auction volume under the current NZ ETS settings and architecture. 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.

Analysis and findings

We have analysed new information since our 2023 NZ ETS settings advice³⁴ that indicates it is feasible to use the NZ ETS to help lock in lower domestic emissions below the levels set in emissions budgets. Any emissions reductions beyond the minimum required by budgets (known as overachieving budgets) increases the likelihood of meeting later emissions budgets, the 2050 target and the NDC.

Our view, consistent with our advice in *Ināia tonu nei*, is that Aotearoa New Zealand should aim to overachieve emissions budgets domestically so long as the impacts are manageable.

In addition to considering the status quo, we identified two options for aligning unit limits with New Zealand's emissions reduction targets:

- **Option 1:** Unit limits are set in line with current domestic emissions budgets, along with an adjustment to reflect the methodological updates to Aotearoa New Zealand's latest Greenhouse Gas

Inventory (GHG Inventory³⁵). These updates reflect refinements to emissions calculations reported in the 2023 GHG Inventory because of better data and information, rather than because of actions that reduce emissions.

- **Option 2:** Unit limits are set in line with the current domestic emissions budgets, with reductions to reflect the methodological updates to the GHG Inventory and projected additional emissions reductions due to non-NZ ETS policies that reduce demand for NZUs. The box on page 42, *Choices about interactions between the NZ ETS and non-NZ ETS emissions reduction policies*, provides further information on this option.

Reducing the unit limits under either option will maintain the same level of effort on NZ ETS sectors as intended when emissions budgets were set and increase the probability that the NZ ETS settings will enable emissions budgets to be met. It also affects the amount of offshore mitigation that may be needed to meet the first NDC (see the box on page 41, *NDC provisional budget*, for further explanation).

We consider Option 1 to be the minimum preferred approach over the status quo. It is consistent with the intent of emissions budgets and the first emissions reduction plan. It can help address the changes in the abatement gap between emissions budgets and the first NDC caused by GHG Inventory updates. Option 1 helps prevent the NZ ETS sectors' share of this abatement gap from being larger than it otherwise would be over 2025-2030³⁶ (by around 6 Mt CO₂e). These points are explained briefly below.

Option 2 reflects an approach for incorporating aspects of the latest information about future emissions trends. It would place New Zealand in a more favourable position than Option 1 to meet a greater share of the NDC domestically.

However, it presents a choice to the Government about how it manages the NZ ETS when non-NZ ETS policies result in permanent emissions reductions in NZ ETS sectors, which we discuss in the box on page 42.

32. He Pou a Rangi Climate Change Commission (2021).

33. Te Tai Ōhanga The Treasury and Ministry for the Environment (2023).

34. He Pou a Rangi Climate Change Commission (2023b).

35. Ministry for the Environment (2023c).

36. This includes the settings for year 2030 even though our recommendations only go to 2029

NDC provisional budget

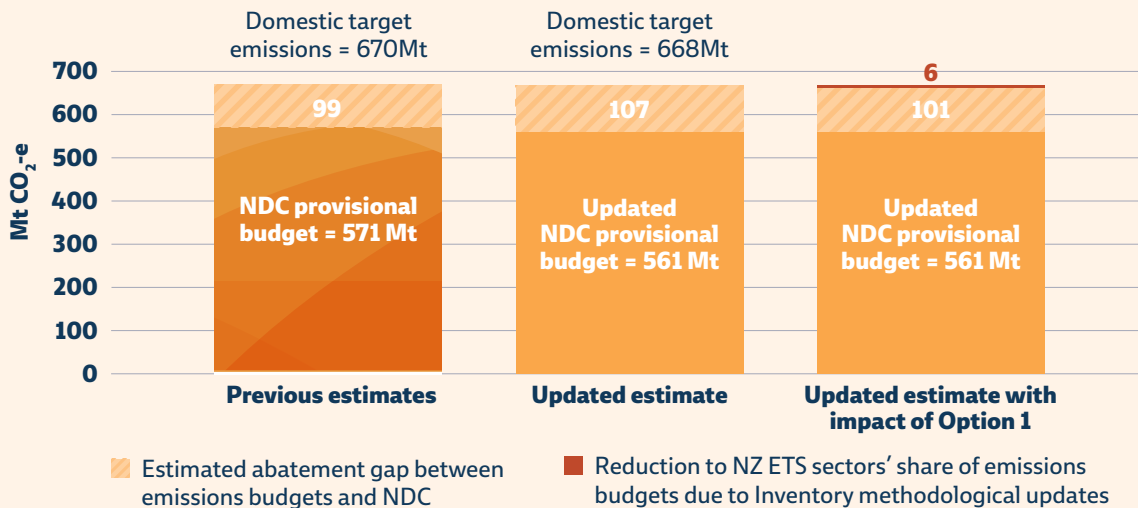
The headline NDC target (net emissions are 50% below gross 2005 levels by 2030) is expressed in point-year terms, but it is managed as a multi-year emissions budget over 2021–2030. Its budget volume is calculated against a 2005 reference year and emissions in 2020.³⁷

Aotearoa New Zealand’s budget for the first NDC (2021–2030) will not be fixed until the end of the target period, which differs from previous target budgets under the Kyoto Protocol. If the Government updates the NDC provisional budget each year based on annual emissions reporting, this will help track progress toward achieving the NDC.

The NDC headline target and how it is expressed as a budget has been previously agreed by the Government and communicated internationally.

Using the same methodology to express the headline target in budget terms that appears to be set out by Cabinet in 2022,³⁸ we estimate the NDC budget has provisionally decreased from 571 Mt CO₂e to 561Mt CO₂e. This increases the total estimated gap between domestic target emissions and the NDC to be met by offshore mitigation to 107Mt CO₂e (an increase of 8Mt from 99Mt in our 2022 advice³⁹) as shown in **Figure 5** below. Note, this figure is an estimate only and is subject to change, for instance when the next inventory is published in April 2024.

Figure 5: The previous and updated provisional NDC budget and abatement gap between emissions budgets and the NDC



Notes:

- Domestic target emissions are made up of the allowed emissions under gazetted emissions budgets 1 (305Mt) and 2 (290Mt) plus target emissions for 2021 as forecasted at that time, which changes with inventory data.
- The NDC provisional budget also includes Tokelau’s emissions.

- The Cabinet paper in which the Government agreed the NDC update in 2022 is available on the Ministry for the Environment website, see Ministry for the Environment (2022a). The Cabinet minute is not published but we understand the first NDC is based on recommendation 10(ii), p 35.
- Starting a straight-line trend from 2020 net target accounting emissions and applying the latest historical emissions data from the 2023 GHG Inventory using the headline NDC target of - 50% reduction by 2030. There is some ambiguity about how the NDC budget is to be updated for new data since the NDC commits to a 50% reduction from actual 2020 net emissions, and also to a 41% reduction from the level of the net 2020 target (5% below 1990 levels). When it was set these approaches resulted in the same budget, but with revised emissions data they differ slightly.
- He Pou a Rangi Climate Change Commission (2022a).

Choices about interactions between the NZ ETS and non-NZ ETS emissions reduction policies in Option 2

Each government has its own priorities and preferred approaches to climate action. One of the choices is about how the NZ ETS unit limit settings should respond to non-NZ ETS emissions reduction policies.

Since our advice on emissions budgets in 2021, conditions have changed and real efforts to reduce emissions have accelerated. As an example, the government's 2023 emissions projections⁴⁰ indicate declining emissions for transport, influenced by dynamic factors including increases in petrol prices associated with the NZ ETS, non-NZ ETS policies relating to fuel use or vehicle type which can increase or decrease emissions, and also simply changes to behavioural trends such as post-Covid changes to working from home arrangements.

There are examples of where non-NZ ETS policies that reduce emissions and demand for NZUs could allow reductions to the NZ ETS unit limits. One (of several) possible examples is where, with co-funding from the Government Decarbonising Industry (GIDI) Fund, NZ Steel have announced the installation of an electric arc Furnace (EAF) at Glenbrook Steel Mill. NZ Steel expects to have the EAF running by 2027, reducing the company's emissions by 800,000 tonnes of CO₂-e per annum, which will be a permanent reduction to its demand for NZUs. The EAF was not anticipated within the Commission's scenario pathway analysis in our 2021 advice on emissions budgets, unlike other emissions reduction projects funded by GIDI.

There are two approaches the Government could take in response to non-NZ ETS policies which change demand for units:

1. Use these complementary emissions reduction policies to reduce the impact of emissions prices on households and businesses. This would involve maintaining the emissions constraint (cap) on the NZ ETS as before, irrespective of the complementary policies' effect on emissions.

2. Use these complementary emissions reduction policies and the NZ ETS together to achieve greater domestic emissions reductions to help meet the NDC (Option 2). This would involve tightening the NZ ETS emissions cap to lock in the emissions reductions achieved by complementary policies.

Under the first approach, if emissions reductions induced by non-NZ ETS policies are implemented without a corresponding tightening of supply, it would lead to diminished upward pressure on the emissions price because of decreased NZU demand. The incentives for emissions reductions from NZ ETS sectors would be lower and the emissions reductions from the non-NZ ETS policy would not be locked in as additional. This is sometimes referred to as the "waterbed effect". This approach would contribute to lower NZ ETS costs flowing through to households and businesses.

Under the second approach, tightening the NZ ETS unit limits would help lock in the material downwards shift in emissions caused by the complementary policy as an additional contribution to meeting targets, especially the NDC, while maintaining the incentives for other NZ ETS participants at the same level as before. The Government does not have a policy on how the NZ ETS should be managed in light of these circumstances, nor was this clarified when past government policies were announced.

The Commission has previously stated that the Government should aim to overachieve on emissions budgets. We have now identified that there are opportunities to use the NZ ETS to help support this, but this needs to be considered together with other aspects of climate policy. It is important that the Government clarify its preferred approach to this issue in the second emissions reduction plan so that the Commission's NZ ETS settings advice can be situated within a wider, coherent policy package.

40. Ministry for the Environment (2023d).

On balance, we have concluded that the NZ ETS unit limits should align with current domestic emissions budgets with a reduction to reflect the methodological updates to the GHG Inventory (Option 1). This will keep them up to date with emissions reporting and prevent them from contributing to a widening gap between domestic emissions and the first NDC, without creating additional effort for NZ ETS sectors.

Tightening unit limits further in line with the approach described in Option 2 is a viable alternative option. However, in the absence of clear policy direction from the Government, we have deferred advising adoption of Option 2. This is a key issue that the Government should develop and communicate its policy direction in the second emissions reduction plan.

Once the Government has communicated its policy direction, the Commission will be able to provide future advice on the NZ ETS settings within the context of a wider, coherent policy package. It will also provide more certainty for NZ ETS participants about the role of the scheme and the potential future impact of non-NZ ETS policies on the price and supply of units.

2 Step 2: Allocate volume 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. This is sometimes referred to as setting the emissions cap, where the "cap" refers 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 pathways of the sector sub-targets in the first emissions reduction plan.⁴¹

Analysis and findings

Our recommended allocation of volume to NZ ETS and non-NZ ETS sectors is based on the same methodology used in our previous advice.⁴² In our methodology we assume that almost all net forestry removals are allocated to NZ ETS sectors. We have incorporated this in setting the emissions constraint for NZ ETS sectors.

The minor change in volumes is due to our proposal under Step 1 to account for methodological updates in the GHG Inventory and an updated estimate of the portion of synthetic greenhouse gas (SGG) emissions outside of the NZ ETS because they are covered by the SGG levy.

Further detail on these emissions and volumes can be found within the Technical Annex 1: Unit limit settings separately published on our website.

41. Ministry for the Environment (2022b) p32.

42. He Pou a Rangi Climate Change Commission (2022a) and (2023b).

3 Step 3: Technical adjustments

In this step we identify differences between past emissions reported in the NZ ETS and levels reported in the GHG Inventory. We also investigate possible underlying causes, and whether any identified differences justify adjustments to unit volumes.

Analysis and findings

In 2022 and 2023 we identified that the NZ ETS reported lower emissions for the liquid fossil fuels (LFF), coal and steel sectors compared to the GHG Inventory. We previously proposed two technical adjustments:

- reduce unit limits volumes by 0.80 million units per year to adjust for LFF
- reduce auction volumes by a fixed percentage of 16% of projected coal and steel emissions per year.

After originally not applying the technical adjustments until the underlying causes were better understood, the Government applied the technical adjustments in 2023.

In our most recent analysis, the differences observed between coal and steel production in the GHG Inventory and the NZ ETS no longer persisted in 2021 emissions. We consider this is primarily due to a previous technical error in emissions reporting that has now been resolved by the Government.

The observed discrepancy within LFF emissions may be related to the classification of Liquid Petroleum Gas (LPG). LPG is classified as an LFF in the GHG Inventory but as stationary energy within the NZ ETS. In our updated analysis, we combined the emissions categories of LFF and gas to ensure LPG was accounted for despite the different categorisation. There is still a historical discrepancy of approximately 3% in total LFF and gas emissions between the NZ ETS and the GHG Inventory.

Based on our updated analysis, we propose that:

- the technical adjustment related to coal and steel has been addressed and does not need to be accounted for
- a technical adjustment is still needed for the LFF and gas discrepancy, using an updated methodology to reduce unit limit volumes by 3% of projected LFF and gas emissions per annum (between 0.70 – 0.75 million units per year across 2025–2029).

4 Step 4: Account for industrial free allocation

Industrial free allocation refers to the amount of free NZUs provided by the Government to entities whose activities are both emissions-intensive and trade-exposed (EITE). Industrial free allocation reduces the total amount of NZUs available for the Government to auction within the emissions volume allocated to NZ ETS sectors. The amount of NZUs given out each year via industrial free allocation is not determined as part of the NZ ETS settings annual process. The rules governing industrial free allocation are in separate provisions of the Act and associated regulations.⁴³

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

In 2023 the Government passed the Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill. This year, the Government intends to update allocative baselines and the electricity allocation factor used to calculate the volume of units provided to EITE firms each year. The updates are expected to reduce industrial free allocation volumes, which would allow auction volumes to increase. However, for this advice, we do not yet have sufficiently certain information to reliably incorporate the updates into the industrial free allocation forecast.

Analysis and findings

Our industrial free allocation forecast has reduced since our previous advice by between approximately 0.2 to 1.0 million units per year. Expected industrial free allocation now totals 26.4 million units over the period 2025–2029, approximately 25% of the total emissions volume allocated to NZ ETS sectors.

There are two key reasons for this reduced forecast:

- An additional year of data shows that actual allocations for 2022 were lower than previously forecast, which reduces the starting point for future forecasts.
- We included a new assumption that the allocation volume for steel manufacturing will reduce by approximately 0.8 million NZUs per year from 2027 onwards.⁴⁴

Incorporating updates into the industrial free allocation forecast

By the time the Government is considering and finalising its decisions on the NZ ETS settings for 2025–2029, it may have more detailed information that enables quantification of the impact of the changes to the industrial free allocation baselines and electricity allocation factor. We encourage the Government to incorporate this information based on the method used by the Commission in Step 4. Incorporating this information at the earliest opportunity will help market participants form accurate expectations about unit supply and prices.

43. 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.

44. This is based on NZ Steel's plan to install an electric arc furnace. The exact arrangements for NZ Steel's industrial free allocation after this project has been implemented are unclear. This assumption may need to be updated over time if this is further clarified.

5 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 present risks of enabling emissions exceeding 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:** a discrepancy adjustment developed to address potential updates to unit limits that are unable to be made due to regulatory limitations around when settings can be updated in the 5-year rolling process.

Analysis and findings

Step 5a: Set surplus reduction volumes

Base surplus estimate

Our estimate of surplus units is based on subtracting three categories of units that we consider unlikely to be available to the market from the total volume of units held in private accounts (sometimes referred to as the stockpile):

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

This year we have new data and information that has increased our central estimate of the volume of surplus units. Applying this data in line with our methodology used in previous advice, our central estimate of the surplus has increased by 19 million units from 49 million units (within a range of 33–66 million) to 68 million units (within a range of 51–84 million).

We discuss the contributing factors to the increase in surplus estimate in the sections **Total unit holdings**, **Pre-1990 forest allocation units held long term** and **Units held for hedging by emitters**.

Total unit holdings

Total unit holdings have increased from 144 million in 2022, to 161 million.⁴⁵ This is a significant increase considering no units were sold at Government auctions in 2023.

The increase in total unit holdings is primarily related to a sharp rise in allocations of forestry units, due to a large increase in the area of forest registered in the NZ ETS.⁴⁶

Units held for post-1989 forest harvest liabilities

Since our last advice, there has been a significant net increase of around 14 million post-1989 forestry units in the NZ ETS. This is associated with allocations of forestry units resulting from the end of the third mandatory emissions reporting period for forestry (MERP3, 2018–2022) combined with the large increase in post-1989 forests registered into NZ ETS in 2022 noted above.

As a result, our estimate of units held for harvest liabilities increases to 58 million, up 6 million units from our 2022 advice.⁴⁷ Our methodology to determine this estimate of the forestry units that do not contribute to the surplus is based on what we used previously, with minor refinements, and is detailed in the separately published Technical Annex 1: Unit limit settings on our website.

The remainder of the forestry units now in the scheme, including due to the large area of newly registered post-1989 forests, contribute to the surplus. These units are from forests that are expected to remain permanently and therefore have no harvest liabilities, or they are units from production forests that do not need to be surrendered at harvest (sometimes termed “low risk” or “safe carbon” by the forestry industry). Approximately 22% of forests registered in MERP3 opted to use averaging accounting, meaning units they earn on first rotation forests will never have to be surrendered as long as the forest is replanted.

Many units allocated to foresters in 2023 correspond to removals that do not count towards Aotearoa New Zealand’s current emissions reduction targets, as the removals have already been counted against the previous target for 2013–2020. The effect of these units, if they are available for use by emitters, is no different from other units in the market – which is to enable further emissions, rather than to offset them.

45. As of 30 September 2023, see Environmental Protection Authority (2024).

46. As noted in last year’s advice, in 2022 more than 200,000 hectares of post-1989 forest registered into the NZ ETS, increasing the area of post-1989 forest covered by the scheme by almost 70%. Last year, we considered this change in step 2 of the unit limits methodology, but were unable to assess its impact on the surplus in step 5 due to insufficient information. Data from emissions returns related to these forests submitted in 2023 has now enabled this analysis.

47. He Pou a Rangi Climate Change Commission (2022a).

Post-1989 forestry units compared to carbon dioxide removals in target accounting

While post-1989 forestry units in the NZ ETS are earned for removals of carbon dioxide from the atmosphere, in some circumstances once they enter the market they should be regarded as permits to emit rather than as offsetting emissions occurring now or in the future. This is due to a mismatch in the timing of how carbon dioxide removals by forests are counted towards national emissions reduction targets and how post-1989 forestry units are used in the NZ ETS.

For targets, all carbon dioxide removals by post-1989 forests are accounted for using New Zealand's target accounting method, whether a forest is registered in the NZ ETS or not, and the removals are accounted for in the year that they occur. The NZ ETS does not align with this, as the units can be allocated up to five years in arrears and can be used for surrenders at any time in the future. For example, many of the units allocated to forests in 2023 relate to removals that occurred prior to the beginning of Aotearoa New Zealand's current emissions reduction targets (i.e. prior to 2021 for the NDC or prior to 2022 for the first emissions budget), given MERP3 covered the 2018-2022 period.

Pre-1990 forest allocation units held long term

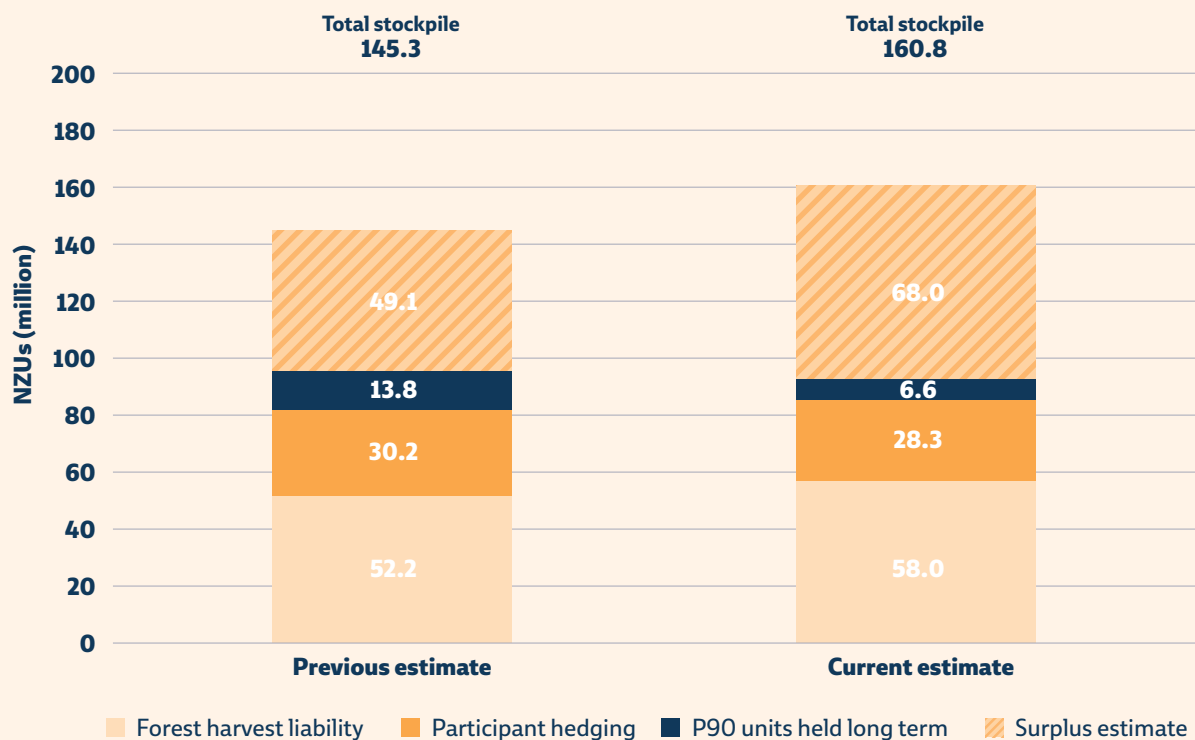
New data about the transfer of pre-1990 allocation units out of their original recipients' accounts indicates that they are being sold at a faster rate than previously projected, allowing them to be used by participants for additional emissions. To account for this, we have updated our estimate of the volume of pre-1990 units that are likely to become available for sale and reduced our estimate of units held long-term from 14 to 7 million.

Units held for hedging by emitters

There is a minor reduction in our estimate of the volume of units held by non-forestry participants for hedging. This is due to emissions reductions based on methodological updates to the GHG Inventory, and the reduction in hedging requirements by NZ Steel from 2027.

We also adjusted the hedging assumption for industrial process participants by making a minor refinement to a smaller amount hedged over three years, based on updated information from the sector.

Figure 6: Comparison of our previous and current estimated breakdown of unit holdings in private accounts (the stockpile)



Reducing the surplus over time

In our previous advice, we subtracted the surplus reduction volume from the volume available to auction each year to encourage participants to use units already available in the market. This approach reduces the risk the surplus poses to achieving emissions budgets. The annual reduction volume was intended to reduce the surplus to zero by 2030 ('the status quo'), with the reduction each year calculated as a constant proportion of the cap.

As we are required to recommend NZ ETS settings that accord with emissions reduction targets, in light of the increased surplus estimate, we have reassessed the unit surplus reduction volume. Over time, the total surplus reduction volumes need to increase to support accordance with emissions budgets. Therefore, we have also reassessed if the previous timeframe to reduce the surplus to zero (2030) remains appropriate.

Given the scale of the increase to the surplus, we have also considered whether special circumstances exist that enable us to recommend changes to the first two years of the unit limit settings (2025 and 2026).

We conclude that the approach of aiming to reduce the surplus by 2030 remains appropriate to support accordance with emissions budgets, and that the special circumstances to amend the 2025 and 2026 existing settings apply to address the surplus. We outline the key points on each issue below.

Timeframe for reducing the surplus

For the timeframe to reduce the surplus, in addition to the 2030 target, we considered alternative options of extending it to 2031 or 2035. These options would maintain higher auction volumes each year compared to reducing the surplus by 2030. This would reduce the magnitude of change to auction volumes from existing NZ ETS settings. Additionally, it would potentially manage risks to liquidity and of market-gaming activity.⁴⁸

The major drawback of the alternative options is that they would undermine the ability of the unit limits to support strict accordance of the NZ ETS settings with the second emissions budget. The surplus would not be eliminated by the end of the second emissions budget period, meaning there would be a higher possibility that it would allow emissions over the level of that budget.

We have placed higher priority on accordance with emissions budgets than other considerations when assessing these options, to reflect the requirements of the Act (described at a high level in **Part 1** of this report). We conclude that reducing the surplus by 2030 remains the appropriate approach under the Act.

Special circumstances allowing unit limit amendments from 2025

If the first two years of the unit limit settings are not amended, the larger surplus volume that needs to be reduced by 2030 results in drastic reductions to auction volumes over 2027–2030.

We are also conscious that there are dynamic factors (particularly related to forestry units)⁴⁹ and uncertainty in the surplus estimate, which means it could be higher than our central estimate. Frontloading the surplus reductions into the unit limit settings for 2025 and 2026 makes it possible to account for a potentially larger surplus estimate in the future. Preserving this ability to account for uncertainties would not be possible if unit limit settings are only amended from 2027 onwards as the auction volume would be already close to or at zero.

This approach is dependent on the special circumstances being met that allow recommendations to amend unit limits from 2025.⁵⁰ We conclude that the change to the surplus estimate justifies amendments to the first two years of the unit limit settings (2025 and 2026), because:

- The 19 million unit increase in our estimate of surplus units has only come to light following our last NZ ETS settings advice and the Government's most recent decision on the settings in July 2023.
- The surplus is a key factor considered in the proper functioning of the NZ ETS.⁵¹ Reducing the surplus help brings the unit settings into alignment with the emissions budget volumes, and the requirements and purpose of the Act.
- Amending years 2025–2026 supports alignment of the unit limits with both the second and third emissions budgets, and avoids more drastic reductions for 2027–2030 if these years are not adjusted. It also preserves the ability to manage the risks that the surplus is larger than our central estimate or that it grows in the future.

Uncertainty is not a reason to delay addressing the unit surplus

We acknowledge the uncertainty range around our central estimate of the surplus. Concerns may be raised that this uncertainty should be resolved to a greater extent before the Government acts to reduce auction volumes, but we do not consider that to be the appropriate course of action taking into account the need to align the settings with emissions reduction targets. The NZ ETS design makes this uncertainty unlikely to be resolved, the risk the surplus presents still needs to be addressed, and the rolling process for NZ ETS settings is intended to allow an adaptive management approach when there is uncertainty.

48. Such as market cornering, where current unit holders gain excessive control over the market.

The risk of this is likely relatively small in the NZ ETS market and this is discussed further in Denne (2022).

49. For example, foresters could decide to leave more forests unharvested (decisions to transition production forests to permanent), meaning fewer units need to be held for future harvest liabilities.

50. Section 30GB(5) of the Act.

51. Section 30GC(5)(b) of the Act.

We are confident that the method we have used to estimate the surplus makes best use of the most recent available information about the units held in the NZ ETS registry. However, the surplus is influenced by various dynamic factors. For example, the stock change accounting used for most forests registered in the NZ ETS makes it challenging to assess how many units are held for harvest liabilities, and this can change over time as foresters' harvest intentions change. This kind of uncertainty is part of the scheme's design, reflecting the options available to participants under NZ ETS rules.

We have considered the risks that the surplus is smaller or larger, or that it grows over time. These can be managed using an adaptive management approach. For example, even if the surplus is lower than our central estimate, the total surplus reduction between 2024 and 2027 is still well below the low end of the estimated surplus range (51 million units). If it becomes clear that the surplus is less than our central estimate, there is time to course correct before the surplus is exhausted when the settings are updated in 2025.

Step 5b: Adjust for discrepancies

This step enables adjustments to address potential updates to unit limits that are unable to be made due to limitations around when settings can be updated in the 5-year rolling process.

As we propose to update unit limit settings from 2025 onward, we have only considered whether a discrepancy adjustment is needed for 2024, which has fixed unit limit settings that cannot be changed. We identified a small discrepancy resulting from Step 1, 3 and 4 (-0.2 million units). This volume is then divided and applied to unit limits over 2025–2029 with very minimal impact on overall unit limit volumes. We discuss this further in the Technical Annex 1: Unit limit settings separately published on our website.

6 Step 6: Set the approved overseas unit limit

As discussed in **Part 2** and **Step 1** of this chapter, there are no overseas units approved for use in the NZ ETS. There is no clarity from the Government on if and when they might be available and decisions by the Government on the role of the NZ ETS in the delivery of offshore mitigation are still pending as it develops a plan for meeting the NDC.

Analysis and findings

Due to the absence of approved overseas units at this time, we recommend retaining the status quo approach of setting the limit on approved overseas units at zero. This is explained in more detail in Steps 1 and 6 of our previous NZ ETS settings advice from 2022 and 2023.

7 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 2025–2029 period. These proposed annual auction volumes are a significant part of what informs the Commission's final recommendation for the total limit on NZUs available by auction and the overall unit limit.

This step also involves assessing the sensitivity and risks associated with these volumes, to provide information about which judgements or uncertainties have the most impact on final auction volumes now or could cause auction volumes to be revised in future iterations of the NZ ETS settings advice.

Analysis and findings

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

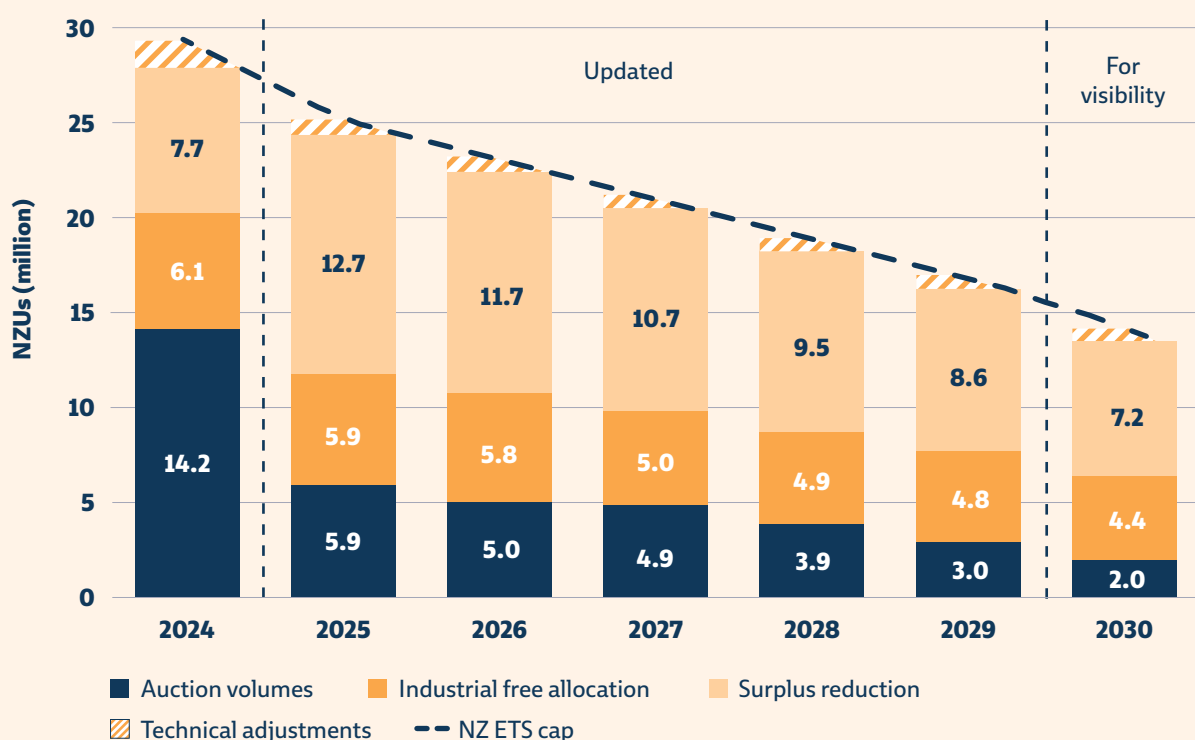
Taken together, these steps above are followed to reach our final proposed annual auction volumes as shown in **Table 1**. The proposed volumes reflect our assessment that the special circumstances under the Act have been met that allow amendments to years 2025 and 2026.

Table 1: Proposed annual auction volumes within the NZ ETS cap – summary of calculations from applying the seven-step method

Units (millions)	Updated calculations to inform recommendations					For visibility
	2025	2026	2027	2028	2029	2030
Step 1: Align with emissions reduction targets	66.7	64.2	61.8	59.3	57.0	53.8
Step 2: Allocate volume to sectors outside the NZ ETS	-41.5	-41.0	-40.7	-40.4	-40.0	-39.6
Allocate volume to NZ ETS sectors (NZ ETS cap)	25.2	23.2	21.2	19.0	17.0	14.2
Step 3: Technical adjustments	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
Step 4: Industrial free allocation	-5.9	-5.8	-5.0	-4.9	-4.8	-4.4
Step 5a: Surplus reduction	-12.7	-11.7	-10.7	-9.5	-8.6	-7.2
Step 5b: Discrepancy adjustment	0.0	0.0	0.0	0.0	0.0	0.0
Step 6: Approved overseas units	0.0	0.0	0.0	0.0	0.0	0.0
Step 7: NZU auction volumes	5.9	5.0	4.9	3.9	3.0	2.0

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

Figure 7: Proposed unit supply calculations informing the Commission’s recommendations



Sensitivities, risks and future developments in auction volumes

Here we discuss the largest sensitivities, risks, and factors most likely to cause changes within the previous steps, to highlight issues that could cause NZ ETS settings to be revised over time.

Our 2024 advice relates to adjustments for settings for 2025–2029 only. We have shown for visibility only settings out to 2030 if the methodology were applied into the future, though this is to be reviewed each year.

The Technical Annex 1: Unit limit settings, its supporting spreadsheet for Technical Annex 1, and the Technical Annex 2: Assessment of accordance table separately published on our website cover in more depth our assessment of how the NZ ETS settings, including the unit limits align with the emissions reduction targets beyond 2030 (emissions budget 3 and the 2050 target), including by showing volumes out to 2035 under the current methodology.

Step 1: Aligning with emissions reduction targets:

As discussed earlier in this report, particularly in **Part 2**, the Government will develop the second emissions reduction plan this year, and this could result in new or clarified policy direction. Future revisions to advice on this step may be needed if the role of the NZ ETS in meeting the NDC and how it should be managed to support further domestic emissions reductions to overachieve emissions budgets is clarified.

In 2024 the Commission will provide Government with our advice on the fourth emissions budget and whether the first three emissions budgets should be revised. By the end of 2025 the Government must notify any updates to the emissions budgets. It is possible that emissions budgets could be revised, and if they are revised downwards this would reduce auction unit volumes. Official change of a budget allows NZ ETS settings to be made to all years of the settings except the year that is already in effect.

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

The voluntary participation of post-1989 forests in the NZ ETS means that the coverage of forestry emissions and removals by the NZ ETS can change significantly over time. As the forestry sector is large, there is potential for this to have significant impacts on the calculations for this step.

In our previous 2023 advice,⁵² this step was affected by a large increase in the area of post-1989 forests registered in the NZ ETS. We now assume that all newly planted forests will register into the NZ ETS. If NZ ETS participation becomes less attractive for post-1989 forests and large areas of them are deregistered from the scheme, this assumption will need to be revisited. This is an issue we will monitor over time as we engage with forestry market participants to understand their views and participation in the NZ ETS.

Step 3: Technical adjustments: Our assessment of the need for technical adjustments is updated each year based on the most recent GHG Inventory, which has the potential to change auction volumes over time. However, so far the technical adjustments volume has had a relatively small impact on units available to the market.

Step 4: Account for industrial free allocation:

Our industrial free allocation forecasts are based on the industrial free allocation regulations in force as of the end of 2023. A process to update these regulations is scheduled to be undertaken in 2024, which is likely to reduce industrial free allocation volumes in future. It is likely that the forecast of industrial free allocation in our 2025 NZ ETS settings advice will be reduced as a result. This also means that the projections of industrial free allocation out to 2035 as shown in the spreadsheet accompanying this advice are likely to be an overestimate. Industrial free allocation takes up an increasing share of the emissions volume available to NZ ETS sectors as the cap declines, which may create challenges in future for aligning units limits with emissions budgets, particularly in relation to the third emissions budget (2031–2035). This is discussed further in the Technical Annex 2: Assessment of accordance table accompanying this advice available on the website.

52. He Pou a Rangi Climate Change Commission (2023b).

Step 5: Set the unit surplus reduction volume:

There are risks that the surplus could increase or decrease more slowly than intended, due to factors influencing the surplus estimate that can evolve over time. For example, changes to harvest decisions by foresters could cause units which were previously held for harvest liabilities to become available for use by emitters. If the surplus increases, it could create a need to reduce auction volumes to very low levels or even zero to keep the unit limit settings in alignment with emissions reduction targets. If this point is reached, the price control settings would no longer be able to have effect as they operate at auctions. It could also create challenges for according the NZ ETS settings with emissions reduction targets, as auction volume is the lever available to the Government to align the unit limits with the targets.

Step 6: Setting the approved overseas unit limit:

The Government has not yet communicated any decisions about obtaining offshore mitigation or approving overseas units for use in the NZ ETS. The end of the first NDC period is fast approaching and the Government needs to outline a clear plan to support stable operation of the NZ ETS. The delayed information to the market could become a risk.

NZ ETS auction proceeds are a limited and variable source of funds

Auctioning units provides cash inflows for the Crown, and there are opportunities to contribute these funds to other initiatives. However, auctioning cannot be regarded as a steady or ongoing source of funds.

For an ETS to reduce emissions, the units in the scheme must decline in line with targets, limiting the potential to auction units. Under current policy the NZ ETS's net emissions cap will reach zero in the mid-2030s.⁵³ NZ ETS auction proceeds are therefore more like a finite sum spread over a limited period (i.e. the next 10 years), than ongoing revenue.

Secondly, auction proceeds can be highly variable. Emissions prices vary and price controls or low market confidence can cause auctions to not clear. In the NZ ETS, uncertain unit flows from industrial free allocation and forestry can also cause auction volumes to be adjusted both up or down to align the scheme with targets.

Finally, the fiscal impacts of the NZ ETS are wider than auction proceeds. The Treasury's *Climate Economic and Fiscal Assessment 2023*⁵⁴ sets out the accounting for the NZ ETS in the Crown's accounts. Importantly, the stockpile of units already in the market is a liability on the Crown's balance sheet, and any further units auctioned also contribute to the liability. This liability can grow if emissions prices and/or units in the market increase – which could have negative impacts on the Crown's books.

53. He Pou a Rangi Climate Change Commission (2023a).

54. Te Tai Ōhanga The Treasury and Ministry for the Environment (2023) – pp 71-75.

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.**

This part of the report contains the Commission's analysis and recommendations for updating the price control settings for the 2025–2029 period.

The Commission's recommendations on the price control settings are first and foremost informed by our analysis of the range of emissions prices that would be consistent with meeting Aotearoa New Zealand's emissions reduction targets. They are not intended to guide or set the price of units.

Our analysis accounts for uncertainty in considering price discovery in the market, including uncertainty about projected emissions trends in the future. We also consider the potential impacts of emissions prices on households and the economy, 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. This gives a sufficiently wide corridor for price discovery and aligns 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.

Considering our recommended unit limit settings in **Part 3** and applying our established methodology from previous advice,⁵⁵ our analysis of these considerations led us to conclude that the current price control settings remain fit for purpose and the existing approach can be extended from 2027 with only minor changes to reflect the latest forecasts of inflation.

55. He Pou a Rangi Climate Change Commission (2022a) and (2023b).

Summary of key considerations

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:

- the forecast availability and cost of ways to reduce greenhouse gas emissions
- the level and trajectory of international emissions prices
- the impact of emissions prices on households and the economy
- inflation.

The range of NZU prices potentially required to meet emissions reduction targets

The Act requires we consider the forecast availability and cost of ways to reduce greenhouse gas emissions.

In our 2022 and 2023 advice and 2022 technical annex⁵⁶ we set out a methodology for how we have considered what price corridor in the NZ ETS would be compatible with Aotearoa New Zealand meeting emissions budgets.

To enhance the available evidence about the range of emissions prices that could be needed to meet emissions budgets, we conducted a modelling exercise in 2022. We ran several scenarios that deviated from the assumptions used to develop the demonstration path and emissions values in *Ināia tonu nei*, to test the effects on emissions prices of varying uncertain factors that could play out in a range of ways into the future. This is discussed in the 2022 and 2023 advice.

We consider this modelling from 2022 still fit for this purpose so we have not updated it. We continue to propose unit limit settings that align primarily to emissions budgets, with the only change to the emissions cap being an update to reflect methodological changes in to the GHG Inventory which are simply a recalculation rather than a material change in the effort required from NZ ETS sectors. This means the unit limit settings are still based on the same set of expected actions and emissions reduction opportunities included in the 2022 modelling scenarios, so the results of that modelling continue to reflect the emissions prices that may be required to achieve the NZ ETS sectors' contribution to meeting emissions budgets.

56. He Pou a Rangi Climate Change Commission (2022a), (2022b) and (2023b).

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 main reasons why international emissions prices may be relevant:

- It is important that Aotearoa New Zealand contribute to the global effort to combat climate change. International emissions prices are one way to give an indication of whether Aotearoa New Zealand's level of effort is comparable to that of other countries, particularly of other developed countries who are Aotearoa New Zealand's peers.⁵⁷
- 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 in 2023 we scanned for updates. Since then, emissions price changes have occurred in some jurisdictions and new pricing initiatives have been announced or implemented – such as Indonesia's emissions trading system for the power generation sector, launched in February 2023.

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 to the efforts of our peers from developed countries, rather than falling behind or overtaking them. The auction reserve price also remains at a level that would avoid regrets from auctioning units at prices likely to be below the cost Aotearoa New Zealand may face to purchase offshore mitigation to meet the first NDC.

Impacts on households and the economy

A fair, inclusive, and equitable transition means that issues of social and economic equity and tackling climate change must be pursued in parallel.

In our 2021 *Ināia tonu nei* advice, our modelling showed that the economy would continue to grow under our recommended emissions budgets. 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.

For the NZ ETS to be effective in its legislated purpose of assisting Aotearoa New Zealand to meet its emissions reduction targets, it must change the relative prices of emissions-intensive activities, products and services in a way that encourages innovation and behaviour change. Using the price control settings to suppress emissions prices would undermine the ability of the NZ ETS to do this.

It remains the Commission's assessment that price control settings are not the appropriate tool for addressing domestic distributional impacts or other equity considerations in the transition, as the Government can manage impacts to households or businesses through policies outside the NZ ETS.

For households and businesses who make the transition to lower emissions, emissions costs related to the NZ ETS will have less and less impact over time. There will, however, be some who have less access to lower emissions alternatives, particularly as it remains a challenging time for many New Zealanders in terms of the cost of living, including because of a sustained period of elevated inflation.

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. This is far preferable from both an equity and climate perspective than suppressing emissions prices across the entire economy.

In our previous NZ ETS settings advice, we presented analysis of the potential impacts of the emissions price on households and the economy. There have been no significant updates to our price control settings recommendations, or that analysis, so we recap key points from that advice, as well as relevant aspects of our recent advice on the second emissions reduction plan here.

57. Note that international emissions prices are only one of several ways to compare climate action across countries. They are not a full reflection of differences in mitigation ambition or cost across jurisdictions, due to varying opportunities to reduce emissions and differing complementary emissions reduction policies in different countries.

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.

Modelling undertaken by the Treasury in 2022⁵⁸ estimated potential cost impacts on consumer spending across a range of NZ ETS prices. 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.

Table 2 shows the Treasury's modelled potential impact of a given change in emissions price on households, broken down by household income. However, it is important to be aware of limitations to the analysis.

The modelling only provides a short-term view. The estimates 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. The modelling also assumes that 100% of emissions pricing is passed through to consumers by NZ ETS participants.

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

Table 2: Modelled median change in household expenditure on food and fuel from a \$10 change in NZU price, assuming no behavioural or technological change (\$/week and as a percentage of household disposable income).

Emissions price (\$/tCO ₂ e)	Quintile 1 (low-income households)	Quintile 2	Quintile 3 (middle-income households)	Quintile 4	Quintile 5 (high-income households)
For a \$10 change in NZ ETS price					
\$/week	\$0.66	\$1.00	\$1.18	\$1.28	\$1.46
% of disposable income	0.11%	0.08%	0.07%	0.06%	0.04%

58. Te Tai Ōhanga The Treasury (2022).

Impacts on iwi/Māori

In our advice on the direction of policy needed to achieve the second emissions reduction plan, we recommended the Government use targeted policies to promote equity and expand the scope of the Equitable Transition Strategy to also include the impacts of climate change and adaptation as well as mitigation.

The Commission has also emphasised that the Government ensure a fair and equitable transition for and with iwi/Māori. This includes acknowledging the Crown's responsibilities under Te Tiriti/The Treaty and the necessity of agency under iwi/Māori leadership.

Iwi/Māori communities and entities have unique and specific interests relating to the NZ ETS, including cultural, spiritual, physical, and economic.

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. Māori landowners own a significant proportion of primary sector assets and face historic barriers that make updating those assets to facilitate lower emissions activities highly challenging.

There are considerable existing forests registered in the NZ ETS. Some of this is Māori operated commercial forestry and some is non-Māori operated forestry on whenua Māori land managed by small trusts. As discussed in the section on engagement in **Part 2**, there are highly diverse views around how to manage NZUs received and other NZ ETS-related decisions. It is important to ensure approaches to understanding such interests are built alongside iwi/Māori and appreciative of diversity.

Forestry is a large part of the Māori economy, so any Government decisions on operating the NZ ETS or reforming its structure can impact on different hapū and iwi around Aotearoa New Zealand and would require consistent consideration of Te Tiriti o Waitangi/The Treaty of Waitangi and Treaty principles. Many of the issues related to forestry are out of scope for this advice, but they are discussed briefly in **Part 2**.

Businesses and industries

Changes to emissions prices are likely to affect large and small businesses differently. *The Business Operations Survey: 2021* completed by StatsNZ⁵⁹ 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, emissions leakage risk – the possibility that a rising emissions price could cause some production to shift overseas in a way that increases global emissions – is currently being managed through industrial free allocation. This substantially reduces the cost of the NZ ETS for these businesses and therefore the risk of economic slowdown and regional employment impacts.

In the medium to long term, the NZ ETS will help drive more efficient and competitive businesses. Internationally, there are growing expectations from investors, customers and consumers around disclosing emissions and taking climate action through the value-chain. To remain competitive, Aotearoa New Zealand's businesses will need to act on their emissions and the NZ ETS incentive can support them to make the shift.

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

59. StatsNZ (2021).

Sectors and regions

The impacts of the NZ ETS price on different sectors and regions 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, particularly Southland, Taranaki, and the West Coast. In contrast, employment in more urban areas is often concentrated around lower emissions intensity service sectors.

Some regions, such as Tairāwhiti, have significant areas of forest, much of which is voluntarily registered into the NZ ETS. Increases to the NZ ETS emissions price over recent years have played a role in increases to forest planting rates across the country, with land conversions more concentrated in some regions. This has impacts for people and regions affected by land-use change, particularly rural communities that thrive on a diversity of land uses. See the Commission's recent advice on the second emissions reduction plan for more on this issue.

Inflation

The Act requires that we consider inflation. We judge this to be relevant in two ways:

- how inflation should be applied to the price control triggers, and
- what, if any, inflationary impact eventual emissions prices in the market might have.

Inflation adjustment to price controls

The continued use of an inflation adjustment to the levels of the price control settings avoids the erosion of the effectiveness of settings over time in real terms. The CCR and ARP trigger prices must be set in nominal prices so any inflation adjustment must be applied in advance. The existing trigger prices for the CCR and ARP are both adjusted for inflation.

As with our 2023 advice,⁶⁰ we have applied the most up-to-date annual Consumer Price Index (CPI)⁶¹ inflation rates in 2023 and forecasts from 2024 onwards as listed in Treasury's *Half Year Economic and Fiscal Update (HYEFU23)* to the relevant years of the settings.⁶² When it becomes available in May 2024, Treasury's *Budget Economic and Fiscal Update (BEFU24)* should be used to account for any forecast updates in the last six months.

Table 3: Annual CPI inflation forecasts from the Treasury's Half Year Economic and Fiscal Update 2023⁶³

June years	2024	2025	2026	2027	2028
CPI inflation (annual % change)	4.1	2.5	2.2	2.0	2.0

60. He Pou a Rangi Climate Change Commission (2023b).

61. The Consumer Price Index (CPI) is Stats NZ's official index to measure the rate of change in prices of goods and services purchased by households. A simple explanation of what the CPI is and how it is calculated can be found on its website, see StatsNZ (2017).

62. Te Tai Ōhanga The Treasury (2022).

63. Te Tai Ōhanga The Treasury (2023).

The effect of the NZ ETS on inflation

Since our previous advice we have considered new information about the effect of NZ ETS on inflation. In July 2023, the Ministry for the Environment extended the model developed by the Treasury to estimate impacts on households of emissions prices⁶⁴ to also estimate the impact on consumer inflation.⁶⁵

The Ministry concluded emissions prices at current levels are a “modest contributor to household inflation”. It estimated, as a rule of thumb, that a \$10 increase in emissions prices contributes an approximate 0.11 percentage point increase to annual CPI. These increases are largely due to higher fuel and electricity prices. This estimate is based on the current household spend as represented by the CPI and may change as fossil fuel use reduces over time.

The Ministry estimated that the \$31 increase in the NZU price over 2021 could have contributed around 0.33 percentage points of the 5.9% CPI increase experienced that year, and the \$12 increase in the NZU price over 2022 could have contributed around 0.13 percentage points of the 7.2% CPI increase experienced that year.

We reviewed the Ministry’s methodology behind its findings and undertook our own calculations with consistent results. We think these are likely upper bounds of inflation impacts, as noted by the limitations set out by the Ministry.

Some impact on inflation is expected as a part of the NZ ETS functioning properly to help change the relative prices of high and low emissions products and services, as this is what will influence behaviour and encourage emissions reductions. Alongside the scheme it is important to have targeted support mechanisms to help households manage cost impacts. Some mechanisms already exist, for example the indexation of benefits and superannuation to the CPI. Other types of support policies can also help unlock the longer-term cost savings of lower emissions technologies, such as heat pumps to heat homes more efficiently or electric vehicles to lower petrol costs.

64. Te Tai Ōhanga The Treasury (2022).

65. Ministry for the Environment (2023e).

Monetary policy mechanisms used by central banks also remain an important policy tool to manage economy-wide flow-on costs from climate policy and pricing mechanisms. The Reserve Bank of New Zealand’s role is to keep the CPI within a target range of 1% to 3% over the medium term with a focus on the 2% midpoint.

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

Analysis and recommendations

CCR structure and trigger price

In 2023, the Government adopted the two-tiered design for the CCR and the trigger prices that the Commission recommended in our previous advice.

Two tiers of trigger prices and reserve volumes reduce the risk of potential anchoring or magnet effects, which helps manage the risk of prices going above what is necessary to meet emissions budgets. This approach also reduces the risks to meeting emissions budgets in the case that the CCR has effect, as not all reserve units are released when the first tier CCR price is triggered.

We consider the CCR trigger prices remain fit for purpose in combination with the recommended unit limit settings as discussed earlier in this chapter. The current price control settings provide a price corridor informed by analysis about the range of NZU prices that are consistent with emissions budgets.

We propose that the trigger prices only be updated to reflect revised Government inflation forecasts. We have applied these changes from 2027 onwards as current settings must remain for 2025–2026.

Table 4: Proposed trigger price for the CCR

	No changes		Updated recommendations			For visibility
	2025	2026	2027	2028	2029	2030
Tier 1	\$194	\$205	\$216	\$227	\$238	\$250
Tier 2	\$243	\$256	\$270	\$283	\$298	\$313

Determining the reserve volumes

In 2023 the Government adopted our recommendations for the cost containment reserve volumes, with the total CCR volume across both tiers equal to the base surplus reduction volume as estimated in 2022. This approach meant that if the CCR volume was fully released, the overall surplus would not decrease or increase.

We recommend maintaining the volumes in the CCR as currently set in regulations, and extending that out to 2029, rather than increasing it to reflect the increased surplus estimated in **Step 5** of the unit limits method. This supports regulatory predictability.

We see no compelling case to increase the reserve volume given this could result in more units being released if the CCR is triggered. It is most important that the NZ ETS settings enable the surplus to be drawn down to support achievement of emissions reduction targets. The CCR's ability to contain prices, in the unlikely event that it is triggered, will be related to whether the volume in the reserve is sufficient to provide units to participants needing them for immediate surrender obligations and hedging needs. The increase to the surplus estimate is not a reflection of increased demand, so it does not logically follow that it justifies an increase in the reserve volume.

Table 5: Proposed volumes in CCR Tiers 1 and 2

Million NZUs	Recommendations					For visibility
	2025	2026	2027	2028	2029	2030
Tier 1 volume	2.6	2.3	2.1	1.9	1.7	1.4
Tier 2 volume	4.5	4.2	3.8	3.4	3.0	2.5
Total CCR volume	7.1	6.5	5.9	5.3	4.7	3.9

Auction reserve price

The auction reserve price (ARP) is the price below which the Government will not sell units at auction.⁶⁶ The purpose of the ARP 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 minimises the risks of unit oversupply by preventing the Government from adding further NZUs into the market when prices are low.

Analysis and recommendations

In 2023 the Government adopted our recommended approach to setting the trigger prices for the ARP. As of 2024 the currently regulated auction reserve price is \$64.

There is no new data or reasons to depart from our previous approach and recommendations. For this advice, we have only updated for inflation forecasts. We have applied these changes from 2027 onwards as current settings must remain for 2024–2026.

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

Table 6: Minimum price below which units must not be sold by auction, recommended updates from 2027

	No changes		Updated recommendations			For visibility
	2025	2026	2027	2028	2029	2030
ARP	\$68	\$72	\$76	\$79	\$83	\$88

Desirable emissions price path

The Act states that the Commission must recommend limits and price control settings for units, including “any desirable emissions price path”.⁶⁷

As stated above, the purpose of price controls is to allow for a price corridor at auctions that allows for price discovery, while managing risks of auction prices that are inconsistent with meeting emissions budgets.

Within these broad bounds, any desirable emissions price path will depend on other emissions reduction policies and external factors that affect the cost of mitigation.

Given the current context of the NZ ETS and the many uncertainties that will shape future prices, we have concluded we are not in a position to define such a path at this time.

66. 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 to avoid unduly disrupting the secondary market. It is not within scope of this advice.

67. Section 5ZOA(2) of the Act.

Te taupoki - Final recommendations

Bringing together our analysis and findings, we arrive at our proposed auction volumes and final recommendations for the unit limit and price control settings.

Proposed auction volumes

Million units	2025	2026	2027	2028	2029	Total
NZU auction volumes (excluding CCR volumes)	5.9	5.0	4.9	3.9	3.0	22.7

Recommended unit limits and price control settings

Million units	Updated recommendations					Total
	2025	2026	2027	2028	2029	
Limit on the New Zealand units available by auction (including CCR volumes)	13.0	11.5	10.8	9.2	7.7	52.2
Limit on the approved overseas units used	0.0	0.0	0.0	0.0	0.0	0.0
Overall limit on units	18.9	17.3	15.8	14.1	12.5	78.6

Cost containment reserve	No changes		Updated recommendations		
	2025	2026	2027	2028	2029
Tier 1					
Trigger price	\$194	\$205	\$216	\$227	\$238
Reserve volume, million NZUs	2.6	2.3	2.1	1.9	1.7
Tier 2					
Trigger price	\$243	\$256	\$270	\$283	\$298
Reserve volume, million NZUs	4.5	4.2	3.8	3.4	3.0
Total reserve volume	7.1	6.5	5.9	5.3	4.7

Auction reserve price	No changes		Updated recommendations		
	2025	2026	2027	2028	2029
Auction reserve price	\$68	\$72	\$76	\$79	\$83

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 2002, 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 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)
 4. to act in a manner consistent with the purpose of the Act (s 3)
- c. be given to the Minister a reasonable time before the Minister is required to recommend the making of regulations.

Table 7 describes the legal obligations on the Commission and where in this report they are addressed.

We have also published a supplementary document, Technical Annex 2: Assessment of accordance, on the Commission's website expanding on s30GC.

Table 7: Requirements for our advice

Obligations in the Act	Where addressed
Section 3: Purpose⁶⁸	
(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.
(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	
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 1 Introduction: Our approach Part 3 Step 1: Align with emissions reduction targets Part 3 Step 2: Allocate volume to NZ ETS and non-NZ ETS sectors Part 3 Step 5: Set reduction volume to address unit surplus Part 4 Price control settings Also see supplementary document, Technical Annex 2: Assessment of accordance, on the Commission’s website
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	Throughout the advice, particularly Part 3: Unit limits
(5)(b) The proper functioning of the NZ ETS	Throughout the advice, particularly Parts 3 and 4

68. 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
(5)(c) International climate change obligations and contracts New Zealand may have for accessing offshore mitigation from other carbon markets	Part 2: Current state and role of the NZ ETS Part 3 Step 1: Align with emissions reduction targets Part 3 Step 6: Setting the approved overseas unit limit
(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: Align with emissions reduction targets Part 3 Step 2: Allocate volume to NZ ETS and non-NZ ETS sectors Part 4: Price control settings
(6) In respect of the price control settings:	
(c) the impact of emissions prices on households and the economy	Part 2: Current state and role of the 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 <i>Ināia tonu nei</i> 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 <i>Ināia tonu nei</i> 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: Current state and role of the NZ ETS Part 3 Step 1: Align with emissions reduction targets Part 3 Step 2: Allocate volume to NZ ETS and non-NZ ETS sectors Part 4 Price control settings

Obligations in the Act	Where addressed
(d) Social, cultural, environmental, and ecological circumstances, including differences between sectors and regions	Part 2: Current state and role of the NZ ETS Part 3 Step 1: Align with emissions reduction targets Part 3 Step 2: Allocate volume to NZ ETS and non-NZ ETS sectors
(e) Distribution of benefits, costs, and risks between generations	Our analysis on emissions budgets in <i>Ināia tonu nei</i> 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 2: Role of emissions pricing and policy
(f) The Crown-Māori relationship, te ao Māori, and specific effects on iwi/Māori	Part 1: Introduction Part 3 Step 5: Set reduction volume to address unit surplus Part 4 Price control settings: Impacts
(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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