He Pou a Rangi
Climate Change Commission

Hon Scott Simpson
Chair
Environment Select Committee
PARLIAMENT

2 December 2024

Tēnā koe Hon Scott Simpson

Thank you for your request to He Pou a Rangi Climate Change Commission for written evidence regarding the petition of Alex Johnston. Our response is attached.

The future of industrial allocation is an important issue and we hope that our response will support the Committee with its work. Due to timing of the request, and the fact that we are in the process of delivering multiple pieces of work to the Minister imminently, we have expediently assembled the relevant contents from our previously completed work.

The result of this streamlined approach is a rather technical document, which is difficult to avoid given the nature of the subject matter. As such, we would be happy to join you at a future Select Committee meeting to discuss the contents if that would be helpful.

Nāku noa, nā

Dr Rod Carr
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Introduction

The petition of Alex Johnston calls for an accelerated phase-out of industrial allocation and implementation of alternative measures supporting decarbonisation of emissions-intensive and trade exposed (EITE) producers while preventing emissions leakage and enabling a just transition for affected workers. Given time and resource constraints, the Commission is not in a position to provide recommendations on the specific proposals in the petition. Instead, we have focused our submission on highlighting areas of our previous statutory advice and Committee submissions that address the important issues raised in Mr Johnston's petition.

The Commission would like to emphasise the following points to help inform the Committee's deliberations:

1. **The purpose of industrial allocation**: Under emissions pricing, transitional assistance can be provided to participants in different forms to achieve a range of possible objectives. Since the 2009 amendments, the New Zealand Emissions Trading Scheme (NZ ETS) has provided uncapped output-based industrial allocation with the primary goal of mitigating the risk of emissions leakage offshore.
2. **The variable risk of emissions leakage**: Based on domestic and international research and experience, the risk of emissions leakage is widely understood to vary across industries and markets and to evolve over time, particularly as technologies and international agreements change.
3. **Trade-offs with providing industrial allocation**: Depending on design, output-based industrial allocation can mitigate the risk of emissions leakage and incentivise recipients to improve emissions intensity. However, it also weakens price incentives for absolute emissions reductions by both recipients and consumers, and displaces NZ ETS auction revenue, raising cost, efficiency, and equity considerations for other market participants and taxpayers.
4. **Misalignment with climate change targets**: The NZ ETS as currently structured will not deliver or sustain the net zero component of the 2050 target. The current approach to industrial allocation in the Climate Change Response Act 2002 (the Act) contributes to this issue.
5. **Solutions to improve outcomes**: Options for improving on the status quo include further reforming industrial allocation (such as adjusting eligibility criteria and phase-out rates to better reflect risks of emissions leakage) and/or implementing alternative measures to support decarbonisation by EITE producers (such as up-front transitional assistance or a carbon border adjustment mechanism). Some of these options are not mutually exclusive.

The petitioner has raised a number of valid policy issues with how industrial allocation operates. Given the challenges surrounding industrial allocation that have been highlighted here and in previous Commission advice, we see merit in investigating other approaches to managing emissions leakage risk that could be more conducive to meeting the 2050 target and come at lower cost to taxpayers. It is important to note that hybrid options could also be feasible.

Key policy considerations for future decisions on industrial allocation include the effectiveness of incentives to reduce emissions in line with Aotearoa New Zealand's climate change targets, the mitigation of emissions leakage risk in the context of the Paris Agreement, the practicality of implementation, and the management of distributional impacts and their equity implications for different sectors and regions, and for iwi/Māori.

1. The purpose of industrial allocation

Under emissions pricing, transitional assistance can be used to:

- reduce the risk of emissions leakage;
- enable sectors to decarbonise while limiting disruptive and abrupt changes;
- improve access to mitigation opportunities;
- recognise, reward or avoid penalising those already delivering low-emissions products; and/or
- provide compensation for stranded assets.[1]

Under the NZ ETS, industrial allocation currently is used primarily as a tool to manage the risk of emissions leakage: the shifting of production and emissions from firms subject to the NZ ETS to jurisdictions with less stringent measures in a way that increases global emissions. Emissions leakage can occur across a spectrum from reductions in output to whole firm closures, so long as they are counterbalanced by increases in production elsewhere leading to higher global emissions. Emissions leakage is a policy failure to be avoided or minimised and compensated for in developing climate change policy.

In developing the NZ ETS, the Government published a *Framework for a New Zealand Emissions Trading Scheme* which set out the issues and choices in setting up an emissions pricing scheme for Aotearoa New Zealand.[2] That document described the reasons for freely allocating some units to participants to prevent loss of production (pp59 and 60). It described four reasons why loss of production would be an issue:

- potential for "economic regrets" from loss of production that would be viable once more countries were included in the international climate regime
- concentrated job losses
- reputational issues for Aotearoa New Zealand as a place to invest
- reducing the potential for carbon leakage risk.

The Government's framework acknowledged the effect on asset values in discussing the reputational impact on Aotearoa New Zealand as a place to invest. It did not describe the allocation as compensation for a loss of a property right, but rather as mitigating the effect of costs from introducing emissions pricing where these would have undesirable effects.

[1] For further explanation, see the Commission's report *Advice on Agricultural Assistance* (2022).
[2] Ministry for the Environment and the Treasury, 2007, *The Framework for a New Zealand Emissions Trading Scheme*, https://environment.govt.nz/assets/Publications/Files/Framework-emissions-trading-scheme-sep07.pdf

Indeed, later in the document it was clear that there was not a pre-existing right to emit. In considering the effect of the NZ ETS on Treaty of Waitangi claimants it said:

> The government's current view is that there is no pre-existing property right to emission units. Rather, the enactment of domestic legislation may create an interest and define the parameters of any interest arising from an ETS.[3]

Where emitting businesses faced a loss of competitiveness from the introduction of the NZ ETS, far from affecting a pre-existing property right, this was the intended policy effect of the NZ ETS – that polluters pay and there is an incentive in favour of low emissions or zero-emissions activities. However, the document acknowledged that trade-exposed producers had less capacity to pass on emissions costs than those serving only domestic markets and therefore could face a disproportionate impact from implementing emissions pricing.

Following consultation, the Government legislated that industrial allocation be capped at 90% of a sector's 2005 emissions.[4] Any growth in emissions above that level (due to either expansion by existing producers or new entrants) would have been fully priced. The precise methodology for allocating units within the overall cap on industrial allocation was to be determined in allocation plans under regulation.[5] Industrial allocation was intended to be a transitional measure, reducing to zero by 2030 as more countries joined the international effort against climate change.

However, in 2009, a new Government amended the NZ ETS to change the basis for industrial allocation to more directly reduce the risk of emissions leakage. It made this change alongside other measures to reduce the economic impact of emissions pricing.[6] It changed allocation to be production based, so that if a recipient increased production, the allocation also increased. It also made allocation available to new entrants, and slowed the planned phase out to 1.3% per year from 2013.[7] The Government's consultations from the time made clear that the rationale for industrial allocation was to address emissions leakage, and to avoid economic regrets:[8]

> The concern is that this reduced competitiveness may result in reduced production and output in New Zealand and a corresponding increase in production and output in other countries. This could result in both:

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[3] Ministry for the Environment and the Treasury, 2007, *The Framework for a New Zealand Emissions Trading Scheme*, p121, https://environment.govt.nz/assets/Publications/Files/Framework-emissions-trading-scheme-sep07.pdf

[4] Ministry for the Environment and the Treasury, 2007, *The Framework for a New Zealand Emissions Trading Scheme*, pp59-60 https://environment.govt.nz/assets/Publications/Files/Framework-emissions-trading-scheme-sep07.pdf

[5] It would have been possible for intensity approaches to be applied within the overall cap.

[6] These included introducing a fixed-price option and progressive obligation for unit surrenders by non-forestry participants.

[7] The phase out of allocation was later deferred indefinitely in 2012, and then re-instituted under a new structure in amendments in 2020.

[8] Ministry for the Environment, 2009, *Development of Industrial Allocation Regulations under the New Zealand Emissions Trading Scheme*, p2 https://environment.govt.nz/assets/Publications/Files/development-industrial-allocation-regulation-ets.pdf

- emissions leakage – New Zealand emissions fall and, although we are better able to meet our international emissions obligations, there is no reduction in global emissions
- economic regrets for New Zealand as a result of losing business activity that may not return, even when emissions pricing is more widespread internationally.

In response to these concerns, allocation is being used to maintain production in New Zealand to reduce emissions leakage and maintain industrial capacity to reduce economic regrets. These two objectives influence the approach taken to allocation, particularly the use of an intensity-based approach that provides incentives to maintain production.

Under 2012 amendments, the phase-out of industrial allocation was deferred indefinitely while other price moderation measures were in place. Under 2020 amendments, a new process was put in place to accelerate the phase-out of industrial allocation starting in 2021. Under 2023 amendments, processes were implemented to update allocative baselines and introduce further eligibility considerations for new entrants.

2. The variable risk of emissions leakage

The risk of emissions leakage is driven by the extent to which a trade-exposed firm is able to avoid, pass on, or absorb emissions costs, and the degree to which overseas competitors would likely increase their production and overseas emissions would rise if the volume of production in Aotearoa New Zealand decreases as a result of domestic climate policies. The risk of emissions leakage is highly specific to particular activities, mitigation options, competitors, and markets. The risk of leakage is also a matter of degree and is not a binary matter.

The risk posed by emissions leakage to climate change and Aotearoa New Zealand's economy is substantially different now than what it was in 2009 when the current regime for industrial allocation was legislated. Since then, the world has moved from the 1997 Kyoto Protocol to the 2015 Paris Agreement. Both developed and developing countries have Nationally Determined Contributions under the Paris Agreement and an increasing number of countries have adopted targets for net zero emissions by 2050. Net-zero targets now cover over 80% of global emissions.[9] Emissions pricing now covers 24% of world emissions and more stringent mitigation policies are in place in many countries.[10] These targets and policies make it less likely now compared to 2009 that emissions-intensive production would move overseas if production closed in Aotearoa New Zealand in response to climate change policy. Countries with absolute economy-wide emissions reduction targets will need to compensate for any increased emissions due to leakage of production from other countries, meaning that any shift in production that does happen is less likely to increase global emissions.

As part of recent Government consultations on the NZ ETS and industrial allocation, technical studies have been done on the risk of emissions leakage for industrial EITE producers in Aotearoa New Zealand.[11] Extensive research and analysis have also been

[9] UNEP, 2024, *Emissions Gap Report*
[10] World Bank, 2024, *State and Trends of Carbon Pricing 2024* https://openknowledge.worldbank.org/entities/publication/b0d66765-299c-4fb8-921f-61f6bb979087
[11] Sense Partners. 2018. *Countervailing Forces: Climate Targets and Implications for Competitiveness, Leakage and Innovation*. Wellington: Sense Partners.

conducted on the potential and actual impacts of industrial allocation under other major emissions trading systems. These studies show that the risk is highly differentiated across industries and markets, actual emissions leakage has not been significant to date under high levels of ETS assistance, and the potential for future emissions leakage specifically due to differential climate policies across countries is hard to determine alongside other drivers of industrial and economic change.[12]

3. Trade-offs with providing industrial allocation

Depending on design, output-based industrial allocation can mitigate the risk of emissions leakage while incentivising recipients to improve emissions intensity. It can also help to avoid economic regrets by early movers taking climate action. These can be beneficial outcomes if the risk of emissions leakage is high. However, there can also be significant downsides.

First, industrial allocation imposes a direct cost on the Government, and thereby to taxpayers. Every unit the Government provides for free means it is foregoing a payment it would receive from selling the unit instead. From a fiscal perspective, giving away a unit is recorded as an expense on the Crown's operating statement with a corresponding liability accruing on the balance sheet. Under the current architecture, industrial allocation can also allow net emissions to exceed emissions budgets, requiring the Government to compensate through further emissions reductions or offshore mitigation at taxpayer expense.

Second, industrial allocation involves issues of equity between sectors. It constitutes giving units, which are assets with financial value, to recipients for free on an output basis, whereas other market participants must purchase units at auction or from other participants. To the extent this enables EITE producers to maintain or increase absolute emissions while the NZ ETS cap declines, that places additional pressure and costs on other market participants to reduce their emissions.

Third, industrial allocation weakens the incentive for both recipients and consumers to reduce absolute emissions. A key principle of emissions pricing is the polluter pays principle – that emitters face the cost of their emissions, in order to incentivise reductions where it is economic to do so. Industrial allocation recipients in the highly emissions intensive category currently receive allocations equal to 86% of their allocative baseline, and so consequently face a much lower effective emissions price.

While this can still encourage marginal efficiency improvements, it does discourage more significant mitigation through product substitution. Eligibility for allocations is targeted at very specific emitting processes and inputs, and if a producer was to change their process to a lower emissions alternative, the allocation would no longer be provided. For example, NZ

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https://environment.govt.nz/assets/Publications/Files/Countervailing-forces-Sense-Partners-2018-FINAL-report.pdf and Denne, T. 2021. *Potential for emissions leakage from selected industries in the ETS*. Resource Economics. https://environment.govt.nz/assets/publications/potential_for_emissions_leakage_from_selected_industries_in_the_ets.pdf

[12] For one example see Commonwealth of Australia. *Carbon Leakage Review. Consultation Paper 2*. November 2024. https://consult.dcceew.gov.au/carbon-leakage-review-consultation-paper-november-2024

Steel receives an allocation of units for the activity 'Iron and steel manufacturing from iron sand.' In shifting to recycling steel using an electric arc furnace, that steel is no longer 'manufactured steel from iron sand' and so is not eligible for an allocation of units for that production. This kind of transformational change will not be incentivised by the NZ ETS alone if the emissions price signal is too low, which is likely under high levels of output based allocation. It is reasonable to assume other emissions-intensive trade-exposed emitters face similar challenges when planning their decarbonization journey.

While industrial allocation levels the playing field between domestic producers and overseas producers that do not face an emissions price, it also weakens the emissions price signal to consumers to choose lower-emission alternatives.

Given these downsides, it is important that any industrial allocation is targeted appropriately and the levels are commensurate to the risk of emissions leakage. If allocation rates are too low, they will not be sufficient to manage the risk of emissions leakage, leading to production relocating overseas. If industrial allocation levels are too high, the Government will overpay to manage the risk, creating windfall gains for some industries and imposing inequitable costs on other emitters and taxpayers. Following the 2023 amendments, the Government has undertaken a process to review and reset allocative baselines to ensure that they are current. The Act now requires that allocative baselines are reviewed between every 5 and 10 years.[13]

4. Misalignment with climate change targets

The Commission's Advice on the Second Emissions Reduction Plan (ERP2 Advice) highlighted that, beyond the mid-2030s, there will not be enough demand from remaining emitters in the NZ ETS to incentivise the removals by forests needed to meet the net zero component of the 2050 target. This is because not all gases included in that target are covered by the scheme, notably agricultural nitrous oxide. Figure 5.4 from the Commission's ERP2 Advice illustrates this point.

[13] Sections 161A and 161D

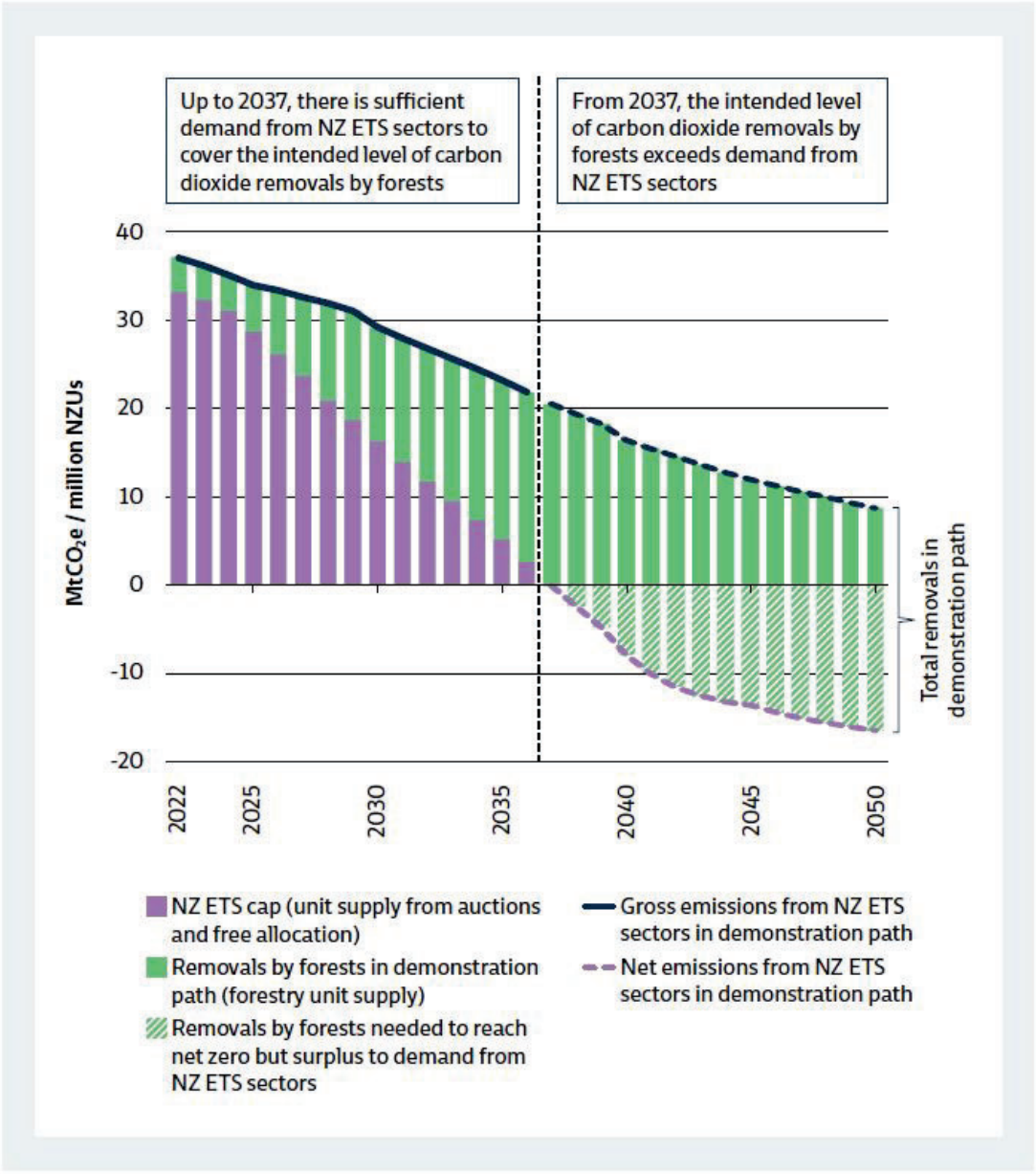

Figure 5.4 The NZ ETS cap reaches zero in 2037 but further removals are needed to reach the 2050 net zero target

Source: Commission analysis of NZ ETS unit limit settings[18]

Meeting the net zero component of the 2050 target will require the Government to implement further policies to incentivise afforestation in addition to the NZ ETS, or to fund additional removals beyond what the NZ ETS will incentivise (this is shown in the green hatched area in Figure 5.4). The precise timing of when the NZ ETS cap moves to zero will depend on choices the Government makes about how the effort to reduce emissions is shared across NZ ETS and non-NZ ETS sectors. However, any set of emissions budget levels that support achieving the 2050 net zero target will face the same issue while a significant proportion of emissions within that target are outside the scope of the NZ ETS. Industrial allocation does not cause this problem but it does contribute to it. The higher the level of industrial allocation, the sooner the system will reach the point where NZ ETS demand will be insufficient to drive further carbon dioxide removals.

Additionally, under current phase-out rates, industrial allocation will still be above zero in 2050. To achieve the net zero component of the 2050 target in this case, the cost would shift more directly onto taxpayers as the Government would have to fund removals outside the NZ ETS to compensate for the ongoing free units provided to EITE activities. This was illustrated in figure 5.5 of our advice, shown below, and included in the petitioner's evidence.

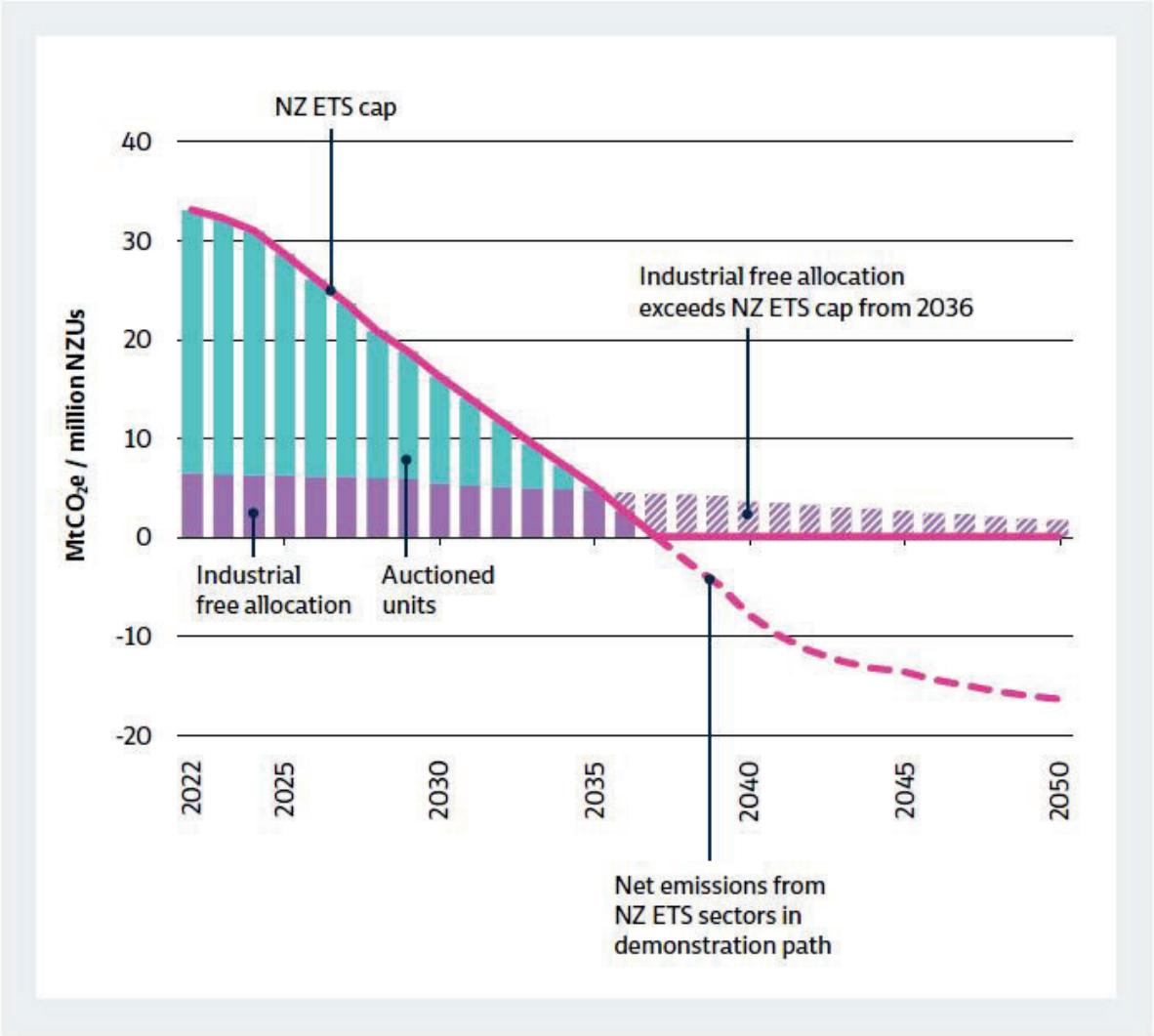

Figure 5.5: Under current settings industrial free allocation exceeds the NZ ETS cap from 2036 onwards
Source: Commission analysis of NZ ETS unit limit settings[29]

Addressing the mismatch between ongoing industrial allocation and the net zero component of the 2050 target will require either:

- complementary measures to reduce industrial emissions and/or incentivise balancing removals
- phasing out industrial allocation more quickly so it aligns with the 2050 target, or
- using a different policy tool to address emissions leakage.

Under the Act, the Commission has a role to provide advice on whether the phase-out rates of industrial allocation should increase or decrease, after the Minister requests advice under

s5ZOB of the Act. This advice must take into consideration the matters listed in section 84C(3). As we have not so far received such a request, we have not prepared advice on phase out rates. It is worth noting that phase out rates can be adjusted separately by industrial activity.

5. Solutions to improve outcomes

One option is to improve the provision of industrial allocation by updating the eligibility criteria and phase-out rates for receiving industrial allocation so they reflect a more holistic assessment of emissions leakage risk.

The Government could also consider replacing industrial allocation with alternative measures that mitigate the risk of emissions leakage. The Commission's previous work has not exhaustively described or assessed the alternatives. In this submission, we briefly note the following options:

- up-front transitional assistance
- a carbon border adjustment mechanism
- performance-based exemptions.

Addressing barriers to change with transitional measures

In place of annual amounts of industrial allocation – or as a complement to increasing the phase-out rate – the Government could help overcome barriers to change many emitters face by enabling actions such as sustainable financing, grants, tax incentives, and/or technical assistance or direct subsidies. To be effective, such support to overcome up-front financial hurdles could be performance based. Depending on policy design, providing up-front support that enables step-change investments and reduces producers' exposure to emissions pricing could produce better cost and emissions outcomes than providing ongoing industrial allocation.

As well as transitional assistance, other policies may be needed to address non-market barriers to unlock industrial mitigation such as capability building or removing regulatory hurdles.

Carbon Border Adjustment Mechanisms

Carbon Border Adjustment Mechanisms (CBAM) have recently gained interest as an option for protecting industries from emissions leakage. Under a CBAM, imports of emissions-intensive goods are subject to an equalising tariff where they originate from countries with less stringent climate policies. The intent of the tariff would be to ensure that overseas producers face an equivalent cost of carbon to domestic producers when selling into a country with such a policy.

The EU is implementing a CBAM, and has indicated it believes it is compliant with World Trade Organisation rules. It is phasing in the CBAM obligation over 2026–2034 and phasing

out its industrial allocation for the relevant products over the same period.[14] Aotearoa New Zealand should be cautious about adopting a CBAM. The EU's approach to CBAM may not work for Aotearoa New Zealand. The EU's model focuses on import (not export) competition and addresses a relatively small number of homogeneous products. It is still facing considerable international resistance. Other jurisdictions are also considering CBAM mechanisms including Canada and Australia.[15] [16]

Accurately developing a CBAM is very complex, requiring an assessment of effective carbon costs across many products and many jurisdictions. This is more than simply determining what the local carbon price is, but also involves determining whether other policies such as regulations/standards have equivalent effect.

We have not assessed the possibility of a CBAM for Aotearoa New Zealand in any detail and are not in a position to comment on whether it would be suitable for Aotearoa New Zealand. But it could have merit and we would encourage the Government and the Committee to learn from the EU and any other international examples as they unfold.

Performance-based exemptions

Another alternative is to require firms to adhere to international best practice for emissions efficiency, and applying carbon costs only over some industry benchmarks. This idea is often raised as an alternative to industrial allocation. However, it has been attempted in Aotearoa New Zealand before, through Negotiated Greenhouse Agreements (NGAs) – a policy that pre-dated the establishment of the NZ ETS.

NGAs granted exemptions from emissions pricing for emissions-intensive, trade exposed industrial producers in return for a negotiated pathway to achieve "world's best practice" in emissions management. Firms that over-achieved their pathway received NZ Kyoto units which they could trade, and firms could purchase units to meet any under-achievement.[17]

The Government reviewed and streamlined NGAs in 2005 and ultimately stopped making new agreements in favour of developing the NZ ETS. The review of NGAs found that "NGAs have taken longer to complete and the negotiations have been more complex and costly than originally envisaged."[18] It was difficult to negotiate target emissions pathways for firms, since the firms knew more about their own operations than the Government did, and because Aotearoa New Zealand's firms often had unique ways of operating that made it difficult to compare to international benchmarks.

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[14] https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en

[15] https://www.canada.ca/en/department-finance/programs/consultations/2021/border-carbon-adjustments/exploring-border-carbon-adjustments-canada.html

[16] https://www.dcceew.gov.au/climate-change/emissions-reduction/review-carbon-leakage

[17] Catherine Leining, 2016, *A timeline of the New Zealand Emissions Trading Scheme,* Motu https://www.motu.nz/our-research/environment-and-resources/emission-mitigation/shaping-new-zealands-low-emissions-future/a-timeline-of-the-nz-emissions-trading-scheme/

[18] Ministry for the Environment, 2005, *Review of Operation of Negotiated Greenhouse Agreement Policy*, https://environment.govt.nz/what-government-is-doing/cabinet-papers-and-regulatory-impact-statements/review-of-operation-of-negotiated-greenhouse-agreement-policy/

While performance-based exemptions could incentivise marginal efficiency improvements, similar to industrial allocation, they would not necessarily incentivise capital-intensive transformational changes in operations to take up emissions reduction technologies where these are available.

Conclusion

Given the challenges surrounding industrial allocation that have been highlighted here and in previous Commission advice, we see merit in investigating other approaches to managing emissions leakage risk that could be more conducive to meeting the 2050 target and come at lower cost to taxpayers. Hybrid options could also be feasible. For example, a CBAM could be tailored to the specific industrial activities for which it is most suitable, whereas output-based industrial allocation or up-front assistance could be used to mitigate emissions leakage risk for other EITE producers.

Key policy considerations for future decisions on industrial allocation include the effectiveness of incentives to reduce emissions in line with Aotearoa New Zealand's climate change targets, the mitigation of emissions leakage risk in the context of the Paris Agreement, the practicality of implementation, and the management of distributional impacts and their equity implications for different sectors, regions and iwi/Māori.