In-Confidence

Office of the Minister of Climate Change

Chair, Cabinet Environment, Energy and Climate Committee

Reform of industrial allocation policy in the New Zealand Emissions Trading Scheme

Proposal

I seek Cabinet approval to amend industrial allocation policy in the New Zealand Emissions Trading Scheme (NZ ETS) and to issue drafting instructions to amend the Climate Change Response Act 2002 (the CCRA) for those policy changes.

Relation to government priorities

- The Government declared a climate change emergency on 2 December 2020. The Cabinet Business Committee (CBC) agreed that climate change "demands a sufficiently ambitious, urgent, and coordinated response across government to meet the scale and complexity of the challenge" [CBC-20-MIN-0097 refers].
- 3 Enabling a just transition to a low-emissions, climate resilient future is a Government priority. CBC declared its intention to "put the climate at the centre of government decision-making" [CBC-20-MIN-0097 refers].
- The proposals in this paper relate to the Cooperation Agreement between the Labour and Green Parties. Achieving the purpose and goals of the 2019 zero carbon amendments to the CCRA is an agreed area of cooperation.
- Reviewing industrial allocation and addressing over-allocation is included in the Government's first emissions reduction plan. The emissions reduction plan, outlining polices and strategies to meet New Zealand's first three emissions budgets was approved by Cabinet and made public in May 2022.

Executive Summary

- The NZ ETS prices emissions across the economy, with emitters surrendering an emissions unit (New Zealand Unit or NZU) for every tonne of emissions. Some industries are more impacted by the NZ ETS where they have high levels of emissions and operate in international markets (referred to as emissions intensive and trade exposed industries, or EITE).
- 7 There is a risk that EITE industries shift offshore to countries with weaker climate policy to reduce compliance costs. This is known as emissions leakage

and could increase global emissions. The closure of these industries would also have implications for employment and regional economies.

- The Government provides support in the form of free NZUs. This policy is known as industrial allocation and it mitigates the risk of emissions leakage by supporting firms in eligible industries to meet some of their emissions costs and reducing competitive disadvantage with offshore firms.
- Ourrent industrial allocation settings in the NZ ETS have not been updated in over a decade. The intended phase-out of industrial allocation was suspended between 2013 and 2021. In this time, the emissions profile of some EITE industries has shifted so much that some firms are now receiving more units than needed to meet their emissions costs.
- To address this over-allocation, I propose to update allocative baselines and reassess eligibility for industrial allocation using new base years. I have consulted on these changes and feedback was largely supportive.
- There is a risk that over-allocation occurs again in future. To mitigate this risk, I propose to enable the Minister of Climate Change to review and update allocative baselines in future, where there is evidence of over-allocation. The provision of evidence will help identify any future over-allocation and allow the government to determine any changes needed to industrial allocation policy.
- I also propose technical improvements to industrial allocation to improve the functions of the policy. These are changes to the eligibility assessment for new activities, to enable easy updates to allocative baselines, improved access to data, and a new electricity allocation factor (EAF) methodology.
- Subject to your agreement, I will issue drafting instructions to the Parliamentary Counsel Office, for inclusion in the Climate Change Response (Emissions Trading Scheme and Other Amendments) Amendment Bill (the Bill) due to be introduced into the House by the end of 2022.

Background

Free emission units are provided to mitigate the risk of emissions leakage

- Differences in climate policy between New Zealand and other jurisdictions can lead to firms shifting production or investment overseas to avoid emissions costs faced in New Zealand. This is known as 'emissions leakage' and could increase global emissions¹, and has potentially substantial economic and employment impacts.
- Government would ideally not incur a cost to support emissions-intensive and trade-exposed firms in the form of free units. However, many of our major trading partners do not have emissions pricing comparable to the NZ ETS, and those countries with emissions pricing provide substantial levels of support to

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¹ If production is more emissions intensive than New Zealand's production, or if production moves to a jurisdiction without a cap on emissions.

industry. This means there is ongoing and material risk of emissions leakage in New Zealand and a risk that firms would close in New Zealand if industrial allocation is removed.

16 s 9(2)(f)(iv)

- 17 The NZ ETS prices emissions to incentivise emission reductions. Industrial allocation offsets some of these emissions costs by allocating free units (NZUs) to firms carrying out eligible (EITE) activities.²
- Industrial allocation mitigates the risk of emissions leakage by reducing competitive disadvantage with offshore competitors who may be subject to weaker climate policy. Annually, industrial allocation policy has a direct fiscal cost to the Crown of around \$600 million (7.7 million NZUs). See Appendix 1 for the split of allocation by activity and number of firms.

Current industrial allocation settings are leading to significant over-allocation

- Eligibility tests are used to determine which activities are eligible for industrial allocation and the level of assistance⁴ provided. A list of all eligible activities is included in Appendix 2. Industrial allocation for a firm carrying out an eligible activity is calculated based on its level of production. Detail on how eligibility is assessed for activities and how a firm's allocation is calculated is included in Appendix 3.
- There is evidence that under current industrial allocation settings some EITE industries are receiving allocations greater than intended to address the risk of emissions leakage. Some firms are receiving NZUs to meet over 100 percent of their emissions costs (effectively making a profit off the NZ ETS).⁵ Overallocation is attributed to out-of-date allocative baselines used in calculating allocation, and out-of-date eligibility test outcomes.⁶

⁴ Level of assistance is the extent to which emissions costs are met by industrial allocation and is determined by the outcome of an eligibility test based on emissions per million dollars of revenue.

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² Emission-intensive and trade-exposed (EITE). Emissions-intensive means the activity produces a significant portion of emissions per million dollars of revenue and therefore there is a significant impact of an emissions price on profitability. Trade-exposure means the activity's output is exposed to international trade and therefore it is assumed it is difficult to pass on additional costs (such as an emissions price).

³ Based on an NZU prices of \$75 as at March 2022.

⁵ A 2020 data collection of four EITE activities showed the following activities were over-allocated: **9(2)(b)(ii)** (allocation of 105 percent of actual emissions cost); (98 percent of actual emissions cost); (92)(b)(ii) (124 percent of actual emissions cost); (305 percent of actual emissions cost).

^b This is partly driven by changes in emissions profile and due to various causes, including: changes in market structure, changes in fuel profile, and improvements in emissions intensity of production.

Over-allocation undermines New Zealand's climate goals

- I am seeking your agreement to proposals to address over-allocation to ensure consistency with New Zealand's ambitious emissions reduction targets and contribution to the global climate effort. If over-allocation is not resolved, it will make it harder to meet progressively declining emissions budgets, it will put disproportionate pressure on other sectors to reduce emissions and it undermines the NZ ETS's price signal one of New Zealand's primary emissions mitigation tools.
- I am also seeking your agreement to these proposals because over-allocation:
 - 22.1 is an ongoing direct and indirect fiscal cost to the Crown;
 - 22.2 is a windfall gain to some firms (approximately \$60 million, almost ten percent of the total annual cost of industrial allocation to the Crown);
 - 22.3 is inconsistent with the policy intent of industrial allocation, which includes an objective that EITE industries face a net emissions cost; and
 - 22.4 could make it harder to link with overseas carbon markets.

The phase-out of industrial allocation will reduce the risk of over-allocation in future

- A phase-out of industrial allocation was planned to have started in 2013, at a rate of 0.01 annually, but was suspended in 2012. The percentage of emissions costs intended to be covered by industrial allocation remained constant until 2021. This means allocations are now at significantly higher levels than envisaged when the NZ ETS was established.
- A new legislated phase-out began in 2021, aiming to gradually reduce industrial allocation. It involves:
 - 24.1 a general phase out rate whereby every year the level of assistance is reduced by 1 percentage point for all activities during 2021-2030, and higher rates from 2031; and
 - 24.2 a legislated process that enables the Minister of Climate Change to recommend decreased or increased phase-out rates for one or more activities.
- The phase-out is premised on existing allocation being accurate. It is not intended to address current over-allocation, but it will reduce the risk of over-allocation in future.

Government agreed to review industrial allocation policy

In 2021, the Climate Change Commission (the Commission) recommended the government consider over-allocation risks, eligibility rules, updates to the EAF

- and allocative baselines.⁷ In April 2021, Cabinet approved the terms of reference for a review of industrial allocation policy [ENV-21-MIN-0009 refers].
- 27 Between July and September 2021, I consulted on updates to allocative baselines, reassessing the eligibility of industrial activities to reflect recent activity and technical changes to industrial allocation policy. I also asked questions about alternatives to industrial allocation, such as a CBAM, to begin a public discussion on this topic. I am not seeking any decisions on these additional questions in this paper.
- On 4 April 2022, Cabinet agreed that officials would, as part of the emissions reduction plan, continue work exploring the risk of emissions leakage from the cement sector and options to manage this risk through alternatives to industrial allocation policies, such as a CBAM [CAB-22-MIN-0110 refers]. This is a separate work programme and decisions on this matter will be sought separately.
- There are risks associated with progressing both industrial allocation reform and work on alternatives to industrial allocation policy. Introducing changes to industrial allocation from 2024 could coincide with any outcomes of the work on alternatives to industrial allocation.
- These risks would need to be considered and mitigated where possible as work and implementation progress. It is likely that further changes to industrial allocation policy would be needed if an alternative emissions leakage mitigation policy is implemented.
- I will seek advice from officials on engaging with industrial allocation recipients to enter arrangements to support rapid decarbonisation.

 S 9(2)(f)(iv)

Resetting the electricity allocation factor

- The impact of the NZ ETS on electricity prices is described by the electricity allocation factor (EAF) prescribed in regulations. The EAF is a component of allocative baselines used in calculating industrial allocation. The existing EAF was set in 2012 using a methodology that required complex use of assumptions and modelling, and long negotiations with stakeholders. The EAF was reviewed in 2020 and shown to be no longer accurate due to the electricity market developing differently to what was modelled.
- I consulted on EAF methodological options in 2021 and, in August 2021, the Cabinet Environment, Energy and Climate Committee invited the Minister to

⁷ Ināia tonu nei: a low emissions future for Aotearoa, Climate Change Commission.

⁸ Approximately one fifth of the value of allocations to industry are based on the EAF value. The remainder are for emissions costs from using fuels and from chemical transformations. In 2020, 7.7 million emission units currently valued at over \$578 million (based on carbon price of \$75) were allocated to industry.

report back with further details on the implementation of the methodology [ENV-21-MIN-0041 refers].

Analysis

- The key objectives of the reform of industrial allocation are to address overallocation whilst ensuring industrial allocation continues to mitigate the risk of emissions leakage and support the objectives of the NZ ETS.
- There is a tension between the purpose of the NZ ETS to effectively price emissions and that of industrial allocation to mitigate pricing impacts and protect at-risk firms from emissions leakage. The changes I propose balance this tension to ensure climate outcomes are consistent with New Zealand's ambitious targets and emissions budgets.
- Additional aims of the reform are to support regulatory certainty and predictability and, where possible and appropriate, to minimise complexity and costs to industrial allocation recipients (and prospective recipients) and to the Crown. The reform of industrial allocation also seeks to address identified technical problems.

Updating allocative baselines will address over-allocation

- I propose updating allocative baselines using new base years as soon as possible, to address current over-allocation. Out-of-date allocative baselines, based on 2006/07, 2007/08, and 2008/09 financial year data, result in levels of industrial allocation that do not reflect current emissions intensity. Most submitters were supportive of updating allocative baselines using new base years, including half of the industrial allocation recipients who submitted.
- I also propose enabling future reviews and updates to allocative baselines using data from other base years in future, but no sooner than five years after the most recent update using new base years. This will introduce an additional tool to address any over-allocation if it occurs in future.
- I propose that to review and update baselines in future would require evidence that the activity is receiving industrial allocation at a level that means it no longer faces a net NZ ETS cost. This evidence would include data collected through a Gazettal process calling for industry data.
- 40 Talso propose allocative baselines are reviewed at least every ten years.
- More regular updates risk dampening incentives to invest in emissions reducing technologies, and risks firms delaying these investments if it would reduce their allocative baseline and their allocation.
- Consultation feedback ranged from support for a one-off update to more regular updates to allocative baselines. Submitters in support of a one-off update or an update once every ten or more years raised this issue, citing a need for business certainty and that longer timeframes better align with their investment cycles. Submitters in support of updating allocative baselines every five years

thought it balances investment certainty with the reducing the risk of overallocation in future.

Reassessing eligibility using new base years

- I propose reassessing eligibility for industrial allocation using new base years. Out-of-date eligibility test outcomes, based on 2006/07, 2007/08, and 2008/09 financial year data, could be contributing to over-allocation. I also propose adjusting the existing emissions intensity thresholds used to test eligibility to reflect changes in emissions costs.
- Some submitters were supportive of reassessing eligibility using new base years, including two large recipients, and stated the need to update current thresholds.
- The existing thresholds are 800 t CO₂-e⁹/\$1 million revenue and 1,600 t CO₂-e/\$1 million revenue. Activities with an emissions intensity above 1,600 t CO₂-e/\$1 million revenue were classified as highly emissions-intensive, and those falling between the two thresholds were classified as moderately emissions-intensive. These thresholds were set in 2009 and assumed an emissions price of \$25 per t CO₂-e.
- The moderately emissions-intensive threshold corresponded to an activity that had emissions costs of more than \$20,000 per \$1 million revenue (2 percent of revenue). The highly emissions-intensive threshold corresponded to an activity that had emissions costs of more than \$40,000 per \$1 million revenue (4 percent of revenue).
- There has been a significant increase in the emissions price in the past two years. If eligibility is to be reassessed with updated data, the thresholds need to be adjusted to preserve the rationale that emissions costs of more than 2 percent and 4 percent of an activity's revenue expose that activity to a significant risk of emissions leakage.
- Therefore, I propose the emissions intensity thresholds are updated according to the methodology described in Table 1.

Table 1: Methodology to update emissions intensity thresholds

Emissions intensity category	Threshold conversion methodology	New threshold (using a \$75 emissions price for illustration)
Moderately emissions intensive	$800*\frac{25}{new\ emissions\ price}$	267 t CO ₂ -e/\$1 million revenue
Highly emissions intensive	$1,600*\frac{25}{new\ emissions\ price}$	533 t CO ₂ -e/\$1 million revenue

⁹ CO₂-e or carbon dioxide equivalent is a metric that converts all greenhouse gases into an equivalent amount of carbon dioxide to account for their different global warming potentials.

¹⁰ See Appendix 3 for more detail on the eligibility thresholds and industrial allocation in general.

- I propose that the 'new emissions price' used to adjust the thresholds be the 'price of carbon', prescribed in regulations and used for calculating penalties and synthetic greenhouse gas levy rates, at the time of the first call for data¹¹ using new base years.
- 50 Updating the emissions intensity thresholds using the methodology in Table 1 and then reassessing eligibility could result in some activities changing eligibility category from:
 - 50.1 the highly emissions intensive category to the moderately emissions intensive category; or
 - 50.2 the moderately emissions intensive category to becoming ineligible for industrial allocation; or
 - 50.3 the moderately emissions intensive category to the highly emissions intensive category.
- If an activity were to move from the moderately emissions intensive category to the highly emissions intensive category this would result in an increase to the level of allocation for this activity, noting that:
 - 51.1 this reflects the increased risk of emissions leakage; although it is possible that their emissions have not increased, their emissions costs have, and, by definition, such firms are unable to pass on these costs; and:
 - 51.2 this is consistent with existing decisions for activities that have met the higher threshold and the purpose of industrial allocation, even though it could lead to an increase in industrial allocation for a subset of firms.
- The possible increase in industrial allocation from reassessing eligibility is significantly less than the overall reduction of over-allocation sought by the other policy proposals in this paper:
 - the maximum possible increase is approximately 200,000 NZUs each year. This would be in the very unlikely event of all 12 moderately emissions-intensive¹² increasing in eligibility and if this were the only change;
 - 52.2 in contrast updating allocative baselines is expected to reduce industrial allocation by at least 800,000 NZUs each year;
 - 52.3 additionally it is likely the effect of updating allocative baselines will be higher. The current estimate is conservative because it is based on a 10 percent reduction in allocation on the basis of expected allocative

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¹¹ A call for data would involve issuing a Gazette Notice requiring the relevant firms to provide requested data to officials in accordance with the notice.

¹² Approximately 50 firms receive allocations across all 12 moderately emissions-intensive activities. Many of these firms receive a very small number of units, some as low as 43 units. Seventy-five percent of these firms receive less than 10,000 units.

- baselines reductions ranging from 8 percent to 80 percent from the 2020 data collection ¹³:
- 52.4 reconciling these potential increases and decreases in industrial allocation would result in a net saving to the Crown of at least 600,000 NZUs or \$45 million each year. 14
- The achievement of emissions budgets is not impacted by this possible movement of activities between categories. If this were the only change, any additional allocation can be accommodated within an emissions budget by reducing auction volume, thereby keeping the same cap on emission unit supply.
- The original emissions intensity assessments used to test eligibility do not reflect recent levels of emissions, emissions costs, production, or revenue. Despite the possibility of some activities increasing in eligibility category, it is necessary to reassess eligibility using adjusted thresholds and recent data given the increase in the emissions price.
- The trade exposure criteria tests whether products are exposed to international trade and whether a firm is unable to pass on emissions costs to consumers. If the product of any domestic industrial activity is traded overseas, it is considered to have met the trade exposure test. I propose retaining the current trade exposure test. The current test is simple, efficient and wide ranging enough to capture most industrial activities.
- The CCRA prescribes a five-year delay before a reduction in an activity's eligibility status due to reassessment takes effect. There is no delay period for increases in allocation due to eligibility reassessment. I propose reducing the five-year delay to two years. Although this imposes some regulatory risks and increases the risk of emissions leakage, it addresses over-allocation sooner and firms will have four-years advance warning of possible changes in eligibility status.

New base years for updating allocative baselines and reassessing eligibility

- Current industrial allocation is calculated using data from 2006/07, 2007/08 and 2008/09. I propose using data from the five most recent years for which data is available for updating allocative baselines and reassessing eligibility. This would mean using data from the 2016/17, 2017/18, 2018/19, 2019/20, and 2020/21 financial years.
- I also propose that firms are required to provide data from all requested financial years but should be given the option to exclude data from either the 2019/20 or 2020/21 financial year when calculating emissions and product to inform

assumption to all activities not subject to the data collection is therefore seen as a conservative estimate.

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¹³ The 10 percent drop in allocation is in the ballpark of the smallest allocative baseline drop from the 2020 data collection $-\frac{\text{s 9(2)(b)}}{\text{collection}}$ – which dropped by 8 percent. $\frac{\text{s 9(2)(b)(ii)}}{\text{collection}}$

¹⁴ Based on the March 2022 NZU price of \$75.

allocative baselines and when calculating emissions and revenue to inform the eligibility reassessment.

This will help to smooth out any distortions in production and revenue resulting from COVID-19 and the COVID-19 response. This option recognises that the effects of COVID-19 were not felt evenly by industry or regions. Submitters were mainly supportive of the need to include these financial years but with appropriate measures to account for COVID-19 impacts.

Changing the approach to assessing eligibility for new activities

- The CCRA allows for new industrial activities to seek eligibility for industrial allocation. However, the process to seek eligibility is unclear because the CCRA is silent on how eligibility would be assessed for new activities not carried out in the historic base years. This might act as a barrier for new, less emissions intensive activities replacing currently eligible activities.
- I propose that new activities continue to be able to seek eligibility for industrial allocation, with a requirement to consider the same criteria¹⁵ that must be considered when recommending phase-out rates increases, which include:
 - 61.1 any targets or budgets set for reducing emission of greenhouse gases;
 - 61.2 the level of risk of emissions leakage;
 - 61.3 the risk that the value of the allocation for the activity will exceed the cost of meeting the emissions trading scheme obligations in relation to the activity:
 - 61.4 the availability of low-emission technology related to the activity;
 - 61.5 the proper functioning of the emissions trading scheme.
- This approach would replace the current eligibility tests for new activities only. It would not affect activities already eligible for industrial allocation.
- This process for new activities to seek eligibility would involve the Governor General, via Order in Council, on the Minister's recommendation, recognising a new activity as eligible for industrial allocation after consideration of criteria referenced in section 84C of the CCRA.
- Although using a more rigorous set of criteria to determine eligibility for new activities might seem inequitable, it is impractical to use the same criteria for existing activities, i.e., the emissions intensity thresholds, because firms performing the new activity would not have any data to provide for such a purpose.
- Feedback on whether new activities should be able to seek eligibility for industrial allocation was diverse. Some did not support new sources of emissions in New Zealand, whilst others argued for support to ensure alignment with other countries. If the NZ ETS prevents new industries from moving to New Zealand that are less emissions-intensive than current activities, this could increase global emissions and be a form of emissions leakage. My proposed

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¹⁵ These criteria are prescribed in section 84C of the CCRA.

option was not consulted on but would allow a more nuanced assessment of actual leakage risk.

Enabling easy updates to allocative baselines and access to data

- Updates to NZ ETS emissions factors, the EAF, and NZ ETS exemption thresholds result in changes to the emissions costs faced by eligible activities. It is not currently possible, however, to easily update allocative baselines to reflect these changes and the inability to do this risks firms being mis-allocated relative to emissions cost impacts.
- I propose to enable allocative baselines to be re-calculated using previously submitted data to reflect changes to NZ ETS emissions factors, the EAF, and NZ ETS exemption thresholds, and that these updates are not subject to consultation. This is not the same as updating baselines using new base years but is instead a technical adjustment to reflect changes occurring in the NZ ETS and electricity market.
- Limitations to accessing data provided in emissions returns and industrial allocation applications restrict the ability to monitor changes in industries. I do not propose any additional reporting requirements, however better access to allocation data is needed. Recent changes to the CCRA now requires NZ ETS participant level emissions to be publicly reported.
- Firms would continue to report production data within industrial allocation applications to the Environmental Protection Authority (EPA). However, I propose that the EPA is required to share information submitted in industrial allocation applications with the Commission and Ministry on request to enable better access to this data and aid the monitoring of industrial allocation policy.

The new EAF methodology will minimise uncertainty for allocation recipients

- To ensure EAF methodology and modelling is transparent to stakeholders and can be used any time to estimate likely allocations, the calculation of the EAF must be performed by a model that:
 - 70.1 is publicly and freely available, alongside all input data required to operate the model;
 - 70.2 is compliant with Schedule 13.3 of the Electricity Industry Participation Code, meaning it accurately replicates the market clearing algorithm used by the System Operator (Transpower);
 - 70.3 uses a counterfactual input of a reasonable estimate of what offers would have been made by the factual generation stack in the absence of emissions pricing.

Regulations will set the input assumptions for modelling

71 High level modelling assumptions will be set through regulations to provide structure and transparency. The Minister will be able to amend these regulations for the purpose of modifying and improving the assumptions when

needed, following public consultation. The key assumptions consulted on prior to policy decisions, were broadly accepted, and are:

- 71.1 thermal generation (generally offered at relatively high prices) would be offered at lower prices because the removal of emissions pricing reduces their marginal costs;
- 71.2 hydro generation plants with controllable storage would adjust their offer prices in response because lower overall prices mean the opportunity cost of water would be lower.

An annual process will minimise variability and increase accuracy

I propose that the EAF in regulations used to update allocative baselines which are used in calculating allocations be a rolling average of single year EAFs calculated for each of the previous three years. Although a single year EAF would maximise short term accuracy, a rolling average would smooth out variability that might result from one-off market events while responding to overall changes in the electricity market. A rolling average would also be accurate over the medium and long term and provide more certainty for firms receiving allocations. Submitters were supportive of that proposal.

Implementation will be an annual technical matter

- Firms that receive industrial allocation are required to submit an industrial allocation application containing production data for the previous calendar year. This can be used to both provide a provisional allocation for the current year and determine the final allocation for activity carried out in the previous year.
- I propose rates of allocations as prescribed in regulations are amended each year for a new EAF value also amended in regulations, ahead of allocations being applied for, as follows:
 - 74.1 the rolling average EAF will be calculated by the Electricity Authority in July, using data up to the end of the financial year finishing 30 June, and published. An internal sign out process will provide assurance, accountability and can be replicated by any party;
 - the Minister of Climate Change will, dependent on delegated authority from Cabinet, approve this rolling average EAF and the issuance of drafting instructions for amendments to the Climate Change (Eligible Industrial Activities) Regulations 2010. No public consultation will be required due to the technical nature of the amendments;
 - 74.3 the Minister of Climate Change will seek approval from the Cabinet Legislation Committee as part of annual amendment regulations, so that the updated EAF and allocative baselines are in place by 1 January of each year.

Implementation

Subject to your approval, amendments to the CCRA will be required to implement recommended changes to industrial allocation and to implement the

new EAF methodology. These amendments are planned for inclusion in the Bill. After the necessary amendments have occurred, the next steps are outlined in the indicative timeline in Table 2.

- The EAF is one component of the allocative baselines. The CCRA currently requires a full emissions and production data collection exercise before those allocative baselines can be updated, including for a new EAF. 16 The proposed amendments simplify these updates.
- Once enabled through the Bill, I expect the earliest a new methodology can be implemented is January 2024, and therefore impacting allocations given to firms for the 2023 calendar year. This is not retrospective, despite appearances, as it will use the existing process in the CCRA of correcting provisional allocations with final 2023 data.
- Subsequent updates to allocative baselines to reflect changes to NZ ETS emissions factors, the EAF, and NZ ETS exemption thresholds could occur annually, without the need for consultation.

Table 2: Timeline for implementation of changes to industrial allocation

Milestone/Activity	Timeframe	
Bill introduced into the House	December 2022	
Select Committee report	June/July 2023	
Enactment	Mid-2023	
Data collection and analysis for industrial allocation	Second half of 2023	
Industrial allocation changes implemented (including public consultation and regulation updates)	2024 (with retrospective application from 1 January 2024)	
New EAF methodology implemented	2024	

Financial Implications

- In 2021, industrial allocation policy had a direct fiscal cost to the Crown of \$578 million.¹⁷ Extrapolating from the 2020 data collection for four EITE activities indicated that updating allocative baselines could reduce free allocation to industries by around 800,000 units per annum.
- This over-allocation has an estimated direct fiscal cost of around \$60 million each year. Addressing this over-allocation would result in an estimated direct cost reduction of \$60 million.

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¹⁶ The exception is for industrial activities with very large electricity contracts. The only activity in this category is aluminium smelting. The allocative baseline for that activity is updated every year once the actual electricity consumption of the New Zealand Aluminium Smelter Ltd is known.

¹⁷ This is based on over 7.7 million NZUs being allocated for 2020 activity at an NZU price of \$75 (NZ ETS secondary market price in March 2022).

My proposals for modelling the EAF and its implementation have no direct financial implications. I will note fiscal implications each time I seek Cabinet approval to amendment regulations to implement an updated EAF.

Legislative Implications

Implementing changes to industrial allocation policy will require changes to the CCRA. Cabinet agreed to place a Climate Change Response Amendment Bill on the Legislative Programme with priority 4 (to be referred to Select Committee this year). Cabinet policy decisions in this paper will be used to issue drafting instructions for that Bill. The timetable for this legislative process is shown in Table 2 above. The timetable is indicative only, as we note the timing of the 2023 general election may affect this timetable.

Impact Analysis

Regulatory Impact Statement

- The Ministry for the Environment's Regulatory Impact Analysis Panel has reviewed this Regulatory Impact Statement and considers it partially meets the quality assurance criteria for Regulatory Impact Assessments.
- The Regulatory Impact Statement makes a good case for change. The underlying analysis is robust, complete, and shows adequate consultation with affected parties. However, the analysis section does not communicate in a way that is easily understandable by decision makers or the public and could be shortened and simplified.
- Treasury's Regulatory Impact Analysis team has determined that the proposal regarding implementation of the revised EAF is exempt from the requirement to provide a Regulatory Impact Statement on the grounds that it has been addressed by existing impact analysis [ENV-32-MIN-0041] and published on the Ministry for the Environment website.¹⁸

Climate Implications of Policy Assessment

- The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirms that the CIPA requirements do not apply to these proposals. In the case of resetting the EAF, this is because the threshold for significance is not met. In the case of changes to industrial allocation policy, this is because there is no direct impact on emissions (although there may be some indirect impacts).
- 87 The intent of my proposed changes to industrial allocation policy is largely to address the issue of overallocation, which is not intended to have a direct impact on emissions.

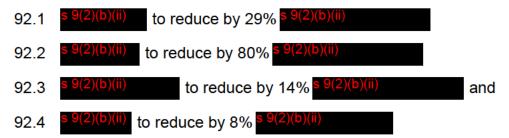
https://environment.govt.nz/what-government-is-doing/cabinet-papers-and-regulatory-impact-statements/updating-the-electricity-allocation-factor-used-in-the-nz-ets/



However, it is difficult to accurately estimate the scale and likelihood of these impacts occurring due to the high number of variables and uncertainty in predicting decision making of firms receiving industrial allocation.

EITE sector and regional economies implications

- 90 Updating allocative baselines would reduce allocations for current recipients carrying out activities that are over-allocated and reduce the windfall gain some of these firms are receiving. EITE firms would receive fewer units and face higher net NZ ETS costs. Across all activities, it is expected that updating allocative baselines will reduce industrial allocation by an estimated \$60 million.
- 91 With limited data it is difficult to estimate the impact these changes may have for specific sectors such as the building and construction sector. Based on extrapolated findings from a limited data collection in 2020, we estimate that allocations for most activities would reduce by around 10 per cent, with the dollar value implication of this varying significantly between industries.
- 92 For the following activities, data was collected during the 2020 data collection, we expect allocation for production of:



Updating allocative baselines to remove over-allocation and the windfall gain could impact both small and large EITE firms and impact regional economies. Although higher marginal NZ ETS costs in the short-term are expected to be insufficient to drive production overseas, it could lead to some New Zealand firms closing and production being taken up by other New Zealand firms. This could impact regions where a firm closes. However, under my proposed approach there will be a minimum of two years between policy changes being announced and subsequent changes to allocations coming into effect, giving some time for firms and regions to consider potential impacts and plan.

Māori and Te Tiriti o Waitangi Implications

- Te Tiriti/Treaty principles require that the Crown be properly informed of Māori interests and act reasonably and with the utmost good faith towards Māori. Māori have a significant stake in climate policy.
- There is a strong Māori interest in the NZ ETS. This is driven by a commitment to reduce emissions and address climate change, and the potential impacts of emissions pricing on Māori involvement in forestry and agriculture particularly as these sectors dominate Māori economic development and employment.
- Assessing Māori interest in industrial policy is complex. Industrial allocation is mainly of interest to EITE firms receiving an allocation many of which are owned or majority-owned by overseas entities.
- I expect that changes in industrial allocation would remove the windfall gain currently received by industries that employ a high proportion of Māori compared to other ethnic groups (in manufacturing, agriculture and forestry). The proposals set out here could affect employment in regions where a firm closes. If a firm carrying out an activity performed by multiple firms (such as growing fresh tomatoes) closes, production could be displaced to other regions.
- Te Rūnanga o Ngāi Tahu (Te Rūnanga) provided the only iwi submission on the industrial allocation proposals. Te Rūnanga indicated agreement that overallocation needed to be addressed and support for updates to allocative baselines and reassessing eligibility for industrial allocation. Specifically, Te Rūnanga was supportive of updating allocative baselines every ten years and clarifying the eligibility process for new activities if it does not lead to a rise in emissions and if firms can prove environmental benefit.

Population Implications

There are no population implications of the proposed policy changes in addition to those already outlined in paragraphs 92 – 96.

Human Rights

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

Consultation

101 Consultation on industrial allocation sought feedback on options to address over-allocation and technical issues with industrial allocation policy. Officials developed these proposals with support from a Technical Advisory Group which provided independent expertise on industrial allocation.¹⁹

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¹⁹ The Ministry for the Environment established a Technical Advisory Group (TAG), with expertise in trade, economic and climate policy to support the review. The TAG was asked to test evidence, analysis and policy options. This supported the development of the consultation document.

- There was a mixed response for most proposals but strong support, including from some industrial allocation recipients, for updating allocative baselines to address over-allocation. Feedback was also received through consultation, from October to November 2021, on the emissions reduction plan.
- I consulted on revising the EAF methodology in 2021. Submitters were supportive of a new methodology for the EAF, and feedback informed subsequent Cabinet policy decisions [ENV-21-MIN-0041 refers]. My officials have since performed targeted engagement with key stakeholders on technical implementation issues such as the nature of the model and the number of years for the rolling average. My recommendations in this paper are consistent with those discussions.
- The following agencies were consulted on this paper: Ministry of Business, Innovation and Employment, the Treasury, the Ministry of Foreign Affairs and Trade, the Ministry for Primary Industries (MPI), Te Manatū Waka Ministry of Transport, the Inland Revenue Department, the New Zealand Customs Service, and the EPA.
- MPI officials have advised, and my officials agree, that without other support to reduce emissions:
 - 105.1 a reduction in industrial allocation for small-medium sized firms in sectors facing rising input costs such as solvent in firm closure;
 - 105.2 wood processing is critical to New Zealand's wider decarbonisation strategy, for example by providing fossil fuel alternatives, and that should a key player close and/or shift production overseas, this could have flow-on effects across wider industry and related sectors such as food supply.
- 106 Te Puni Kōkiri and the Department of the Prime Minister and Cabinet were informed.
- The Energy Efficiency and Conservation Authority was also consulted on the content in this paper to support a new methodology for the EAF.

Communications

- Announcements about the NZ ETS need to be managed carefully to avoid any inconsistencies and market risks, including sudden NZU price rises. In addition, information should not be disseminated in a way that advantages some market participants over others and compromises NZ ETS investments.
- Following Cabinet decisions and in consultation with other Ministers, I intend to make public announcements on the proposed policy changes for progressing through the Bill to be introduced at the end of 2022.

Proactive Release

110 I intend to proactively release this paper on the Ministry for the Environment's website, subject to redactions consistent with the Official Information Act 1982, once public announcements have been made.

Recommendations

The Minister of Climate Change recommends that the Committee:

- note there is evidence that some emissions-intensive, trade-exposed (EITE) activities are receiving industrial allocation at levels greater than intended to address emissions leakage;
- 2 **note** that I am seeking to address this over-allocation because it makes it harder to meet our climate goals, puts disproportionate pressure on other sectors to reduce emissions, and is an ongoing fiscal cost to the Crown:
- note that the Climate Change Response (Emissions Trading Reform)
 Amendment Act 2020 introduced the phase-out of industrial allocation to reduce allocation through two complementary approaches:
 - 3.1 a general phase out rate: This started as an annual reduction of 0.01 in the level of assistance for all activities for the period 2021-2030, then 0.02 from 2031 to 2040, and then 0.03 from 2041 to 2050; and
 - 3.2 a legislated process which enables the Minister of Climate Change to recommend decreased or increased phase-out rates for one or more activities;
- 4 **note** that the general phase-out reduces the risk that over-allocation will recur in future;
- note that the additional phase-out mechanisms provide for temporary or permanent activity-specific increases to phase-out rates, and an intent of these mechanisms is to address any over-allocation if it does arise in future;
- note that in 2021, the Climate Change Commission (the Commission) recommended that the government consider over-allocation risks, eligibility rules, updates to the electricity allocation factor (EAF) and allocative baselines:
- **note** that in April 2021, Cabinet approved the terms of reference for a review of industrial allocation policy [ENV-21-MIN-0009 refers];
- 8 **note** that proposed changes to industrial allocation policy were publicly consulted on from July to September 2021;
- 9 note that on 4 April 2022, Cabinet agreed that officials would, as part of the emissions reduction plan, continue work exploring the risk of emissions leakage from the cement sector and options to manage this risk through alternatives to industrial allocation policies [CAB-22-MIN-0110 refers];

- note that alternative policies to industrial allocation are being progressed through a different work programme and any policy decisions on this matter will be sought separately;
- 11 **note** that further changes to industrial allocation policy would be needed if an alternative emissions leakage mitigation policy is implemented;
- note that I will seek advice from officials on engaging with industrial allocation recipients to enter arrangements to support rapid decarbonisation;
- note that the impact of the NZ ETS on electricity prices is described by the EAF and is a component of allocative baselines used in calculating industrial allocation;
- note that the EAF was set in 2012 and is no longer accurate due to the electricity market developing differently to what was modelled;
- note that I consulted on options for resetting the EAF and Cabinet Environment, Energy and Climate Committee invited me to report back with further detail on implementation [ENV-21-MIN-0041 refers];

Updating allocative baselines

- 16 **note** that allocative baselines are used in the calculation of industrial allocation:
- note that these allocative baselines are based on activity data from the 2006/07, 2007/08, and 2008/09 financial years, as required by the Climate Change Response Act 2002 (CCRA);
- note that the requirement to calculate allocative baselines from these historical years is resulting in over-allocation to some activities;
- note that updating allocative baselines using data from recent financial years will reflect recent emissions intensities and address most over-allocation occurring now;
- 20 **note** that updating allocative baselines will remove windfall gains to EITE firms, and direct fiscal costs to the Crown, estimated at approximately \$60 million;
- 21 **agree** to remove the statutory restriction setting the 2006/07, 2007/08, and 2008/09 financial years as the basis for determining allocative baselines;
- agree that allocative baselines are updated with a call for data from the financial years 2016/17, 2017/18, 2018/19, 2019/20, and 2020/21;
- note that allowing the exclusion of data from one year would smooth any distortions to production and emissions related to COVID-19 and the COVID-19 response;
- agree that firms are required to provide data from all requested financial years but can exclude data from either the financial year 2019/20 or the financial

- year 2020/21 when calculating specified emissions and specified total amount of product;
- agree to enable the Minister of Climate Change to review and update allocative baselines considering data from new base years in future;
- agree that updates to allocative baselines using data from new base years in future can only occur five or more years after the most recent update using data from new base years;
- agree that the Minister of Climate Change will be enabled to call for data via a Gazette notice, to provide evidence as to whether the activity is receiving industrial allocation at a level that means it no longer faces a net ETS cost, and if so, use this data to update allocative baselines in future;
- agree that when making later updates to allocative baselines the Minister must be satisfied that the activity is receiving industrial allocation at a level that means it no longer faces a net ETS cost;
- agree that all allocative baselines be reviewed every ten years, following their most recent review;

Reassessing eligibility

- note that an activity's eligibility for industrial allocation is determined by a trade exposure and an emissions intensity test;
- note that out-of-date eligibility test outcomes, based on 2006/07, 2007/08, and 2008/09 financial year data could be contributing to over-allocation;
- agree to remove the statutory restriction setting the 2006/07, 2007/08, and 2008/09 financial years as the basis for reassessing eligibility;
- agree to reassess the emissions intensity of existing eligible activities with the use of data from the financial years 2016/17, 2017/18, 2018/19, 2019/20, and 2020/21;
- note that allowing the exclusion of data from one year would smooth any distortions to emissions and revenue related to COVID-19 and the COVID-19 response;
- agree the firms will be required to provide data from all requested financial years but can exclude data from either the financial year 2019/20 or the financial year 2020/21 when calculating specified emissions and specified revenue:
- note that emissions intensity thresholds used in the eligibility test were set such that if an activity's emissions costs exceeded 2 percent of its revenue it was deemed moderately emissions intensive, unless its emissions costs exceeded 4 percent of its revenue in which case it was deemed highly emissions intensive;

- 37 **note** that emissions intensity thresholds used in the eligibility test were based on an emissions price of \$25;
- note that emissions intensity thresholds used in the eligibility test no longer accurately reflect the risk of emissions leakage due to the increase in emissions price, and therefore the rationale to provide assistance to activities that have emissions costs in excess of 2 or 4 percent of their revenue is no longer preserved;
- agree to update the emissions intensity thresholds used in the eligibility test to reflect changes to the emissions price;
- agree that the thresholds used in the eligibility test will be calculated according to the methodology defined in Table 3;

Table 3: Methodology to update emissions intensity thresholds

Emissions intensity category	Threshold conversion methodology
Moderately emissions intensive	800 * new emissions price
Highly emissions intensive	$1,600*\frac{25}{new\ emissions\ price}$

- agree that the 'new emissions price' in the methodology defined in Table 3 will be the 'price of carbon' set by or in accordance with regulations made under section 30W of the CCRA at the time the first call for data using new base years is issued:
- note that at the time the eligibility thresholds are calculated for the purpose of reassessing eligibility, the methodology described above will ensure that if an activity's emissions costs exceed 2 or 4 percent of revenue, it will be classified as moderately emissions intensive, or highly emissions intensive respectively, and receive industrial allocation at a level that reflects this classification;
- 43 **note** that updating the emissions intensity thresholds and reassessing eligibility could result in some activities moving eligibility category;
- note that an activity moving from the moderately emissions intensive category to the highly emissions intensive category would result in an increase to the level of allocation for this activity:
- 45 **note** that this reflects the increased risk of emissions leakage to firms in carrying out such an activity because their emissions costs have increased and by definition they cannot recover those costs;

- 46 **note** that I expect any potential increases in allocation resulting from reassessing eligibility would be far outweighed by the overall reduction in allocation resulting from the full set of policy changes;
- 47 **note** that reconciling these potential changes would result in a net estimated saving to the Crown of at least 600,000 NZUs or \$45 million per year²⁰;
- 48 **note** that any viable changes to the trade exposure test would not better support the objectives of the NZ ETS, nor would they better address overallocation or the risk of emissions leakage;
- 49 **note** I am not proposing any change to the current trade exposure test;
- note that a five-year delay exists in implementation of any reclassification of an eligible activity from highly emissions intensive to moderately emissions intensive, or from moderately emissions intensive to ineligible;
- note that there is a need to retain some delay before a decrease in an activity's level of assistance comes into effect to ensure firms have a level of regulatory certainty, however this needs to be balanced with correcting over-allocation as soon as practicably possible;
- 52 **agree** to reduce the five-year delay period for a decrease in eligibility classification to two years;
- note that reducing this delay period imposes some regulatory risk and increases the risk of emissions leakage but addresses over-allocation sooner;
- 54 **note** that policy decisions would be signalled in 2022, and relevant amendments to legislation would come into force in 2024;
- note that this would mean four years of advance warning of a possible reduction in allocation due to eligibility reassessment;
- note that there is no delay period for increases in allocation due to eligibility reassessment;

Changing the approach to assessing eligibility for new activities

- 57 **note** that the CCRA allows for new industrial activities to seek eligibility for industrial allocation, however the process is unclear;
- note the CCRA is silent on how eligibility would be assessed if an activity was not carried out in the historic base years and this could act as a barrier to new, less emissions intensive activities seeking eligibility;
- agree that new activities continue to be able to seek eligibility for industrial allocation;
- agree that eligibility assessment for new activities requires consideration against the criteria outlined in section 84C of the CCRA that the Minister must

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²⁰ Based on the March 2022 NZU price of \$75.

- consider when recommending increases to phase-out rates for industrial allocation, instead of using the emissions intensity and trade exposure criteria;
- note that this process for new activities to seek eligibility would involve the Governor General, via Order in Council, on the Minister's recommendation, recognising a new activity as eligible for industrial allocation after consideration of the criteria referenced in section 84C of the CCRA;
- note that while using a more rigorous set of criteria to determine eligibility for new activities might seem inequitable, it is impractical to use the same criteria for existing activities the emissions intensity thresholds because firms performing the new activity would not have any data to provide for such a purpose;

Enabling easy updates to allocative baselines and access to data

- 63 **note** that the calculation of allocative baselines depends on NZ ETS emissions factors, the EAF, and NZ ETS exemption thresholds, and that these could be updated in future;
- note that updating allocative baselines to reflect updates to NZ ETS emissions factors, the EAF and NZ ETS exemptions thresholds requires a call for data process;
- 65 **note** that failure to update allocative baselines to reflect changes in these factors risks activities being under- or over-allocated relative to these emissions cost impacts;
- agree to enable allocative baselines to be re-calculated using previously submitted data to reflect changes to NZ ETS emissions factors, the EAF, and NZ ETS exemption thresholds, and that these updates are not subject to call for data requirements or consultation;
- 67 **note** that the CCRA limits the ability of the Environmental Protection Authority (EPA) to share emissions return and industrial allocation application data;
- 68 **note** that this can act as a barrier to the monitoring and policy development of industrial allocation;
- agree to require the EPA to share information submitted in industrial allocation applications with the Commission and Ministry on request;

Resetting the electricity allocation factor

- note that in 2021, I consulted on options for methodological changes to the EAF, which is an important part of the rates of allocation certain activities receive in the NZ ETS;
- 71 **note** that in August 2021 Cabinet invited the Minister of Climate Change to report back with further details on the methodology and options for its implementation [ENV-32-MIN-0041 refers];

- 72 **note** that my preferences for the new methodology will provide transparency and minimise variability while ensuring accuracy over time;
- agree the calculated annual EAF value used to determine allocative baselines is determined using an electricity market model that:
 - 73.1 is publicly and freely available, alongside all input data required to operate the model;
 - 73.2 be compliant with Schedule 13.3 of the Electricity Industry Participation Code, meaning it accurately replicates the market clearing algorithm used by the System Operator (Transpower);
 - vs. a counterfactual input of a reasonable estimate of what offers would have been made by the factual generation stack in the absence of emissions pricing;
- agree that the EAF in regulations used to determine allocative baselines must be updated each year to be the rolling average of single year EAF values for each of the previous three years;
- agree that this rolling average EAF will be calculated by the Electricity Authority each year in July, using data up to the end of the financial year ending 30 June
- agree changes to the EAF value used to determine allocative baselines can be made without public consultation;
- agree to delegate to the Minister of Climate Change the ability to make annual policy decisions on the EAF used to determine allocative baselines for the purpose of issuing drafting instructions for amendment to the Climate Change (Eligible Industrial Activities) Regulations 2010;
- agree that the Minister of Climate Change may recommend regulations to set input assumptions for modelling of the EAF, following consultation with those likely to be substantially affected;
- agree the consultation requirements will not apply to the first modelling assumptions set in accordance with this paper;
- 80 **agree** the following modelling assumptions will be set in regulations:
 - 80.1 thermal generation (generally offered at relatively high prices) would be offered at lower prices because the removal of emissions pricing reduces their marginal costs;
 - 80.2 hydro generation plants with controllable storage would adjust their offer prices in response, because lower overall prices mean the opportunity cost of water would be lower;
- agree the Minister can recommend amendments to the modelling assumption regulations, if necessary to improve accuracy, following public consultation;

note that implementation of the updated methodology is contingent on amendment to the CCRA:

Next steps

- authorise the Minister of Climate Change to further clarify policy decisions relating to the amendments proposed in this paper, in a way consistent with Cabinet's decisions;
- invite the Minister of Climate Change to issue drafting instructions to the Parliamentary Counsel Office based on the decisions presented in this paper;
- note that subject to policy and legislative changes for industrial allocation, a data collection exercise will need to occur to inform updates to allocative baselines and retesting of eligibility;
- 86 **note** that the Climate Change (Eligible Industrial Activities) Regulations 2010 would need amendment to prescribe updated allocative baselines and levels of emissions intensity.

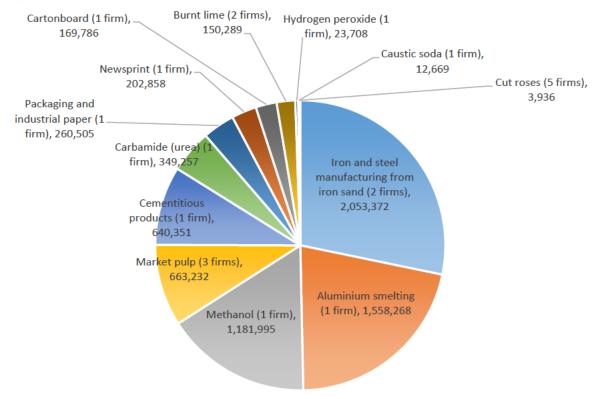
Authorised for lodgement

Hon James Shaw

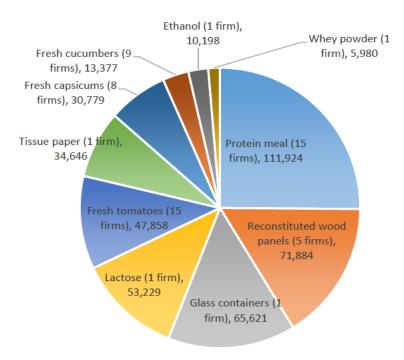
Minister of Climate Change

Appendix 1: Allocation (NZU) received by firms for activities in 20201

Highly emissions intensive activities



Moderately emissions intensive activities



¹ Some of these firms have received co-funding for decarbonisation projects from the Government Investment in Decarbonising Industry Fund (GIDI) fund, in addition to receiving industrial allocation. The GIDI fund aims to accelerate emissions reductions in industry through co-funding energy efficiency and fuel switching projects, whereas industrial allocation aims to mitigate the risk of emissions leakage by supporting firms to meet some their emissions costs.

Appendix 2: activities eligible for industrial allocation

Eligible activity	Number of firms receiving allocation for the activity in 2020	Eligible activity	Number of firms receiving allocation for the activity in 2020
Aluminium smelting	1	Burnt lime	2
Carbamide (urea)	1	Cartonboard	1
Carbon steel	0	Caustic soda	1
Cementitious products	1	Clay bricks	0
Cut roses	5	Ethanol	1
Fresh capsicums	8	Fresh cucumbers	9
Fresh tomatoes	15	Glass containers	1
Gelatine	0	Hydrogen peroxide	1
Iron and steel manufacturing from iron sand	2 (but both sit within the same multi- national company)	Lactose	1 6
Market pulp	3	Methanol	
Newsprint	1	Packaging and industrial paper	1
Protein meal	15	Reconstituted wood panels	5
Tissue paper	1	Whey powder	1

Appendix 3: Background to industrial allocation

Purpose of industrial allocation

Industrial allocation is the provision of free emissions units to firms who perform eligible emissions intensive activities. The purpose of providing free units is to reduce the risk of 'emissions leakage' – where production, investment, or entire firms move offshore to jurisdictions with weaker climate policy to avoid the NZ ETS's emissions costs. The free emissions units offset some of these firm's emissions costs and therefore reduces their competitive disadvantage with offshore firms. If emissions leakage were allowed to occur, it could increase global emissions, and New Zealand would lose economic activity.

History of New Zealand's industrial allocation policy

New Zealand's industrial allocation policy was based on the Australian system which was developed for their proposed Carbon Pollution Reduction Scheme (CPRS). At the time it was anticipated that both the CPRS and the NZ ETS would closely interact, and it was desired that activities eligible for an allocation in Australia would also be eligible in New Zealand. The CPRS was never implemented, however New Zealand's industrial allocation policy retained the same structure and eligibly criteria (aside from an adjustment for the exchange rate).

Eligibility for industrial allocation

- 3 An activity needs to satisfy two criteria to receive industrial allocation.
 - 3.1 **Trade exposure:** emissions leakage is only a risk for activities that are unable to pass on emissions costs to the consumer. This is an issue where the price of a commodity is set offshore and domestic firms carrying out the activity are 'price takers'. To determine if emissions costs can be passed on, a proxy is used an activity's exposure to international trade. By default, an activity is deemed trade exposed, unless there is no international trade off its output across oceans, or it is not economically viable import or export it.
 - 3.2 **Emissions intensity:** emissions leakage is only a risk to firms if emissions costs have a significant impact on their bottom line. To an extent, an emissions price has an impact on all goods and services, however it is impractical to provide an allocation to everyone in the economy. An emissions intensity test is used as a proxy to determine the impact of an activity's emissions costs on a firm's profitability. This criterion is used to identify the activities at significant risk of emissions leakage and therefore warrant support.
 - 3.3 Current legislation classifies an activity as 'moderately emissions intensive' if it produces more than 800 tonnes of carbon dioxide equivalent per one million dollars of revenue (800 t CO2-e/\$1 million revenue). If an activity is below this threshold, it is deemed ineligible for an allocation. A firm carrying out a moderately emissions intensive

- activity receives government support equivalent to 58 percent of its emissions costs for 2022.
- 3.4 An activity is 'highly emissions intensive' if it produces more than 1,600 tonnes of carbon dioxide equivalent per one million dollars of revenue (1,600 t CO2-e/\$1 million revenue). A firm carrying out a highly emissions intensive activity receives government support equivalent to 88 percent of its emissions costs for 2022.

Calculation of allocation

4 Allocation is calculated according to:

Allocation = Production * Allocative Baseline * Level of Assistance

- 4.1 Allocation is the total number of emissions units (New Zealand Units or NZUs) for a single product provided to a particular firm that carries out the eligible activity.
- 4.2 *Production* is the total amount of production of a single eligible product typically this is in tonnes.
- 4.3 Allocative Baseline is the emissions intensity of production of the eligible product. Note this is the 'cost impact' emissions intensity not the physical 'actual' emissions intensity. Also note that a particular activity can have multiple products and therefore multiple allocative baselines.
- 4.4 Level of Assistance is the percentage of support the government provides to the activity. As described above, in 2022 this is 58 percent of emissions costs for moderately emissions intensive activities, and 88 percent of emissions costs for highly emissions intensive activities.
- 5 As an example, if a firm:
 - 5.1 produces 100 tonnes of eligible product; and
 - 5.2 the product has an allocative baseline of 1 t CO2-e/tonne of eligible product; and
 - 5.3 the activity is classified as highly emissions intensive and therefore receives 88 percent of its emissions costs;
 - 5.4 the total allocation provided to the firm is 88 NZUs (100 * 1 * 0.88 = 88).

Other things to note

- 6 Eligibility is determined at the activity level. Support is provided at the firm level.
- Allocation is proportional to the amount of production of an eligible product. This means activities always see a cost on emissions at the margin.
- 8 Allocative baselines are calculated as a national average.